

# Spirituality Research: Measuring the Immeasurable?

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*The rising popularity of spirituality is accompanied by a flood of research in numerous disciplines to probe its relationships with health, wellness, and countless other topics. Initially subsumed under religion, especially Christianity, and still overlapping with it, spirituality is increasingly treated as a distinct topic that applies to all religions and to persons who have none with their diverse assumptions, variables, and terminology. Besides issues common to all social and behavioral sciences, spirituality research faces special challenges because of its subject matter. In the context of Christian values, it is immeasurable, yet numerous scales serve the measurement need as its indicators or reflectors. Much more research is needed, ideally with methodological and philosophical precautions to avoid reification, reductionism, and other traps. Because spirituality pervades everything that is human, its study is central to investigations of the essence of human nature.*

A 1986 article on spirituality and science began with the words, “Most social and behavioral scientists avoid attention to the spiritual nature of humanity.”<sup>1</sup> That still is true in some specialties, but spirituality has become a prominent subject of research in those most closely related to religion, health, and well-being. This article summarizes and critiques significant developments in psychological and other research on spirituality. It provides an introductory foundation for beginning research on the subject and critically analytic suggestions for persons already grounded in it. Endnote references can guide readers deeper into aspects of spirituality that intrigue them.

## The Popularization of Spirituality

Popular magazines that once aimed at political correctness by shunning discussions of religion have resumed publishing front cover stories about it. News reports no longer avoid mentioning the

religious orientations and spiritual experiences of newsworthy persons for whom they are a concern, although most use only “God talk” substitutes about personal faith in Jesus Christ. Since the late 1980s, there has been a rising crescendo of popular interest in spirituality and its marketplace<sup>2</sup> of religious and pseudo-religious phenomena, including meditation, mysticism, psychic healing, yoga, spirit guides, witchcraft, New Age cults, and alternate religions, some of which openly or covertly incorporate themes and techniques from ancient Greek, Gnostic, or Eastern religions.

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The popularization of spirituality is accompanied by expanded recognition of the centrality of religion in human societies and a surge of interest in studying spiritual phenomena.<sup>3</sup> Annual meetings of many professional societies include sections on religion-related topics that once were shunned, if not banned. Entire conferences gather around spiritual themes.<sup>4</sup>

Empirical research on and related to spirituality has rapidly expanded since the late 1980s in the social and behavioral sciences, social work, nursing, medicine, neurobiology, and other academic specialties and applied professions. It matters not whether popularization stimulated scholarly investigations or reflected the growing recognition that spirituality is important, for they are closely interrelated. These interests also reflect major trends in the politics of global society, culture wars, international warfare, and significant migration patterns. Spirituality is increasingly recognized as a concern that penetrates to the core or essence of both human nature and society.

This article focuses upon one significant facet of those developments, the multidisciplinary research on spirituality. By answering key questions, it sketches some highlights of the research, methods, and tools used to investigate spirituality; samples of findings; research problems and limitations; and relevant Christian values. It mentions some of the challenges for future research and provides references to help interested scholars and researchers quickly locate helpful resources for their investigations, whether they are at beginning or advanced stages of study.

### How Did Spirituality Research Begin?

The American Scientific Affiliation was far ahead of its time when the question of the amenability of spirituality to scientific study was included in its joint conference on “Science and Christian Faith” with the Research Scientists’ Christian Fellowship at Oxford University in July 1965.<sup>5</sup> Interest in spirituality was stimulated in part by a nagging feeling that the central core of religion may have been cut away from the sociology of religion. The claim of Charles Glock, a prominent sociologist of religion, that all of the manifestations of religious commitment in all religions of the world can be subsumed under five interactive and researchable dimensions (ritualistic,

ideological, intellectual, experiential, and consequential) also motivated that work.<sup>6</sup>

Probing this issue led to the conclusion that, at least within Christianity, there is a sixth component of personal religiousness that can be labeled as the “spiritual” or “supernatural.” It is the very essence or core of religious commitment, labeled by Italian sociologist Sturzo as “the true life.”<sup>7</sup> He convincingly argued that the supernatural is not a separate segment of social life juxtaposed to the natural, but rather, that the natural order exists within the atmosphere of the supernatural. Therefore, even those who search for purely natural explanations of religion, while denying the supernatural root and branch of life, are involved in “a sociology of the supernatural” in a negative sense.

This is fully consistent with 378 references in the Hebrew Bible to the word *ruah* and 146 in the Greek New Testament to *pneuma*, each referring to human beings as *spirit*. The Creator breathed life into Adam, and he became a living soul (Gen. 2:7).<sup>8</sup>

Indeed, the word “breath” comes from the Latin *spiritus*, which means “that which gives life or vitality.” When we breathe in, that invisible breath gives life to our visible bodies: so it is with our spirit, also unseen. Spirit, like the breath, transcends a person but is part of the person. All of our relationships with others can be perceived as spiritual, especially when we understand that they have in common the life-giving gift of breath.<sup>9</sup>

Rich and relevant reports on evidences for the spiritual nature of humanity, the importance of bringing ontological supernatural elements of religion back into the sociology of religion (and by implication all disciplines dealing with religion), and tentative methods by which spirituality can be explored through philosophical questions, theory development, and scientific methodologies comprise major foundation stones for subsequent developments in research on spirituality.<sup>10</sup>

Even more important from the perspective of its discernible historical impact was the 1971 White House Conference on Aging (WHCA), which replaced a section on religion with one on Spiritual Well-Being (SWB). Its 63-page background paper began by differentiating spirituality from religion

and identifying six categories of spiritual needs among aging people. Its working definition stated,

... we shall consider "the spiritual" as pertaining to man's inner resources, especially his ultimate concern, the basic value around which all other values are focused, the central philosophy of life—whether religious, anti-religious, or non-religious—which guides a person's conduct, the supernatural and nonmaterial dimensions of human nature. We shall assume, therefore, that all men [i.e., people] are "spiritual," even if they have no use for religious institutions and practice no personal pieties.<sup>11</sup>

In order to implement recommendations of the SWB Section of the 1971 WHCA, the National Interfaith Coalition on Aging (NICA) was founded in 1972. As it began cooperative work, its leaders quickly recognized dissimilar interpretations of SWB that had divergent referents, denotations, and connotations, sometimes clashing with each other. To assure reasonable agreement that all were discussing the same or closely related phenomena when they used the word "spiritual," a nonsectarian definition was needed to guide NICA's deliberations and data collection. A two-day workshop in 1975 discussed the diverse viewpoints of representatives from numerous religious backgrounds and academic disciplines. It resulted in a "working definition" that still remains in use:

Spiritual well-being is the affirmation of life in a relationship with God, self, community and environment that nurtures and celebrates wholeness.<sup>12</sup>

That NICA definition has been used for ecumenical discussions and pragmatic applications, but it clearly is not an operational definition for scientific research. Nevertheless, it has stimulated cooperation and prevented many human service professionals from continuing to ignore the spiritual nature and needs of clients. It sensitized academicians from many disciplines to spirituality, encouraged spiritual intervention experiments and interdisciplinary studies, and prodded support for spiritual care in hospitals, retirement facilities, and other service agencies. In 1992, it was among the stimuli for changing the name of the Forum on Religion and Aging to FORSA, Forum on Religion, Spirituality and Aging.<sup>13</sup>

## What Are the Foundations for Spirituality Research?

Spirituality was long excluded from scientific investigations as too ephemeral, mystical, theological, ineffable, or transcendent to be a researchable subject. Christians were especially resistant to its scientific study. Many of them, with others, believed it was too sacred for study by the mundane, cold, worldly methods of science. Others thought it was so inscrutable that it was far beyond the range of sensory observations. Logical positivists claimed spirituality was nothing more than a verbalized reification or product of the human imagination. Reductionists subsumed its manifestations under psychological, neurological, medical, or other concepts.

Gradually, however, the recognition grew that spirituality was no more intangible and immeasurable than numerous other internalized phenomena that already were investigated through the scientific lenses of disciplines such as psychology, epidemiology, and sociology. Already researchable were subjective nonmaterial subjects, e.g., anomie, attitudes, beliefs, opinions, prejudice, self-concepts, and marital happiness, that were accessible only through self-reports.

Narrative accounts of spiritually sensitive nurses, physicians, therapists, chaplains, pastors, and priests complemented the stories and legends spread by the testimonials of Christians and others in religious circles and popular culture. Anecdotal and observational data in literature and scholarly essays (analogous to early forms of qualitative research) stimulated further studies of spirituality through quantitative methods, especially survey research.

Today the question of whether spirituality, or at least aspects of it, can be subjected to scientific research methodologies is seldom raised, although subsidiary questions, such as differentiating spirituality from religion and the appropriateness and scope of quantitative studies, remain.

## Is Spirituality a Synonym for Religion?

Initially, everything now considered to be spiritual phenomena was subsumed under the concept of religion. Reinterpreting details of religion research reveals inclusion of numerous variables and concepts that now would be classified as "more spiritual than

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religious." Moberg's 1951 dissertation, e.g., included multidimensional measures of religious faith and beliefs alongside church membership and religious activities. It found that beliefs (now categorized as spirituality) were more likely than other measures to be correlated with good personal adjustment in old age.<sup>14</sup> Similarly, the 1967 Religious Orientation Scale that differentiated intrinsic from extrinsic religiousness was an early attempt to separately measure two types of personal religion.<sup>15</sup>

Religion and spirituality are very complex multidimensional phenomena. They overlap so much that two leading research questions are whether "spirituality" is just another word for "religion," and if not, whether it is possible to separate the two for research purposes. Allie Scott's content analysis of thirty-one definitions of religiousness and forty of spirituality that were used in social science publications over the previous century found three differentiating polarizations that became increasingly acceptable among behavioral scientists. They are organizational religion vs. personal spirituality, substantive religion vs. functional spirituality (centering upon sacred contents or their effects), and negative religiosity vs. positive spirituality. Nevertheless, one qualifying conclusion [especially relevant to Christians] was that there is little difference between the processes of religion and of spirituality for those who consider all of life to be sacred.<sup>16</sup>

For at least a decade, many have treated the concepts as so interrelated that they can be studied together as "Religion/Spirituality."<sup>17</sup> Among recent demonstrations of their overlap in people's minds are face-to-face interviews with 6,082 USA adults from three ethnic and racial sub-groups. Their self-ratings of religiousness and spirituality clearly suggest that most Americans do see differences between the two concepts, although the majority closely link them together.<sup>18</sup> Therefore the dominant trend in research is to deal with them as discrete although interrelated and overlapping variables. Thus, in her introduction to three special issues on spirituality and adult development in the *Journal of Adult Development*, Sinnott explained,

Spirituality is one's personal relation to the sacred or transcendent, a relation that then informs other relationships and the meaning of one's own life ... Religion ... refers to practices and beliefs related to a particular dogma system.<sup>19</sup>

From my perspective, spirituality is the broader concept. Out of it emerged the countless religions and pseudo-religions of the world. Their rituals, belief systems, ideologies, and institutions developed out of the original incentive to awaken, stimulate, nourish, and satisfy desires and drives that originate in the spiritual essence of every person.

## How Is Spirituality Measured?

Especially since the 1960s, numerous indexes, scales, and rating instruments have been constructed to "measure" personal religiousness. The components of each, typically including many now classified as facets of spirituality, define whatever the scale is named. By 1984, Gorsuch argued that there already were a sufficient number and variety of reasonably effective instruments to meet almost any task related to the psychology of religion. He pleaded that, instead of creating ever more new measures, psychologists should work on testing, improving, and linking with theory those already in existence.<sup>20</sup>

Soon thereafter, in-depth analyses compared twenty measures of spiritual and transpersonal constructs uncovered in a nonexhaustive survey and mentioned fifty-four more they did not discuss.<sup>21</sup> (Transpersonal constructs include spirituality as a major topic among phenomena that extend beyond direct empirical observation, such as experiences of awe, ecstasy, inner states of consciousness, creativity, love, meaning, mystical experiences, and purpose in life. They attract the attention of New Age sects, but Christian scholars recognize that they are closely related to biblical perspectives on spirituality.)<sup>22</sup> Extension of those descriptive and analytical studies at the end of the twentieth century revealed ten more research tools plus another twenty-eight not included in earlier studies.<sup>23</sup> Hill and Hood also provided descriptions and evaluations of 126 measurement scales. Eight included "Spiritual" in their titles; numerous others would now be considered primarily spiritual, and most of the rest included spiritual components.<sup>24</sup>

Dozens of scales with varying degrees of methodological sophistication relative to spirituality have been developed subsequently, so at least two hundred are now available. Many relate to the spiritual assessment of individual persons. Others aim to evaluate holistic well-being in a framework of physical or mental health, and still others aid nonsectarian

chaplains and counselors who work in settings like hospitals, colleges, businesses and industries, retirement facilities, and the armed forces. Still more are oriented mainly to the needs of nurses, physicians, or other health professionals. Some are tools for use in research, including several created to measure different kinds of praying and prayer.<sup>25</sup> Despite their variety and abundance, most are relatively unknown except among a small minority of professional practitioners within each research and service domain.

Most measures of religion and spirituality can be classified for research and other purposes under twelve domains. Hill refers to four as measures of dispositional religiousness or spirituality: general religiousness or spirituality, religious or spiritual commitment, religious or spiritual development, and religious or spiritual history. The other eight are functional assessments of religious or spiritual social participation, private practices, support, coping, beliefs and values, motivations, experiences, and techniques for regulating and reconciling relationships.<sup>26</sup>

The most widely used instrument designed for measuring general spirituality is the Spiritual Well-Being Scale (SWBS) developed by psychologists Paloutzian and Ellison.<sup>27</sup> Its uses in hundreds of studies in very diverse populations are reported in nearly four hundred articles and books. Its twenty simple questions produce a SWBS score. Ten comprise the Existential Well-Being subscale, a "horizontal dimension" of adjustment to self, community, and surroundings with items probing the respondent's sense of purpose, direction, satisfaction in life, and adjustments to self and community. The other ten are on the "vertical dimension" of Religious Well-Being, one's perception of the wellness of his or her spiritual life in relation to God. Although originated in a Christian frame of reference, it is used in non-Christian cultures for evaluating spirituality levels of general populations. Researchers constructing new religion and spirituality scales use it to test concurrent criterion validity. It is a tool for clinical counseling, for assessing the effectiveness of patient care programs, for helping individuals "assess your perceived relationship with God, sense of life purpose and life satisfaction," and for evaluations in religious congregations, although it is less helpful for distinguishing between people with high levels of spirituality than those with low or average levels

of spirituality. With rare exceptions, its scores have been positively correlated with a wide range of measures of health and well-being.<sup>28</sup>

## What Has the Research Revealed?

The results of studies relating spirituality to measures of health, well-being, personality, and other concerns are so exceptionally consistent in one direction that many researchers are surprised by their discoveries.

The growing body of evidence that there is a strong positive relationship between spiritual health and other forms of physical, psychological, and social health would seem to suggest that therapeutic interventions with clients might be enhanced by addressing spiritual dimensions of the client's life experiences.<sup>29</sup>

Many of these findings have been clearly, comprehensively, concisely, and critically summarized in numerous books, especially those by Harold G. Koenig.<sup>30</sup>

This, however, must not lead to the presumption that every activity and practice labeled as "spiritual" has only wholesome effects for every person and group. Outliers with negative results instead of the usually constructive and wholesome correlates and effects of spirituality are found in most, if not all, empirical studies. Exploring those cases and the reasons for their deviations deserves more attention than it has received to date.

Questions can also be raised about the evaluative criteria that describe events and experiences as good or bad, well or ill, and so forth. What are the values behind each label? Are they superficially time- and culture-bound or linked to only superficial feelings, hence of no enduring worth? Peterson, e.g., has reminded us that even the increasing use of the word "spirituality" in Christian circles might reflect more pathology than health.<sup>31</sup>

## Does the Research Reflect a Christian Bias?

One criticism of most spirituality research is that it strongly reflects Christian definitions and interpretations of spirituality. Whether by Christian researchers or others, it allegedly applies explicit or implicit

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Christian values that then are presumed to provide universally valid criteria for evaluating the positive or negative spiritual well-being and functional health of all people everywhere. Thus Glicksman claims that Protestant theological themes that shaped American civilization are so central to the research that its tools are inappropriate for use in non-Christian populations.<sup>32</sup> He thinks “evangelical Protestant” themes and assumptions pervade seven prominent scales that he analyzed and then contrasted with perspectives of contemporary Judaism. Those scales are weak, he claims, both from the viewpoint of excluding “right action” such as charitable acts and from the viewpoint of ignoring “the core of the Christian message—the message of sin and redemption” from their components. Therefore they neither use measures independent of a particular religious tradition nor properly reveal how faith shapes the lives of respondents.

Among several respondents to Glicksman’s stimulating critique, Oman studied details of the same scales and concluded that “the problem appears substantially smaller than the impression conveyed by Glicksman, but still merits further attention and correction.”<sup>33</sup> Moberg called attention to the ongoing need to clarify the concept of “spirituality” and associated methodological issues, while also summarizing some Jewish roots of evangelicalism that support several of the evaluative criteria.<sup>34</sup>

Nearly all prominent spirituality scales, indeed, were developed inside a cultural context of implicit Christian values, even if most constructors fail to acknowledge any source other than universal humanistic ideals. The main reason is that most of the research has been done in the USA and other countries with populations of mostly Christian backgrounds and identities. Under the European heritage of ethical and legal values grounded in Christianity, most popular evaluations use labels that simply assume what is good and bad, well and ill, upright and immoral, and the like. Besides, spirituality is a special concern of Christian theology, so some of the research was undertaken for specific Christian purposes.

A significant question is whether spirituality itself is so strictly a Christian concept that it is inappropriate for study among people with other religions. Christian terminology does slip into items included

in some “nonreligious” measurement scales. There also is such a wide variety of people’s concepts or images of God that any item referring to the deity is likely to reflect meanings so diverse that findings are not genuinely equivalent from one religious group to another, and possibly not even from one person to another. (Members of the same Christian parish reciting a liturgical creed together may have widely divergent mental images of God, Jesus, sin, forgiveness, and other religious concepts.)

Studies of the spirituality of people with non-Christian religions usually use case studies, simple survey questions, or general scales because none have been specifically developed for use in the context of their own faith. Few professional reports cover Buddhist spirituality and aging, possibly due less to disinterest in the subject than to tenets of the faith and its spiritual culture,<sup>35</sup> although an eleven-item Buddhist Beliefs and Practices Scale was developed to assess agreement with Buddhist teachings and practices.<sup>36</sup> The faith traditions and religious experience of Judaism, Islam, Buddhism, and Hinduism are described alongside those of Catholicism and Protestantism in chapters of Hood’s *Handbook*.<sup>37</sup> People in Japan, however, lack a clear equivalent for the word “spirituality,”<sup>38</sup> and Shinto is so indigenous that Isomae believes it ought not be treated as the hybrid implied by the term “Japanese religion.”<sup>39</sup>

## Is There Research on Nonreligious Spirituality?

Currently, some interpret spirituality as if it were completely separate from religion. This usually takes the form of “nontheistic” (atheistic) attempts to exclude every reference to God, worship, supernaturalism, and institutional religion. Not only are there scales to deal with spirituality apart from religion, but there also are academic, analytical, and interpretive studies that present spirituality as a “natural” phenomenon, conflating it to one or another “nonreligious” essence, such as meditation or self-realization. Ellis, e.g., argues that spirituality is misrecognized existential self-esteem.<sup>40</sup>

The most prominent analytic example is Atchley’s textbook on spirituality and aging with its wealth of perspectives on and interpretations of spiritual self-identity, journeying toward wisdom, coping

with aging and dying, a spirituality inventory, and similar topics. It defines spirituality as

... a subjective, existential region of experience. Spiritual experience begins with basic spirituality, an unadorned sense of being. To this is added a sense of 'I' as perceiver and actor, having the capacity to experience spiritual qualities through various human avenues of experience.<sup>41</sup>

Atchley believes that each person's spiritual journey is one of seeking and negotiating a landscape for which we never have perfect maps to help us discover the ground of being. Drawing mainly upon developmental experiences and qualitative resources, he emphasizes the importance of an intentional inner journey and shows how Quaker, Buddhist, and other types of reflection and contemplation can aid spiritual growth. Because his book focuses on spirituality as a topic separate from religion, it omits attention to nearly all of the huge and rapidly growing body of empirical research findings.

Both religious and antireligious biases create problems for any researcher, therapist, or educator who desires to use a single spirituality instrument in heterogeneous groups that include members outside of Christianity or any other cultural context that is the scale's origin. When no religiously neutral instruments appropriately measure spirituality with only nonreligious variables, researchers covering nonreligious or other ideological groups need to create their own.

One scale designed to measure the effect of spirituality on subjective well-being outside of a religious framework is the *Spirituality Index of Well-Being*. It aims to be a parsimonious, yet global, instrument to capture the complexity and depth of spirituality in any healthcare or other context without being "hampered" by items that gauge religiosity. Assuming spirituality is a health-related quality-of-life concept within a psychological domain, its twelve items ask (with five "strongly disagree" to "strongly agree" responses) if the respondent is unable to do much to help himself or herself, fails to understand his or her problems, knows how to begin to solve them, feels overwhelmed, has not found life's purpose, often has no way to complete whatever was started, has a great void in life, and the like. Most of the variance among its scores is accounted for by two factors,

life scheme and self-efficacy. Its scores correlate positively with those of the SWBS, especially its Existential Well-Being subscale, presumably because both include life purpose and satisfaction in addition to life experiences.<sup>42</sup>

Because of the consistently observed importance of religion and spirituality to health and the need for a holistic model to deal with health problems in their existential as well as other dimensions, Katerndahl developed a *Spiritual Symptom Scale* to complement the other components of the BioPsychoSocioSpiritual Inventory. Its seven items (none mentioning religion) summarize a medical client's sense of peace, harmony, and purpose. Among patients in two primary care clinics, spiritual symptom scores alone or in conjunction with other symptom categories were associated with higher health services utilization rates for seven of ten outcomes.<sup>43</sup>

Whether these and other nonreligious scales validly focus upon spirituality, comprise only socio-psychological measures of subjective feelings of mental health or well-being, are reductionistic perversions of spirituality measurement, or reflect some other underlying concept remains an open question.

## Is Spirituality Relevant to Other Sciences?

As ever more linkages of spirituality with other domains of personal and scholarly interest are recognized, investigating it has spread far beyond its primary homes in the psychological, social science, epidemiological, medical, and religious disciplines. For example, biological factors help to explain differences in the religious and spiritual orientations of paired twins, although environmental influences are more important.<sup>44</sup> Mystical, religious, and spiritual experiences have been linked to neuroscientific findings,<sup>45</sup> the innate genetic brain structure of humans,<sup>46</sup> consciousness rooted in the brain,<sup>47</sup> quantum physics,<sup>48</sup> mystical experiences,<sup>49</sup> and other scientific research.<sup>50</sup>

As additional associations of spirituality with other variables are revealed, novices will be tempted to believe that it is fully explained by whatever is the focus of their research. Spirituality, however, is much too huge and complex to be treated fairly by any ontological reductionisms of scientific work.

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Even on the basis of the best research revealing contributions of religion and spirituality to resolving human problems and meeting people's needs, the findings

... cannot be explained away simply as attempts to counter the fear of death, as the expression of a need to find in God or the gods fantasy substitutes for earthly parents, as a neurotic escape from the realities of life, or as symptoms of incipient or real psychosis.<sup>51</sup>

Furthermore, just because many scientists' opinions overstep the limitations of science by rejecting spirituality and the Bible as possible aspects of reality, is no reason for denying them. The fact of the existence of a spiritual dimension or of an intelligent Creator is outside the sphere of scientific examination per se. What is obvious in everyday experience need not be overlooked just because it cannot be measured.<sup>52</sup>

Without appropriate qualifications, it is easy to conclude that a research scale actually measures spirituality as a whole or that its scores are equivalent to spirituality itself. Doing either is a serious ontological reductionism, for no measurement constitutes the phenomenon it measures. Thus, a serious error to avoid is making statements that declare spirituality is nothing except whatever is named.<sup>53</sup>

In reducing everything to the laws of nature we risk denying that there is any rationality or truth behind nature's laws ... [Just because] human beings [are] made up of atoms and molecules ... that does not even begin to describe the unity we experience in our everyday lives.<sup>54</sup>

### Does Spirituality Research Confront Special Problems?

All of the methodological issues ordinarily involved in social and psychological research apply to studying spirituality, but it poses additional complications, some of which may be unique. Because spirituality is becoming a significant aspect of professional interventions and therapies, there also is a danger of interpreting it as nothing more than an additional means to an end, a tool to use for healing, coping with problems, or attaining other goals. Human beings and their conceptualizations can be observed and understood only in part, while their Creator immeasurably transcends all limits.

### Conceptual Issues

Not the least of the complications of researching spirituality are questions about the concept itself. Hundreds of definitions are available. How a researcher interprets it must interact with the definitions held by research subjects. This reflects the questions of whether spirituality is subsumed under or is a partner of religion, whether supernatural references are needed, and whether it is, at base, supernatural or nonreligious.

Using subjective data, e.g., feeling states, a sense of meaning or purpose in life, self-rated well-being, or other subjective self-evaluations, to measure spirituality can imply that it is no more than a reification of interiorized impressions that differ from one person to another and lack any objective foundation. It also opens the question of whether it is genuinely reflected by verbalized self-appraisals offered in interviews, questionnaires, narratives, and the like.<sup>55</sup> To use an analogy, thousands of people every year look good and feel well with no medical tests uncovering ailments, yet later a slow-growing cancer at or near the stage of metastasis that must have been present much earlier is discovered. Similarly, many devout saints of God experience "the dark night of the soul."<sup>56</sup> Subjective feelings can twist facts into perceptions contrary to reality.

### Linguistic Issues

Language differences easily become a source of incomparable meanings even among the members of relatively small groups. Regional and global nuances in the meanings of words, the breadth of the vocabularies of research subjects, reading- and writing-skill levels, being test-wise or not, dialects that interfere with oral communication, previous religious knowledge and spiritual experiences, and much more, influence data collection related to spirituality. The complications are accentuated whenever a research sample includes persons of different cultural backgrounds, religious traditions, educational levels, and lifestyle patterns.

Translation of scales from one language to another imposes additional complications, as is especially evident to Christians who have studied diverse religious interpretations originating in alternative meanings of the original Hebrew and Greek words in the Bible. When, e.g., my *Spiritual Well-Being Questionnaire*<sup>57</sup> was translated into Swedish, we

wondered how to word the Jewish “theological position” (faith) in a society with very few Jews. I preferred simply *Jude* or *Judaisk*, but my Swedish consultants insisted upon *Judaiska trosbekännelse* (Jewish confession of faith). Several Christians checked it, apparently realizing that their faith in Jesus Christ echoed Abraham’s faith in Yahweh (Gen. 15:6).

### Research Design

There are important questions about the appropriateness of various designs for spirituality research. Most quantitative studies use cross-sectional data gathered at only one moment of their subjects’ lifespan, but people change spiritually over time, some by life-changing conversions and others by gradual developmental modifications. Even if all research subjects are within a narrow age range, they may differ greatly in spiritual alertness and maturity. In terms of biblical evaluations, some are spiritually dead, while those “born anew” may remain spiritual infants (1 Cor. 3:1–4; Heb. 5:11–14).

Many studies use data from convenience samples, especially college students, most of whom have had limited personal experiences, are relatively immature spiritually, and represent a far narrower scope of spiritual experiences than most middle-aged and older adults. This is an important limitation of spirituality scales developed by studying only youths.

Assessments to discover and measure changes in spirituality that occur from a ministry or program intended to produce spiritual growth can be biased. By using the same instrument for before and after evaluations, results in the repeated “test” may be modified by the habituation of recalling details.

Longitudinal studies of spirituality at different stages of the same persons’ lives are very desirable to assess either developmental growth or the effects of influences such as family, education, or participation in church ministries. However, they are contaminated by intervening events and experiences of their subjects, some of which reinforce and some counteract the variables under investigation. The inevitable dropouts during research can also bias results. Thus, since people with the lowest levels of religiousness usually die earliest,<sup>58</sup> the average spirituality level of a typical large group can increase with age even without any changes among the survivors.

Experimental interventions aimed at modifying personal spirituality are confronted with major complications, whether the change agent is education, evangelism, counseling, Bible study groups, or other influences. Sometimes one can coerce members of a “captive audience” to participate behaviorally, but even then no spiritual change is certain. If spirituality is basically an inner orientation “of the heart,” it cannot be imposed upon people from the outside. Besides, questions about feasibility include important theological issues regarding “free will” and the ethics of research.

### Statistical Analyses

As already suggested, most spirituality research has used quantitative methods, gathering data from questionnaires and interviewing schedules. The simplified answers to response categories of questions can be analyzed with rigorous statistical sophistication, but their simplicity is itself a source of difficulty because it waters down complex feelings, commitments, beliefs, behaviors, qualifications, and relationships with God and people.

In addition, many studies, including some used for scale construction, are based upon small samples that lack statistical significance even when observed differences are large, while others with big national samples produce statistically significant differences with a narrow range of variations. The nature of statistical measurement in and of itself thereby raises questions about the certainty of generalizations, especially when few people have a reported characteristic. In my opinion, the social significance represented by large and consistent but statistically insignificant results from numerous small samples is more important than small but statistically significant differences from a large sample.

### Qualitative Studies

Because spiritual phenomena have a richness that is difficult to capture by statistically manipulable answers, qualitative methods are exceptionally suitable for studying them. Besides their typical uses during the exploratory stages of research, qualitative methods can lead to improved understanding of relationships between the subjects’ interpretations of their own and others’ spirituality, its connections with their own sense of meaning in life and purpose

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for living, its impact upon their perceived well-being, the influence of past experience, its connections with religion, and much more.

Despite that rich potential, an analysis of 2,726 articles published from 1978 to 2003 in seven journals that include articles relevant to psychology and spirituality found only twenty-two based upon qualitative methods.<sup>59</sup> Of them, eighteen used face-to-face interviews, three of which were in focus groups. Seven used a phenomenological design that was also referred to as a narrative approach or clinical interviewing, four applied grounded theory, and two used research software.

### Researcher Bias

Because spirituality is a nebulous concept, a shrewd scholar using any method can subtly or unconsciously shape its representations to fit the postulates and presuppositions of his or her frame of reference, whether it is an academic discipline, theory, religion, or philosophical ideology. More often than not, the narrower and more precise the targeted scope and definition of spirituality, the less likely will a definitionally limited instrument meet the interests and needs of those who identify themselves with divergent disciplines, religions, or belief systems. On the other hand, the more generalized and universalized the instrument, the less the likelihood that it will satisfy the precise interests and needs of persons within any particular spiritual frame of reference.

### Ethical Issues

Social and professional pressures drive researchers toward conformity to whatever values and practices seem most acceptable or politically correct in their society or subculture and subtly push them toward minimizing attention to whatever is unique in their own ideology and faith.<sup>60</sup> Christians, like others, must carefully weigh those issues to find the best professional and personal resolution for each situation. They also must face the issue of whether it is ethical to use political, institutional, or other influences to force Christian behavioral norms, including those of research instruments that allow only responses based upon unique Christian values, upon people of other faiths, no religion, or NUNYAs (none of your business).<sup>61</sup>

## Do Spirituality Scales Really Measure Spirituality?

Every attempt to measure spirituality is based upon one or more observable reflectors that score each individual. Typically these are components, concomitants, correlations, or consequences that allegedly reflect a person's spirituality or a subsidiary such as spiritual intelligence, orientation, maturity, gifts, self-assessment, and so forth. Because each item included is chosen as a possible sign or symbol of the aspect of spirituality under investigation, every measuring instrument is a product of postulates and assumptions that are more often implicit than overtly expressed. Whatever the researcher believes to be outside of possible relevance is not even considered for inclusion. The validity of the instrument (whether it genuinely measures spirituality or a subcategory) thus depends upon presuppositions that preselect and omit variables before empirical data gathering. If truly important variables are omitted from the initial selection, they are never tested. (Ideally, prior knowledge and qualitative explorations help to overcome that limitation.)

Central to questions about the validity of instruments for evaluating and measuring spiritual wellness and illness is the issue of widely diverse standards for judging elements such as commitment, devoutness, ritual faithfulness, and other criteria used in various world religions, their subsidiary denominations and sects, and the functionally equivalent philosophies, therapies, and practices that serve as parts of spirituality or as its synonyms, analogies, or substitutes. Do those evaluation systems and the research instruments built upon them genuinely measure spirituality or only something else connected with or related to one of its disparate interpretations? What does any given scale really measure? To date we have, for the most part, simply accepted at face value the claims of psychologists and others who create spirituality scales, affirming that they indeed measure spirituality.

Since the indicators included in a scale are only *components* of spirituality, those parts obviously do not comprise its whole. If they are *concomitants*, any relationships found could be little more than the *coincidence* of disparate events that happen together at the same time. If they are *correlations*, both variables may be common causes or effects of

the same chains of events. If they are *consequences* of spirituality, its products cannot be spirituality itself. The same holds true if they are verbal or other *symbols* of spirituality, for words, pictures, music, sculpture, or whatever else depicts spirituality is not spirituality. In the final analysis, therefore, the validity of any index or scale cannot be established by scientific investigations alone. It depends upon theological and philosophical criteria that ultimately extend beyond the limits of empirical observation.

The complexity of these epistemic relationships means that the measurement process itself has impenetrable limitations. Even if there is agreement on a conceptual definition of spirituality, its operational definition for empirical applications is fraught with difficulties. Unless there is agreement about an outside basis for evaluation, the ultimate conclusion must necessarily be that *spirituality in each case is only whatever is measured by the spirituality scale under consideration*. Each scale is its own operational definition. Although many scales are closely related to others that have overlapping components, some are completely different from all the rest. Do all genuinely measure spirituality?

Allegations about hidden “Christian values” in the research reflect those complications. Christian values necessarily must be the foundation for explicitly Christian scales, but whose values should govern those intended to be generic or universal? The analysis of these complex interrelationships is a continual challenge for religion scholars and philosophers of religion as well as for social and behavioral scientists.

## How Do Christians Interpret Spirituality?

The Bible clearly teaches that humanity originated in creation by God as males and females made in “his” image (Gen. 1:27). Obviously, that image is not physical, for every human body is unique. However we interpret and fine tune that *imago Dei*, it is explained by Jesus who taught that “God is spirit” (John 4:24). Therefore our essence, too, must be *spirit* (a concept often interchangeable with *soul* in the Bible). As spirit, we possess bodies and minds; we are not bodies that possess spirits and minds. Yet, as Hall explained, we are spirits embodied in the material and physical world God created, and our bodies

have the purpose of functioning within facilitating relationships of service that show God to others.<sup>62</sup>

In the process of creating humans as trinitarian spirits (with body, soul, and mind), God “set eternity in the hearts of men” (Eccles. 3:11, NIV). The inner nature of humanity innately seeks God and wants to please him, however nebulous and distorted their images of him may have become through millennia of social and cultural modifications that have produced diverse religions and far-fetched philosophical speculations. To use psychologist Helminiak’s words, “... simply to be human is already to be spiritual. So underlying all expressions of spirituality is a core that is universal, a core that is simply human.”<sup>63</sup>

Barrett’s cognitive science of religion accordingly concludes that belief in divinity is so inevitable a consequence of the kind of minds we have that theism is our natural condition.<sup>64</sup> People everywhere try to transcend the natural world and thereby confirm that the ultimate referent for spirituality is the Almighty Creator in whose image all were created. He is revealed most clearly of all by his incarnation in the person of Jesus Christ (Heb. 1:1–4) but also through all of his created universe and the gentle inner whispers of the Holy Spirit calling attention to things we observe, experience, and do. Those revelations help us make sense of scientific (and other) discoveries, interpretations, and contemplations in the context of biblical truths.

Biological research provides supportive evidence that spirituality is a built-in biological component of human nature.<sup>65</sup> God did “set eternity in human hearts,” so *all of life is spiritual* or sacred and everything human relates to or mirrors spirituality. Therefore every thought, feeling, and action reflects spirituality in some way, and almost all of them could be used in research, along with other variables, as indicators or reflectors of spirituality.

No wonder every known group of people has, or at least has had, a religion of some kind! Most have included sacrifices and offerings to win the favor or deflect the anger of one or more demons or deities. The preliterate and ancient religions originated, in my opinion, in the undescribed and unexplained relationships with the Creator that led Cain and Abel to offer up sacrifices to him (Gen. 4:3–4). Later, when their descendants were scattered across the earth after their sin at the Tower of Babel (Gen. 11:1–9),

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they brought atoning sacraments along. Over centuries of separation from each other in diverse environmental and cultural settings, the details of their rituals and accompanying meanings of sacrifices were gradually modified into today's global variations of spiritual worship and religious systems. (I hope archeological and other researchers will some day discover the resources necessary to test that hypothesis.)

The Bible teaches that all humanity are spiritual beings who stem from a common ancestry (Acts 17:26–29). It reminds us that Christian spiritual worship requires the living sacrifice of offering one's entire being to God (Rom. 12:1–2). That means praying without ceasing (1 Thess. 5:17), not only during worship services, prayer gatherings, and personal devotions. Loving God with all of one's heart, soul, mind, and strength (Luke 10:27; Matt. 22:37–40) is a 24/7 spiritual activity, not an occasional part-time experience separate from the rest of life.<sup>66</sup> Believers who are spiritually alive through faith in the Lord are "God's workmanship, created in Christ Jesus to do good works" (Eph. 2:10). On average they are more sensitive to the issues, values, biases, assumptions, limitations, and applications related to spirituality than are people who remain spiritually "dead in transgressions and sins."

### Human Finitude

Since spirituality is the essence of human nature, everything in which people are engaged is related to it. Nevertheless, because it is the core or ground of being, it is easy either to ignore it or to slip into thinking that one's own dominant interest is its center and consequently to view all human experience from only that limited perspective. Reaching simplified conclusions about spirituality is one of the most subtle forms of ontological reductionism, especially if that focus obscures manifestations, however faint, of the mystical work of the Almighty Creator.

Many problems of spirituality research stem from failure to recognize the limitations of science, on the one hand, and of Christian faith, on the other. The sciences are based upon observing only "natural" phenomena. God and much of his work are scientifically unobservable, so research is limited to "methodological naturalism"<sup>67</sup> or "methodological atheism."<sup>68</sup> Except for theoretical and speculative attempts to interpret that which cannot be observed,

science is limited to empirically discernible data. That, however, does not preclude the "philosophical theism" of Christian, Jewish, and Muslim scientists who believe that human beings, the universe, and everything it contains were made by the invisible Creator and therefore reflect his handiwork.

## What Is the Future of Spirituality Research?

Spirituality research is flourishing. When I first contemplated writing this article, I thought it ideally ought to summarize all the definitions and scales that have been developed to measure and assess spirituality and its numerous subsidiaries. Analysis of those scales should list all the indicators (questions and topics) that comprise each operational definition, demonstrating side-by-side which indicators are shared and which are exclusive, so that it shows how a scale is distinctly different from all others. In addition, I wanted to summarize and compare details of the specific methodological procedures used for collecting and analyzing data, for they also help to explain similarities and differences of findings.

Alas, those tasks are undone! They would require an ever-expanding activity for a year or more of full-time work and result in an encyclopedic report. Also awaiting attention is the collection and analysis of voluminous interpretations of spirituality tucked away in literature, history, the arts, religious studies, and other humanities.

### The Multiplication of Research Scales

The challenge to researchers who need spirituality instruments explicitly oriented to the beliefs, values, languages, and cultures of non-Christian faiths is slowly being resolved. However, there are few explicitly "Christian" instruments focused directly upon elements at the heart of the value systems of fundamentalist, Pentecostal, Catholic, Orthodox, or other branches of Christianity.<sup>69</sup> Because most scales attempt to be generic, unique elements, such as questions about an evangelical faith in Jesus Christ as the only way to eternal salvation and trusting his vicarious death and resurrection for forgiveness of sin, usually are omitted. Research on any Christian group that believes that the unique aspects of its own Reformed, Arminian, charismatic, denominational, or other distinctives are important may require its own

spirituality subscale. Because of the large variations within and between major religious groups, research reports always should designate clearly whichever definitions and measures of spirituality are used.

### "Cafeteria Religiosity"

A challenge to Christian leaders is the tendency of many of their people and even some clergy<sup>70</sup> to create their own religion by patching together pieces of faith, worship, ethics, and practices that make them feel good, regardless of their source and whether their creation is or is not consistent with creeds they recite or the Bible they claim as their guide to faith and action.<sup>71</sup>

Currently the word *spirituality* glows with favor, so numerous New Age sects, alternative healing cults, and commercial hucksters use words such as "spiritual" to describe their rituals, attract members, and sell their services or wares. What they allege to be good spirituality may be as radically opposite to values of the Bible as the biblical words of Satan were when he tempted Jesus (Matt. 4:1-11; 2 Cor. 11:14-15). It is very easy to "let the world around you squeeze you into its own mould ... [instead of letting] God re-mould your minds from within" (Rom. 12:2, Phillips). Christians are squeezed by social, economic, political, and other pressures of society and its subcultures to rationalize worldly standards instead of conforming to whatever genuinely reflects the mind and example of Christ.

Three-fourths of the US population identify themselves as Christians, but many are becoming more like Hindus who believe there are many paths to God. With a strong propensity for a "divine-deli-cafeteria religion" that selects and combines its own pieces of different religions, thinking all seem the same and with 24% believing in reincarnation, a Hindu spirit seems to be replacing Christian orthodoxy.<sup>72</sup>

### The Next Great Discovery?

Richard Cox has boldly asserted, "The next great discovery will be in the realm of the Spirit. The ramifications of this discovery for the church will be beyond our current imagination."<sup>73</sup> On the growing edge of that prediction are research reports on the genome and countless other subjects in peer-reviewed journals, conferences on topics such as consciousness that

present massive evidence for the reality of the Soul and Spirit, and the coming together of the fields of psychology and religion. The Christian church, Cox believes, therefore needs to practice an "invasive theology" out of the conviction that its message is truly life changing. Centuries of its results are equivalent to empirical experiments that demonstrate the power of what it preaches and teaches.<sup>74</sup>

Recent demonstrations of that power include the renunciation of atheism by Antony Flew, who in 2004 publicly announced that he now accepts the existence of God. Major influences on his shift were scientific findings of DNA investigations, data on the fine tuning of the universe, the inability of evolutionists to explain the first emergence of life, and fallacious circular reasoning of atheists unable to explain the origin of the universe. Reason and science, not faith, were progenitors of his radical turnaround.<sup>75</sup> Flew is not alone. "Since the 1980s and 1990s, there has been a renaissance of theism among analytic philosophers."<sup>76</sup>

## Conclusions

All research on spirituality is incomplete and imperfect. Despite significant progress, especially since the late 1980s, it still is in its infancy. Every research method and tool used to identify, describe, analyze, evaluate, and apply the findings about spirituality touches on only fragments of its totality. Spirituality is so comprehensive, universal, and all-inclusive that humans can apprehend only miniscule bits and pieces that are but tiny samples reflecting its amazing totality.

In the final analysis, spirituality is "the demonstration of the Spirit. It is an action of its originator, the soul, i.e., Spirit."<sup>77</sup> Because we *are* spirit, it is impossible to separate ourselves from spirituality to study it with unbridled objectivity, and many of its immaterial aspects are outside and beyond the bounds of scientific observation. As Fontana concludes,

... the urge to religious and spiritual experience and belief, and the consequences of this urge for human behavior, are among the greatest mysteries facing psychology. In spite of countless words written over the centuries, we are still a long way from finding answers to these mysteries.<sup>78</sup>

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The mysteries of spirituality are at the core of human existence, pervading everything that human beings are and do. It is impossible to fully understand it and all of its complex connections, even though every activity, belief, commitment, and motivation reflects it positively or negatively in some way.

This means that the large and expanding number of scales that allegedly measure the immeasurable spirituality are a benefit, not a problem. Whether they include religiosity or not, all provide strong or weak reflections of their subjects' spirituality, even when reversals of positive and negative scores may seem necessary to fit contrasting values of Christian and other ideologies. Ultimately, however, only God knows for sure whether a person is spiritually well, so it may forever be impossible for mere humans to discover and measure levels of spiritual well-being with absolute certainty despite the guidelines for righteous living in the Bible.

Scientific research on the material universe is rapidly expanding human knowledge of both its vastness and its intricately interacting minute parts, processes, and relationships. Similarly, research on spirituality is expanding our perceptions toward both an ever broader awareness of its vast domains and a deeper discernment of its largely impenetrable components, processes, and influences.

As we continue to study snippets of spirituality and its manifestations both within and outside of religion, we will generate increasing light on its complexities and expanding wisdom for its applications to social and individual behavior. Yet far beyond the scope of research methods related to spirituality and their findings, there forever is more and more and more.

Puzzles will always remain and will serve as a stimulus to further growth. Yet Christians who use the paradoxes and dilemmas of life constructively will win the satisfaction of bringing healing to both individuals and society in our troubled world. They will reap the immediate satisfactions of God's *shalom* ... [and] the ultimate reward of being a part of the great multitude "from every nation, tribe, people and language, standing before the throne and in front of the Lamb," their redeemer (Rev. 7:9, NIV).<sup>79</sup>

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## Notes

- <sup>1</sup>David O. Moberg, "Spirituality and Science: The Progress, Problems, and Promise of Scientific Research on Spiritual Well-Being," *Journal of the American Scientific Affiliation* 38, no. 3 (1986): 186–94. (That article serves as an introduction to this one.)
- <sup>2</sup>Wade C. Roof, *Spiritual Marketplace: Baby Boomers and the Remaking of American Religion* (Princeton, NJ: Princeton University Press, 1999).
- <sup>3</sup>See, e.g., Eileen Barker, ed., *The Centrality of Religion in Social Life: Essays in Honour of James A. Beckford* (Oxon, UK: Ashgate Publishing, 2008); and Adrian Wooldridge, *God Is Back: How the Global Revival of Faith is Changing the World* (New York: The Penguin Press, 2009).
- <sup>4</sup>Examples include the interdisciplinary conference on "Alternative Spiritualities, the New Age and New Religious Movements in Ireland" at the National University of Ireland, Oct. 30–31, 2009; the sixth international conference of the SIEF Working Group on Ethnology of Religion, devoted to "Experiencing Religion (illuminating spiritual experience)" in Warsaw, Poland, June 2–3, 2010; the theme of "Religion: A Human Phenomenon" chosen to encourage discussion of religions and religious phenomena across traditional geographical and temporal boundaries at the XXth Quinquennial World Congress of the International Association for the History of Religions, Toronto, Aug. 15–21, 2010; an international conference on "Politics, Poverty and Prayer" at the Africa International University in Nairobi, Kenya, July 22–25, 2010; and an international conference on "Changing Gods: Between Religion and Everyday Life" at the University of Torino, Italy, Sept. 9–11, 2010.
- <sup>5</sup>This resulted in a paper by David O. Moberg at ASA's 1965 annual meeting, which was subsequently published in the *Journal of the American Scientific Affiliation* under the title, "Science and the Spiritual Nature of Man," 19, no. 1 (1967): 12–17.
- <sup>6</sup>Charles Y. Glock, "On the Study of Religious Commitment," Research Supplement, *Religious Education* 59, no. 4 (1962): S-98–S-110.
- <sup>7</sup>Luigi Sturzo, *The True Life: Sociology of the Supernatural*, trans. Barbara Barclay Carter (London: Geoffrey Bles, 1947).
- <sup>8</sup>*Nephesh*, the Hebrew word for soul, is also variously translated as spirit, person, being, creature, and so forth.
- <sup>9</sup>Hartzell Cobbs, "A Small Room in Kolkata: The Spiritual Gifts of Caregiving," *Aging Today* 30, no. 4 (2009): 10.
- <sup>10</sup>Moberg, "Science and the Spiritual Nature of Man," and David O. Moberg, "The Encounter of Scientific and Religious Values Pertinent to Man's Spiritual Nature," *Sociological Analysis* 28, no. 1 (1967): 22–33.
- <sup>11</sup>David O. Moberg, *Spiritual Well-Being: Background and Issues* (Washington, DC: White House Conference on Aging, 1971), 3. As customary then, its references to "man" were to all humanity, not sexist allusions to one gender as if only males are important.
- <sup>12</sup>James A. Thorson and Thomas C. Cook Jr., eds., *Spiritual Well-Being of the Elderly* (Springfield, IL: Charles C. Thomas Publisher, 1977), xiii.
- <sup>13</sup>James Ellor, "FORSA Celebrates Traditions of Diversity, Fellowship and Service," *Aging Today* 30, no. 4 (July–August 2009): 7, 9.
- <sup>14</sup>David O. Moberg, *Religion and Personal Adjustment in Old Age* (Ph.D. diss., University of Minnesota, 1951).

- <sup>15</sup>G. W. Allport and J. M. Ross, "Personal Religious Orientation and Prejudice," *Journal of Personality and Social Psychology* 5 (1967): 432-43. The ROS is still in use; e.g., it is among the scales used by Mark Brennan and Thalia MacMillan, "Spirituality, Religiousness, and the Achievement of Vision Rehabilitation Goals among Middle-Age and Older Adults," *Journal of Religion, Spirituality and Aging* 20, no. 4 (2008): 267-87.
- <sup>16</sup>B. J. Zinnbauer, K. I. Pargament, and A. B. Scott, "The Emerging Meanings of Religiousness and Spirituality: Problems and Prospects," *Journal of Personality* 67, no. 6 (1999): 889-919.
- <sup>17</sup>B. J. Zinnbauer and K. I. Pargament, "Capturing the Meanings of Religiousness and Spirituality: One Way Down from a Definitional Tower of Babel," *Research in the Social Scientific Study of Religion* 13 (2002): 23-54.
- <sup>18</sup>Linda M. Chatters, Robert Joseph Taylor, Kaim Bullard, and James S. Jackson, "Spirituality and Subjective Religiosity among African Americans, Caribbean Blacks, and Non-Hispanic Whites," *Journal for the Scientific Study of Religion* 47, no. 4 (2008): 725-37.
- <sup>19</sup>Jan D. Sinnott, "Introduction: Special Issue on Spirituality and Adult Development, Part I," *Journal of Adult Development* 8, no. 4 (2001): 199-200.
- <sup>20</sup>Richard L. Gorsuch, "Measurement: The Boon and Bane of Investigating Religion," *American Psychologist* 39 (1984): 228-36.
- <sup>21</sup>Douglas A. MacDonald, Laura LeClair, Cornelius J. Holland, Aaron Alter, and Harris L. Friedman, "A Survey of Measures of Transpersonal Constructs," *Journal of Transpersonal Psychology* 27, no. 2 (1995): 171-235.
- <sup>22</sup>David O. Moberg, "Christian Spirituality and Transpersonal Sociology," *Research in the Social Scientific Study of Religion* 12 (2001): 131-63.
- <sup>23</sup>Douglas A. MacDonald, Harris L. Friedman, and Jeffrey G. Kuentzel, "A Survey of Measures of Spiritual and Transpersonal Constructs: Part One—Research Update," *Journal of Transpersonal Psychology* 31, no. 2 (1999): 137-54.
- <sup>24</sup>Peter C. Hill and Ralph W. Hood Jr., eds., *Measures of Religiosity* (Birmingham, AL: Religious Education Press, 1999).
- <sup>25</sup>Bernard Spilka, "Religious Practice, Ritual, and Prayer," in *Handbook of the Psychology of Religion and Spirituality*, ed. R. F. Paloutzian and C. L. Park (New York: Guilford Press, 2005), 365-77.
- <sup>26</sup>Peter C. Hill, "Measurement in the Psychology of Religion and Spirituality: Current Status and Evaluation," in *Handbook*, ed. Paloutzian and Park, 43-61.
- <sup>27</sup>Raymond F. Paloutzian and Craig W. Ellison, "Loneliness, Spiritual Well-Being, and Quality of Life," in *Loneliness: A Sourcebook of Current Theory, Research, and Therapy*, ed. L. A. Peplau and D. Pearlman (New York: Wiley Interscience, 1982), 224-37; R. F. Paloutzian and C. W. Ellison, *Manual for the Spiritual Well-Being Scale* (Nyack, NY: Life Advance, Inc., 1991); R. K. Bufford, R. F. Paloutzian, and C. W. Ellison, "Norms for the Spiritual Well-Being Scale," *Journal of Psychology and Theology* 19 (1991): 56-70; for the 2010 version of its website, go to [www.lifeadvance.com/spiritual-well-being-scale/8-research.html](http://www.lifeadvance.com/spiritual-well-being-scale/8-research.html) (Accessed February 10, 2010).
- <sup>28</sup>See M. F. Ledbetter, L. A. Smith, W. L. Vosler-Hunter, and J. D. Fischer, "An Evaluation of the Research and Clinical Usefulness of the Spiritual Well-Being Scale," *Journal of Psychology and Theology* 19 (1991): 49-55; R. F. Paloutzian, "A Time-tested Tool: The SWB Scale in Nursing Research," *Journal of Christian Nursing* 19, no. 3 (2003): 16-9.
- <sup>29</sup>David B. Simpson, Jody L. Newman, and Dale R. Fuqua, "Spirituality and Personality: Accumulating Evidence," *Journal of Psychology and Christianity* 26, no. 1 (2007): 33-44. See also P. S. Richards and A. E. Bergin, *A Spiritual Strategy for Counseling and Psychotherapy* (Washington, DC: American Psychological Association, 1997).
- <sup>30</sup>Among the most useful overviews of the research compiled by Harold G. Koenig are *Medicine, Religion, and Health: Where Science and Spirituality Meet* (Conshohocken, PA: Templeton Foundation Press, 2008) and his massive survey and critique co-authored by Michael E. McCullough and David B. Larson, *Handbook of Religion and Health* (New York: Oxford University Press, 2001). Brief summaries are in D. O. Moberg, ed., *Spirituality and Aging* (Binghamton, NY: Haworth Press, now Taylor and Francis, 2001).
- <sup>31</sup>Eugene H. Peterson, *Subversive Spirituality* (Grand Rapids, MI: Eerdmans, 1997).
- <sup>32</sup>Allen Glicksman, "The Contemporary Study of Religion and Spirituality among the Elderly: A Critique," *Journal of Religion, Spirituality and Aging* 21, no. 4 (2009): 244-58.
- <sup>33</sup>Doug Oman, "Unique and Common Facets of Religion and Spirituality: Both Are Important," *Journal of Religion, Spirituality and Aging* 21, no. 4 (2009): 275-86.
- <sup>34</sup>David O. Moberg, "Predicaments in Researching Spirituality and Religion: A Response to Glicksman's Contemporary Study of Religion and Spirituality among the Elderly," *Journal of Religion, Spirituality and Aging* 21, no. 4 (2009): 297-309.
- <sup>35</sup>Ronald Y. Nakasone, "A Brief Review of Literature of Buddhist Writings on Spirituality and Aging," in *Methods in Religion, Spirituality and Aging*, ed. James W. Ellor (New York: Routledge, 2009), 211-7.
- <sup>36</sup>Tipawadee Emavardhana and Christopher D. Tori, "Changes in Self-Concept, Ego Defense Mechanisms, and Religiosity following Seven-Day Vipassana Meditation Retreats," *Journal for the Scientific Study of Religion* 36, no. 2 (1997): 194-206.
- <sup>37</sup>Ralph W. Hood Jr., ed., *Handbook of Religious Experience* (Birmingham, AL: Religious Education Press, 1995).
- <sup>38</sup>M. Takahashi and S. Ide, "Implicit Theories of Spirituality across Three Generations: A Cross-Cultural Comparison in the U. S. and Japan," *Journal of Religious Gerontology* 15, no. 4 (2003): 15-38.
- <sup>39</sup>J. Isomae, "Rethinking 'Japanese Religion': The Transcendental and the Indigenous." Paper presented at the 19th World Congress of the International Association for the History of Religions, Tokyo, March 28, 2005.
- <sup>40</sup>Thomas B. Ellis, "On Spirituality: Natural and Non-natural," *Religion Compass* 2, no. 6 (2008): 1117-38.
- <sup>41</sup>Robert C. Atchley, *Spirituality and Aging* (Baltimore, MD: The Johns Hopkins University Press, 2009), 147.
- <sup>42</sup>Timothy P. Daaleman and Bruce B. Frey, "The Spirituality Index of Well-Being: A New Instrument for Health-Related Quality-of-Life Research," *Annals of Family Medicine* 2, no. 5 (2004): 499-503.
- <sup>43</sup>David A. Katerndahl, "Impact of Spiritual Symptoms and Their Interactions on Health Services and Life Satisfaction," *Annals of Family Medicine* 6, no. 5 (2008): 412-20.

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- <sup>44</sup>Matt Bradshaw and Christopher G. Ellison, "Do Genetic Factors Influence Religious Life? Findings from a Behavior Genetic Analysis of Twin Siblings," *Journal for the Social Scientific Study of Religion* 47, no. 4 (2008): 529–44.
- <sup>45</sup>Kevin S. Seybold, "God and the Brain: Neuroscience Looks at Religion," *Journal of Psychology and Christianity* 24, no. 2 (2005): 122–9.
- <sup>46</sup>D. Hamer, *The God Gene: How Faith Is Hardwired into Our Genes* (New York: Doubleday, 2004).
- <sup>47</sup>A. B. Newberg, E. d'Aquili, and V. Rause, *Why God Won't Go Away: Brain Science and the Biology of Belief* (New York: Ballantine Books, 2001).
- <sup>48</sup>Fred Alan Wolf, *The Spiritual Universe: How Quantum Physics Proves the Existence of the Soul* (New York: Simon and Schuster, 1996); and P. Zoeller-Greer, "Genesis, Quantum Physics and Reality: How the Bible Agrees with Quantum Physics ...," *Perspectives on Science and Christian Faith* 52, no. 1 (2000): 8–17. See also Jeffrey Satinover, "Quantum Theory and the Boundary between Science and Spirit: Some Remarks from a Friend of Kabbalah," *World Futures: The Journal of General Evolution* 64, no. 4 (2006): 300–8.
- <sup>49</sup>Barbara Bradley Hagerty, *Fingerprints of God: The Search for the Science of Spirituality* (New York: Riverhead Books, 2009).
- <sup>50</sup>Francis Collins, *The Language of God: A Scientist Presents Evidence for Belief* (New York: Free Press, 2006).
- <sup>51</sup>David Fontana, *Psychology, Religion, and Spirituality* (Oxford: British Psychological Society and Blackwell Publishing, 2003), 228.
- <sup>52</sup>Martinez J. Hewlett, "What Price Reductionism?" in *Science and the Spiritual Quest: New Essays by Leading Scientists*, ed. W. M. Richardson, R. J. Russell, P. Clayton, and K. Wegter-McNelly (London: Routledge, 2002), 82–9.
- <sup>53</sup>This "nothing buttery" fallacy is thoroughly exposed in Donald M. MacKay, *The Clockwork Image: A Christian Perspective on Science* (Downers Grove, IL: InterVarsity Press, 1974).
- <sup>54</sup>Dinesh D'Souza, *What's So Great about Christianity* (Washington, DC: Regnery Publishing, 2007), 247, 246.
- <sup>55</sup>David O. Moberg, "Epistemological Issues in Measuring Spirituality," *Annals of Family Medicine* (March 16, 2004): <http://annalsfm.highwire.org/cgi/eletters/2/1/49> (Accessed February 10, 2010).
- <sup>56</sup>Gerald G. May, *The Dark Night of the Soul* (San Francisco, CA: HarperSanFrancisco, 2004).
- <sup>57</sup>See Michael J. Boivin, reviewer, "Spiritual Well-Being Questionnaire (Moberg, 1984)," in *Measures of Religiosity*, ed. Hill and Hood, 375–81.
- <sup>58</sup>Koenig, McCullough, and Larson, *Handbook*, 385–6.
- <sup>59</sup>Jamie D. Aten and Barbara Couden Hernandez, "A 25-Year Review of Qualitative Research Published in Spiritually and Psychologically Oriented Journals," *Journal of Psychology and Christianity* 24, no. 3 (2005): 266–77.
- <sup>60</sup>For one introduction to these issues, see David O. Moberg, "Assessing and Measuring Spirituality: Confronting Dilemmas of Universal and Particular Evaluative Criteria," *Journal of Adult Development* 9, no. 1 (2002): 47–60.
- <sup>61</sup>See Reeve Robert Brenner, "Nons, Nunyas, Appreciative Inquiry, and the Aged," *Journal of Religion, Spirituality and Aging* 21, no. 1–2 (2009): 119–30.
- <sup>62</sup>Elizabeth Lewis Hall, "What Are Bodies For? An Integrative Examination of Embodiment," *Christian Scholar's Review* 39, no. 2 (2010): 159–75.
- <sup>63</sup>Daniel Helminiak, *The Human Core of Spirituality: Mind as Psyche and Spirit* (Albany, NY: State University of New York Press, 1996), 272. For further discussion of the inner self as an aspect of the whole person, see Nancey Murphy, *Bodies and Souls, or Spirited Bodies?* (New York: Cambridge University Press, 2006).
- <sup>64</sup>Justin L. Barrett, *Why Would Anyone Believe in God?* (Walnut Creek, CA: AltaMira Press, 2004).
- <sup>65</sup>David Hay, *Something There: The Biology of the Human Spirit* (Philadelphia, PA: Templeton Foundation Press, 2007).
- <sup>66</sup>See D. O. Moberg, *Wholistic Christianity* (Elgin, IL: Brethren Press, 1985).
- <sup>67</sup>Patrick McDonald and Nivaldo J. Tro, "In Defense of Methodological Naturalism," *Christian Scholar's Review* 38, no. 2 (2009): 201–29.
- <sup>68</sup>For a popularized explanation of "methodological atheism," see D'Souza, *What's So Great*, 55–64.
- <sup>69</sup>One exception is the Mormon Scale reviewed by Susan Sheffer, "Attitudes toward the LDS Church Scale (Hardy, 1949)," in *Measures of Religiosity*, ed. Hill and Hood, 471–8.
- <sup>70</sup>Alexander D. Salvato, "A Buddhist Bishop in the UP," *Religion in the News* 12, no. 1 (Spring 2009): 14–6.
- <sup>71</sup>See the Barna Research Group's interpretations of challenges and opportunities this offers Christian pastors: "Many Churchgoers and Faith Leaders Struggle to Define Spiritual Maturity," *Barna Update* (website), May 11, 2009, [www.barna.org/barna-update/article/12-faithspirituality/264-many-churchgoers-and-faith-leaders-struggle-to-define-spiritual-maturity](http://www.barna.org/barna-update/article/12-faithspirituality/264-many-churchgoers-and-faith-leaders-struggle-to-define-spiritual-maturity) (Accessed March 9, 2010).
- <sup>72</sup>Lisa Miller, "We Are All Hindus Now," *Newsweek* (Aug. 24 and 31, 2009): 70. Her thesis is based upon results from public opinion polls.
- <sup>73</sup>Richard H. Cox, *The Sacrament of Psychology: Psychology and Religion in the Postmodern American Church* (Sanford, FL: InSync Press, 2002), 288.
- <sup>74</sup>*Ibid.*, 288–95.
- <sup>75</sup>Antony Flew with Roy Abraham Varghese, *There Is a God: How the World's Most Notorious Atheist Changed His Mind* (New York: HarperCollins Publishers, 2008).
- <sup>76</sup>*Ibid.*, 149.
- <sup>77</sup>Cox, *The Sacrament of Psychology*, 289.
- <sup>78</sup>Fontana, *Psychology, Religion, and Spirituality*, 228.
- <sup>79</sup>Moberg, *Wholistic Christianity*, 200.

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