WHERE GOD AND SCIENCE MEET

How Brain and Evolutionary Studies Alter Our Understanding of Religion

VOLUME 3

The Psychology of Religious Experience

Edited by Patrick McNamara

PRAEGER PERSPECTIVES

Psychology, Religion, and Spirituality

J. Harold Ellens, Series Editor

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Series Foreword

The interface between psychology, religion, and spirituality has been of great interest to scholars for a century. In the last three decades a broad popular appetite has developed for books which make practical sense out of the sophisticated research on these three subjects. Freud expressed an essentially deconstructive perspective on this matter and indicated that he saw the relationship between human psychology and religion to be a destructive interaction. Jung, on the other hand, was quite sure that these three aspects of the human spirit, psychology, religion, and spirituality, were constructively and inextricably linked.

Anton Boisen and Seward Hiltner derived much insight from both Freud and Jung, as well as from Adler and Reik, while pressing the matter forward with ingenious skill and illumination. Boisen and Hiltner fashioned a framework within which the quest for a sound and sensible definition of the interface between psychology, religion, and spirituality might best be described or expressed.[1] We are in their debt.

This series of General Interest Books, so wisely urged by Greenwood Press, and particularly by its editors, Deborah Carvalko and Suzanne I. Staszak-Silva, intends to define the terms and explore the interface of psychology, religion, and spirituality at the operational level of daily human experience. Each volume of the series identifies, analyzes, describes, and evaluates the full range of issues, of both popular and professional interest, that deal with the psychological factors at play (1) in the way religion takes shape and is expressed, (2) in the way spirituality functions within human persons and shapes both religious formation and expression, and (3) in the ways that

spirituality is shaped and expressed by religion. The interest is psycho-spiritual. In terms of the rubrics of the disciplines and the science of psychology and spirituality this series of volumes investigates the *operational dynamics* of religion and spirituality.

The verbs "shape" and "express" in the above paragraph refer to the forces which prompt and form religion in persons and communities, as well as to the manifestations of religious behavior (1) in personal forms of spirituality, (2) in acts of spiritually motivated care for society, and (3) in ritual behaviors such as liturgies of worship. In these various aspects of human function the psychological and/or spiritual drivers are identified, isolated, and described in terms of the way in which they unconsciously and consciously operate in religion, thought, and behavior.

The books in this series are written for the general reader, the local library, and the undergraduate university student. They are also of significant interest to the informed professional, particularly in fields corollary to his or her primary interest. The volumes in this series have great value for clinical settings and treatment models, as well.

This series editor has spent an entire professional lifetime focused specifically upon research into the interface of psychology in religion and spirituality. These matters are of the highest urgency in human affairs today when religious motivation seems to be playing an increasing role, constructively and destructively, in the arena of social ethics, national politics, and world affairs. It is imperative that we find out immediately what the psychopathological factors are which shape a religion that can launch deadly assaults upon the World Trade Center in New York and murder 3,500 people, or a religion that motivates suicide bombers to kill themselves and murder dozens of their neighbors weekly, and a religion which prompts such unjust national policies as pre-emptive defense; all of which are wreaking havoc upon the social fabric, the democratic processes, the domestic tranquility, the economic stability and productivity, and the legitimate right to freedom from fear, in every nation in the world today.

This present set of three volumes, the project on religion and the brain, is an urgently needed and timely work, the motivation for which is surely endorsed enthusiastically by the entire world today, as the international community searches for strategies that will afford us better and deeper religious self-understanding as individuals and communities. This project addresses the deep genetic and biological sources of human nature which shape and drive our psychology and spirituality. Careful strategies of empirical, heuristic, and phenomenological research have been employed to give this work a solid scientific foundation and formation. Never before has so much wisdom and intelligence been brought to bear upon the dynamic linkage between human physiology, psychology, and spirituality. Each of these three aspects

has been examined from every imaginable direction through the illumining lenses of the other two.

For fifty years such organizations as the Christian Association for Psychological Studies and such Graduate Departments of Psychology as those at Boston University, Fuller, Rosemead, Harvard, George Fox, Princeton, and the like, have been publishing significant building blocks of empirical, heuristic, and phenomenological research on issues dealing with religious behavior and psycho-spirituality. In this present project the insights generated by such patient and careful research are synthesized and integrated into a holistic psycho-spiritual world view, which takes the phenomenology of religion seriously.

Some of the influences of religion upon persons and society, now and throughout history, have been negative. However, most of the impact of the great religions upon human life and culture has been profoundly redemptive and generative of great good. It is urgent, therefore, that we discover and understand better what the psychological and spiritual forces are which empower people of faith and genuine spirituality to give themselves to all the creative and constructive enterprises that, throughout the centuries, have made of human life the humane, ordered, prosperous, and aesthetic experience it can be at its best. Surely the forces for good in both psychology and spirituality far exceed the powers and proclivities toward the evil that we see so prominently perpetrated in the name of religion in our world today.

This series of Greenwood Press volumes is dedicated to the greater understanding of *Psychology, Religion and Spirituality*, and thus to the profound understanding and empowerment of those psycho-spiritual drivers which can help us transcend the malignancy of our earthly pilgrimage and enormously enhance the humaneness and majesty of the human spirit, indeed, the potential for magnificence in human life.

J. Harold Ellens

NOTE

1. Aden, L., & Ellens, J. H. (1990). *Turning points in pastoral care: The legacy of Anton Boisen and Seward Hiltner.* Grand Rapids, MI: Baker.

Preface

In recent years, several lines of evidence have converged on the conclusion that religiousness is associated with a specific and consistent set of biological processes. Religion appears to be a cultural universal. There may be a critical period (adolescence) during the life cycle of normally developing persons when religiousness is best transmitted from an older to a younger generation (see volume II, chapter 4). Individual differences in religiosity are associated with consistent health benefits (see volume I, chapter 7; volume III, chapter 2) as well as unique health risks (see volume III, chapters 4 and 8). Twin studies have shown that religiousness is moderately to highly heritable (see volume I, chapter 3). Genetic studies have implicated specific genes in religiousness (mostly genes that code for regulatory products of monoamine transmission in limbic-prefrontal networks; for reviews, see Comings, Gonzales, Saucier, Johnson, & MacMurray, 2000; D'Onofrio, Eaves, Murrelle, Maes, & Spilka, 1999; Hamer, 2004; see also volume I, chapter 3). Consistent with these preliminary genetic studies, neurochemical and neuropharmacologic studies have implicated limbic-prefrontal serotoninergic and dopaminergic mechanisms in mediation of religious experiences (see volume II, chapters 1 and 2; volume III, chapters 1 and 10). Neuroimaging and neuropsychologic studies have implicated a consistent set of neurocognitive systems and brain activation patterns in religious activity (mostly limbic-prefrontal networks (see volume II, chapters 2, 3, 8, and 9; volume III, chapter 7). A cognitive psychology of religious belief has revealed both the unique aspects of religious cognition as well as its commonalities with other basic cognitive processing routines (see volume I, chapters 6, 9, and 10; volume II, chapter 10). Finally, changes in self-reported

religious experience by individuals suffering from obsessive-compulsive disorder; schizophrenia, Parkinson's disease, and temporal lobe epilepsy are in the expected direction if the previously mentioned neurocognitive networks (limbic-prefrontal) do in fact mediate core aspects of religiousness (see volume II, chapters 1 and 8; volume III, chapter 1).

Although the array of previously mentioned findings suggests to some investigators that it is reasonable to speak about potential neurocognitive specializations around religiosity, caution is in order when attempting to interpret the findings (see volume II, chapters 3, 5, 6, and 8; and all three commentaries). As in every other scientific enterprise, what is investigated in any given study is not the whole phenomenon of interest but rather only a small constituent part of the whole. The previously cited studies could not investigate "religion" per se. That is too vast a phenomenon to be studied in a single project. Instead, they tried to operationalize religiousness in various ways—with everything from a score on an inventory about religious practices to measurements on those practices themselves. Thus, we are reduced to making inferences about the nature of religiousness from data we collect via these questionnaire and observational/experimental methods. Making inferences about the nature of religion as a whole from neurobiologic correlations of one aspect of religiosity is, of course, fraught with danger (as all three commentators and several of our authors point out), but there is simply no other way to proceed. Inference and extrapolation from observations you collect on operationalized measures of the phenomenon you are interested in is necessary if you want to make progress. What is all-important, however, is to extrapolate, infer, and proceed with caution and humility. Constraints on incautious claims and inferences can often be obtained if you have a good theoretical framework from which to generate inferences about data meanings and from which you can develop falsifiable hypotheses. When it comes to biologic correlates of religiousness, the best available theory is evolution. Thus, several of the essays in these volumes discuss potential evolutionary and adaptive functions of religion.

Claims, however, about potential adaptive functions of religiousness also need to be treated with great caution and tested against the evidence. Several authors in these volumes address the question of whether religiousness can be considered an evolutionary adaptation (see volume I, chapters 1, 4, 5, 7, 8, and 10; volume II, chapter 4; volume III, chapter 6; and all three commentaries). For those scientists who think the evidence supports some variant of an adaptationist position (see volume I, chapters 4, 5, 7, and 10; volume II, chapter 4; volume III, chapter 6), the questions shift to what part of religiousness is actually adaptive and what functions might religiousness enact? Some theorists suggest that it is reasonable to speak about a "common core" religious experience fundamental to all forms of religiosity (see volume I, chapter 7; volume III, chapters 5 and 6). Some investigators suggest that the aspect of religiousness that was "selected" over evolutionary history was the

capacity for trance, placebo responding, or altered states of consciousness, or ASC (see volume I, chapters 5 and 7; volume III, chapter 6). The capacity for trance, placebo responding, and ASC, of course, would yield both health benefits and arational or even irrational belief states over time. Other theorists (see volume I, chapters 4 and 5; volume II, chapter 4) suggest that the aspect of religiousness that was selected over evolutionary history was its ability, primarily via ritual displays and other "costly signals" (see volume I, chapters 2, 4, and 5; volume II, chapter 10), to solve the free-rider problem (where unscrupulous individuals exploit the benefits of group cooperation without paying any of the costs of that cooperation) and thereby promote cooperation among individuals within early human groups. Other theorists who tilt toward some kind of adaptationist position emphasize both costly signaling theory as well as gene–culture interactions to explain particular associations of religiosity, such as its ability to promote character strengths (volume I, chapter 2), its ability to protect against death-related fears (volume I, chapter 9; volume III, chapter 8), its ability to generate life meanings (volume III, chapter 3), its ability to address attachment needs (volume I, chapter 8; volume II, chapter 6), its links with the sources and phenomenology of dreams (volume III, chapter 9), and its similarities with special perceptual capacities of the aesthetic sense (volume II, chapter 7).

Although it has to be admitted that all these investigators have marshaled an impressive array of evidence to support their claims concerning religion's potential adaptive functions, all the authors of these theories realize that it is nearly impossible to demonstrate conclusively that some biopsychologic process is an adaptation, in the classical sense of that term. Several authors in these volumes have pointed out just how easy it is to get muddled when attempting to think through evolutionary approaches to a phenomenon as complex as religiousness (see volume I, chapters 1, 8 and 10; volume II, chapter 6; and all three commentaries). It is all too easy to overlook the harmful (and presumably nonadaptive) aspects of religiousness (see volume I, chapters 1 and 6; volume III, chapters 4 and 8). Ignorance of the complexity of religious phenomena, an underappreciation of the pervasive effects of social learning and cultural transmission on cognitive functions, and confusion around technical terms in evolutionary biology (such as adaptation, exaptation, and so forth) all militate against progress in this new science of the biology of religion.

To help think through problems of evolutionary change and adaptations in animals, the evolutionary biologist has often utilized the principles and methods of cladistics and phylogenetic analysis. Debates on potential adaptive functions of religion may benefit by taking a look at these methods. Cladistic methodology is used to analyze phylogenetic relationships in lineages that are recognized by the presence of shared and derived (advanced) characteristics. When cladistic methodology is supplemented with the advanced

statistical tools of "phylogenetic analysis," you get precise and powerful techniques for reconstructing evolutionary history. These techniques have now been successfully used in the cultural arena, as in analyzing biocultural changes (e.g., language evolution). Scholars of ritual and religious practices have now amassed a huge amount of data on the historical development of ritual practices and on ritual practices in premodern human groups. There may therefore be enough data to reconstruct the evolutionary history of ritual practices in certain human lineages. If there is also enough data available on the history of various forms of healing practices of cooperative enterprises (e.g., farming or herding), it may be possible to assess change in ritual practices against change in these other forms of human activity. By superimposing phenotypic features (e.g., ritual practices) over accepted language phylogenies, one can reconstruct the history of evolutionary change in ritual practices as well as potential correlated change in health or in cooperative practices. Thus, hypotheses about potential adaptive functions of key aspects of religiousness may be tested quantitatively using these sorts of methods. With these sorts of methods, one could also potentially assess whether some aspect of religiousness (e.g., ritual practices) fit criteria for an adaptation or an exaptation. An adaptation involves the modification of a phenotypic feature (e.g., a particular ritual practice) that accompanies or parallels an evolutionary acquisition of a function (new healing practices or new forms of cooperation). However, in exaptation, the feature originates first rather than in parallel and only later is co-opted for the function in question. In short, because phylogenetic analysis involves quantitative reconstruction and analysis of histories of shared and derived traits, it provides powerful methods for identification of potential adaptive functions of religion. I draw attention to these techniques only to point out their potential. They have significant limitations, and they have not yet been applied to many problems in biocultural evolution. In particular, phylogenetic techniques have not yet been brought to bear on questions of the evolutionary history of religious practices. Nevertheless, they may be one way to shed some light on the problem of potential adaptive functions of religion.

The fact that reasonable speculations about potential adaptive functions of religion can be advanced at all is partly due to the startling consistency of the evidence summarized in these volumes on the neurobiologic correlates of religiousness. While tremendous progress has been made in identifying neurobiologic correlates of religiousness, it will be a challenge to place these findings in new theoretical frameworks that can do justice to the richness and complexity of the religious spirit. The essays in these volumes provide the necessary first tools to do just that.

Patrick McNamara

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CHAPTER 2

The Relationship between Religion and Health

Andrew B. Newberg and Bruce Y. Lee

INTRODUCTION

The relationship between religion and health care has cycled between cooperation and antagonism throughout history. Some of the most advanced civilizations of ancient times (such as the Assyrians, Chinese, Egyptians, Mesopotamians, and Persians) attributed physical illnesses to evil spirits and demonic possessions, and treatment was aimed at banishing these spirits. Since then, physicians and other health care providers have been viewed by religious groups as everything from evil sorcerers to conduits of God's healing powers. Conversely, religion, from the perspective of physicians, scientists, and health care providers, has been viewed with interest, disinterest, and disdain.

In recent years, there has been a growing interest in understanding the effects of religion on health among the medical and scientific communities (Levin, 1996). Popular news magazines such as *Time* and *Newsweek* and television shows have devoted substantial coverage to the interplay of religion and health (Alternative Medicine, 2001; Begley, 2001a, 2001b; Woodward, 2001). Many spiritual activities aimed at improving or maintaining health such as yoga have become very popular (Corliss, 2001). Moreover, studies have clearly shown that many patients consider religion to be very important and would like their physicians to discuss religious issues with them. We will review what is currently known about clinical effects of religious and spiritual practices, and the challenges that researchers and health care practitioners may face in designing appropriate studies and translating results to

clinical practice. We also will discuss future directions in the roles of religion and spirituality in health care.

THE IMPORTANCE OF RELIGION AND SPIRITUALITY TO PATIENTS AND PHYSICIANS

Studies have confirmed that religion and spirituality play significant roles in many people's lives. Over 90 percent of Americans believe in God or a higher power, 90 percent pray, 67–75 percent pray on a daily basis, 69 percent are members of a church or synagogue, 40 percent attend a church or synagogue regularly, 60 percent consider religion to be very important in their lives, and 82 percent acknowledge a personal need for spiritual growth (Bezilla, 1993; Gallup Report, 1994; Miller & Thoresen, 2003; Poloma & Pendleton, 1991; Shuler, Gelberg, & Brown, 1994). Studies have also suggested that patients are interested in integrating religion with their health care. Over 75 percent of surveyed patients want physicians to include spiritual issues in their medical care, approximately 40 percent want physicians to discuss their religious faith with them, and nearly 50 percent would like physicians to pray with them (Daaleman & Nease, 1994; King & Bushwick, 1994; King, Hueston, & Rudy, 1994; Matthews & Clark, 1998). Many physicians agree that spiritual well-being is an important component of health and that it should be addressed with patients, but only a minority (less than 20%) do so with any regularity (MacLean et al., 2003; Monroe et al., 2003). When physicians have been surveyed, they frequently blamed lack of time, inadequate training, discomfort in addressing the topics, and difficulty in identifying patients who want to discuss spiritual issues for this discrepancy (Armbruster, Chibnall, & Legett, 2003; Chibnall & Brooks, 2001; Ellis, Vinson, & Ewigman, 1999).

Educators have responded by offering courses, conferences, and curricula in medical schools, postgraduate training, and continuing medical education (Pettus, 2002). However, some question the relevance and appropriateness of discussing religion and spirituality in the health care setting, fearing that it gives health care workers the opportunity to impose personal religious beliefs on others. In addition, there is concern that necessary medical interventions may be replaced by religious interventions. A number of scholars have cautioned that it could be harmful if patients come to believe that their illnesses are due to poor faith (Sloan, Bagiella, & Powell, 1999). Others have cautioned that religion should not be considered to be an intervention because it is to be pursued for spiritual, not health-related, purposes. Moreover, there is considerable debate over how religion should be integrated with health care and who should be responsible, especially when health care providers are agnostic or atheist (Levin, Larson, & Puchalski, 1997).

THE ROLE OF RELIGION IN HEALTH CARE

Despite this controversy, there are many signs that the role of religion in health care is increasing. For instance, the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, recognizes religion and spirituality as relevant sources of either emotional distress or support (Kutz, 2002; Lukoff, Lu, & Turner, 1992; Turner, Lukoff, Barnhouse, & Lu, 1995). Also, the guidelines of the Joint Commission on Accreditation of Healthcare Organizations require hospitals to meet the spiritual needs of patients (La Pierre, 2003; Spiritual Assessment, 2003). The literature has reflected this trend as well. The frequency of studies on religion and spirituality and health has increased over the past decade (Levin et al., 1997). Stefanek and colleagues reported a 600 percent increase in spirituality and health publications and a 27 percent increase in religion and health publications from 1993 to 2002 (Stefanek, McDonald, & Hess, 2004).

Some have recommended that physicians and other health care providers routinely take religious and spiritual histories of their patients to better understand their patients' religious background, determine how they may be using religion to cope with illness, open the door for future discussions about spiritual or religious issues, and help detect potentially deleterious side effects from religious and spiritual activities (Kuhn, 1988; Lo, Quill, & Tulsky, 1999; Lo et al., 2002; Matthews & Clark, 1998). It may also be a way of detecting spiritual distress (Abrahm, 2001). It is also important to understand whether there are religious beliefs that may affect how a person makes decisions about his or her health care. There also has been greater emphasis on integrating various religious resources and professionals into patient care, especially when the patient is near the end of life (Lo et al., 2002). Some effort has been made to train health care providers to listen appropriately to patients' religious concerns, perform clergy-like duties when religious professionals are not available, and better understand spiritual practices (Morse & Proctor, 1998; Proctor, Morse, & Khonsari, 1996).

METHODOLOGICAL ISSUES WITH CLINICAL STUDIES

The study of religion and health has faced the same challenges that most nascent research areas have had to confront: lacks of adequate funding, institutional support, and training for investigators. This is part of the reason why a large percentage of the literature consists of anecdotes and editorials, which are helpful in generating discussions, formulating ideas, and fueling future studies but do not establish causality or scientific support of specific interventions. Of the scientific studies that have been performed, many have been correlational and have demonstrated interesting associations, but they have not always adjusted for all possible confounding variables such as socioeconomic

status, ethnicity, and different life-styles or diets and as a result have not clearly established causality. In some cases, religious variables were included in a larger study that did not focus on the effects of religion. Because these studies were not necessarily designed and powered to primarily study the religious variables, results must be considered cautiously. There have been a limited number of randomized controlled trials (RCTs). For example, in a systematic review of studies from 1966 to 1999, Townsend and colleagues counted nine RCTs. But as the study of religion and health progresses, the number and sophistication of scientific studies should continue to grow.

There also are challenges inherent in the clinical study of religion. Understanding these challenges is crucial in designing appropriate studies and interpreting the results. Otherwise, inappropriate conclusions may be drawn, unnecessary and even dangerous interventions may be initiated, and further necessary research may be curtailed. Moreover, these challenges will help guide investigators in choosing areas needing further study. Several of these challenges are described below.

Defining Religion and Spirituality

Investigators have struggled to agree on formal definitions of religion and spirituality, two distinct and yet overlapping terms that have often been mistakenly used synonymously (Powell, Shahabi, & Thoresen, 2003; Tanyi, 2002). Even if universal definitions were established, which specific practices would be classified as either or neither? For example, where does one draw the line between religions and cults? In fact, the Merriam Webster dictionary defines a cult as "a religion regarded as unorthodox or spurious." What, then, is the criterion for being unorthodox and spurious? In fact, as history has often demonstrated, what formerly was considered a cult and spurious can eventually become a major religion, and vice versa.

Designing Studies with Sufficient Numbers of Subjects and Adequate Controls

It is difficult to control for the many possible confounders, as well as recruit and randomize subjects, because they may not be willing or able to alter their religious beliefs and practices for the study. In other words, one cannot simply take 100 religious individuals and assign half to maintain their religious practices and half to not maintain their religious practices. No one would be willing to participate. Since prayer and other religious activities can be private, silent, or disguised as social interactions, investigators may have trouble monitoring and ensuring that subjects comply with study requirements. Inadvertent noncompliance can easily occur, as patients may be influenced by visitors or their environment.

Measuring Religiousness and Spirituality

Religiousness can be measured in many different dimensions, and patients who score high in one dimension may not necessarily score high in others. For example, just because an individual feels that he or she is very religious (high *subjective religiosity*) does not mean he or she would score high on more objective measures (low *religious commitment/motivation*). An individual may not participate significantly in formal church, synagogue, or temple activities (low *organizational religiosity*) but may regularly perform private religious activities such as praying, reading religious scriptures, and watching religious television (high *nonorganizational religiosity*). A number of other potential measures exist, including how closely an individual's beliefs conform to the established doctrines of a religious body (*religious belief*), how knowledgeable or informed an individual is about his or her religion's doctrines (*religious knowledge*), and how well his or her actions, such as working for the church and acts of altruism, support his or her religion (*religious consequences*). Studies should always clearly state the exact measures used and avoid making claims about measures not used.

Determining Reliability and Validity of Measures

Some measures of religiousness may be determined by direct observation. For example, organizational religiosity can be established by noting over a period of time the frequency of church attendance, reading religious scriptures, and prayer. Measuring such activities can be challenging because quantity and quality might be difficult to differentiate. Subtle religious displays may be missed. Moreover, it is unclear how each activity should be counted. Is reading scriptures every day for one hour equivalent to reading scriptures five days a week for four hours? To establish a true cause-and-effect relationship, it would be helpful to determine whether increased religiosity corresponds to better health. Many studies simply divide patients into dichotomous groups (e.g., church membership or nonmembership), which does not account for significant variation within each of the two groups. Should certain religious activities be considered more important than others? Someone who does not belong to a church but regularly prays and follows religious doctrine may, in fact, have greater religious commitment than a person who belongs to a church but does not believe in or care to comprehend religious doctrine.

When direct observation is not possible, investigators must rely on self-report questionnaires or interviews. Therefore, the quality of the data depends on the quality of the instrument, and, unfortunately, many studies do not indicate whether and how their questionnaires or interviews were validated. Even well-validated instruments may be susceptible to a number of potential biases. For instance, patients may forget or be unwilling to admit lapses in religiousness.

Many existing measures are based on Western perspectives of religion and may not be applicable to traditions such as Buddhism or Hinduism.

Accounting for the Positive Externalities of Religion

Religion can provide many "positive externalities" that are potentially beneficial to health. Church groups can provide a social support network, and church activities may offer exercise and reprieves from unhealthy environments. People can meet future spouses, physicians, and other health care workers through church. Religious activities can offer retreats that take individuals away from daily stressors and provide time for reflection. Many religious doctrines suggest that participants observe specific dietary habits and avoid promiscuity, alcohol, and other high risk behaviors. Thus, when a study shows a positive effect of religion, it is not always clear what is responsible for the effect.

Determining the Direction of Causality

Is a patient's religious activity causing the observed effects on his or her health, or is the patient's health status affecting his or her religious activity? If an association is seen in a study, it may not be clear which side is the cause. In some cases, poor health can prevent or discourage patients from participating in religious and spiritual activities. In other cases, serious health problems may motivate patients to attend religious activities. Perhaps more importantly, health outcomes should never be tied to religion or spirituality. A person should not feel that health is related only to his or her religious behaviors, and religions should not be evaluated based on their potential for health benefits.

Accounting for Variations in Practices and Doctrines among and within Different Religions

Practices and doctrines vary significantly both within and across traditions. For example, prayers may be silent or vocal. Behaviors connoting minimum levels of religious commitment differ from one religion to another. For example, what may be proper dress in one denomination may be evidence of inadequate religious commitment in more orthodox denominations. A person's sense of well-being may depend on the degree of hierarchy in a religion and his or her place in that hierarchy. Moreover, a person's socioeconomic status, gender, and ethnicity can affect his or her acceptance by a given religious group.

Evaluating Effects of the Local Environment

Different religions hold different social statuses in different countries during different times. Practically all religions have been persecuted and deprived

of resources at some time and place during history. Members of the dominant religion in a society may be more accepted, enjoy a stronger and more extensive social network, and have greater access to resources. All of these can have subtle psychological and physical consequences. In some severe cases, physical punishment may be inflicted on minority religious sects. Moreover, minority or fringe religious sects who are unable to convince mainstream individuals to join their cause may have to recruit among societal outcasts, many of whom could have psychological or physical illness. Therefore, any study of a specific religious sect should account for the location of the study group and the sect's relationship with the ambient society.

Determining the Proper Time Frame for the Study

How long should individuals or populations be observed before effects are expected to occur? Some spiritual activities such as prayer, yoga, and meditation have been found to have immediate effects on physical parameters such as heart rate and blood pressure. But these practices can also have long-term consequences that lead a person's spiritual journey. Furthermore, some religious experiences last for several moments and affect a person over a lifetime, and some experiences require a lifetime to occur. Therefore, studies that observe subjects over only a short period of time may miss findings. However, the longer the follow-up, the more costly and difficult the study is to perform, and the greater the chance that more confounders will enter the picture.

Bridging the Divide between Health Researchers and Religion Researchers

While interdisciplinary fields have the benefits of bringing together people with diverse interests, experiences, perspectives, and abilities, they also must confront communication hurdles. Health researchers and religion researchers often are not familiar with important publications in each others' specialty journals. Separate meetings, separate departments, different methodologies, and different lexicons have hindered collaboration. However, the emergence of interdisciplinary journals and conferences has begun to alleviate this problem.

THE POSITIVE EFFECTS OF RELIGION ON HEALTH

Disease Incidence and Prevalence

Various systematic reviews and meta-analyses demonstrate that religious involvement correlates with decreased morbidity and mortality (Ball, Armstead, & Austin, 2003; Braam, Beekman, Deeg, Smit, & Van Tilburg, 1999;

Brown, 2000; Kark, Carmel, Sinnreich, Goldberger, & Friedlander, 1996; Kune, Kune, & Watson, 1993; McCullough, Hoyt, Larson, Koenig, & Thoresen, 2000; McCullough & Larson, 1999; Oman, Kurata, Strawbridge, & Cohen, 2002), and high levels of religious involvement may be associated with up to seven years of longer life expectancy (Helm, Hays, Flint, Koenig, & Blazer, 2000; Hummer, Rogers, Nam, & Ellison, 1999; Koenig et al., 1999; Oman & Reed, 1998; Strawbridge, Cohen, Shema, & Kaplan, 1997). A study by Kark and colleagues over a 16-year period found that belonging to a religious collective in Israel was associated with lower mortality (Kark et al., 1996). In Comstock and Partridge's analysis of 91,000 people in a Maryland county, those who regularly attended church had a lower prevalence of cirrhosis, emphysema, suicide, and death from ischemic heart disease (Comstock & Partridge, 1972). Several studies have implied that religious participation and higher religiosity may have a beneficial effect on blood pressure (Armstrong, Van Merwyk, & Coates, 1977; Hixson, Gruchow, & Morgan, 1998; Koenig et al., 1998b; Walsh, 1998).

Some research findings have suggested that mortality and morbidity vary by religion, even when adjusting for major biological, behavioral, and socioeconomic differences (Rasanen, Kauhansen, Lakka, Kaplan, & Salonen, 1996; Van Poppel, Schellekens, & Liefbroer, 2002). However, as mentioned previously, the experience of individuals within a given religion can depend significantly on the local environment, so the results of such comparisons should be viewed guardedly. For instance, a study of contemplative monks in the Netherlands showed that their mortality compared with the general population varied with time during the 1900s (de Gouw, Westendorp, Kunst, Mackenbachh, & Vandenbroucke, 1995). Greater morbidity and mortality have been reported among Irish Catholics in Britain, which may be related to their disadvantaged socioeconomic status in that country (Abbotts, Williams, & Ford, 2001; Abbotts, Williams, Ford, Hunt, & West, 1997). A study in Holland suggested that smaller religious groups may be less susceptible to infectious disease because of social isolation (Van Poppel et al., 2002). In general, not enough studies have examined how mortality and morbidity for different religions vary over time and place. Moreover, many religions and religious sects have received little attention from investigators. Consequently, the body of literature comparing morbidity and mortality rates among religions is not large enough to draw any definitive conclusions. However, the results to date suggest that, under the right circumstances, religion can have a beneficial impact on health.

Disease and Surgical Outcomes

Studies also have reported that religiousness correlates with better outcomes after major illnesses and certain medical procedures. In Oxman and colleagues' analysis of 232 patients following elective open heart surgery,

lack of participation in social or community groups and absence of strength and comfort from religion were consistent predictors of mortality (Oxman, Freeman, & Manheimer, 1995). Another study evaluated 30 elderly women after hip repair and found that religious belief was associated with lower levels of depressive symptoms and better ambulation status after surgery (Pressman, Lyons, Larson, & Strain, 1990). Contrada and colleagues found that in patients who underwent heart surgery, stronger religious beliefs were associated with shorter hospital stays and fewer complications, but attendance at religious services predicted longer hospitalizations (Contrada et al., 2004). On the other hand, Hodges and colleagues did not find spiritual beliefs to significantly affect recovery from spinal surgery (Hodges, Humphreys, & Eck, 2002).

Research has studied whether religiosity improves the survival of patients with different illnesses as well. In a study of African American women with breast cancer, patients who did not belong to a religion tended to have shorter survival rates (Van Ness, Kasl, & Jones, 2003). In a study by Zollinger and colleagues, Seventh Day Adventists had better breast cancer survival than non–Seventh Day Adventists, but this was likely due to earlier diagnosis and treatment (Zollinger, Phillips, & Kuzma, 1984). Several other studies of various cancers including colorectal, lung, and breast cancer showed no statistically significant effect of religious involvement on cancer survival (Kune, Kune, & Watson, 1992; Loprinzi et al., 1994; Ringdal, Gotestam, Kaasa, Kvinnsland, & Ringdal, 1996; Yates, Chalmer, St. James, Follansbee, & McKegney, 1981).

Behavior and Life-styles

Life-style differences may account for some of the observed effects in research on religion and health. Studies in Israel showed that secular residents had diets higher in total fat and saturated fatty acids (Friedlander, Kark, Kaufmann, & Stein, 1985) and higher plasma levels of cholesterol, triglyceride, and low-density lipoprotein (Friedlander, Kark, & Stein, 1987) than religious subjects. Oleckno and Blacconiere's study on college students revealed an inverse correlation between religiosity and behaviors that adversely affect health (Oleckno & Blacconiere, 1991). Religious involvement has been shown to be associated with greater use of seat belts (Oleckno & Blacconiere, 1991) and preventative services (Comstock & Partridge, 1972). Compared to the general population, Mormons and Seventh Day Adventists have been found to have a lower incidence of and mortality rates for cancers linked to tobacco and alcohol (Fraser, 1999; Grundmann, 1992).

Religion can affect alcohol and substance use at several stages. It may affect whether a person initiates use, how significant the use becomes, how the use affects the person's life, and whether the person is able to quit and

recover (Miller, 1998). The attitudes of religions toward alcohol and substance use vary considerably. Some religious sects strictly prohibit alcohol and substance use, some allow the use of alcohol and incorporate drinking wine into their rituals, and others use psychoactive substances such as peyote, khat, and hashish to achieve spiritual goals (Lyttle, 1988). Most investigators study Judeo-Christian religious sects, which may allow the use of alcohol but tend to denounce alcohol abuse and illicit substance use. Therefore, conclusions from these studies may not apply to all religions.

Individuals involved in religion may be less likely to use alcohol and other substances (Heath et al., 1999; Luczak, Shea, Carr, Li, & Wall, 2002; Stewart, 2001). Even among those who use alcohol and drugs, religiously involved individuals are more likely to use them moderately and not heavily (Gorsuch & Butler, 1976; Miller, 1998). In a nationally representative sample of adolescents, Miller and colleagues determined that personal devotion (which they defined as a personal relationship with the divine) and affiliation with more fundamentalist denominations were inversely associated with alcohol and illicit drug use (Miller, Davies, & Greenwald, 2000). This effect was seen outside the United States as well, in Latin American regions (Chen, Dormitzer, Bejarano, & Anthony, 2004). A number of possible reasons exist for these findings. Religions can play a role in educating people about the dangers of alcohol and drugs and recommending against their use (Stylianou, 2004). Fear of violating religious principles and doctrines can have a powerful effect. Religious involvement and the accompanying positive externalities may keep people occupied and prevent idleness and boredom that can lead to substance abuse. There may be peer pressure from other members of the church to remain abstinent, and an absence of peer pressure to try alcohol and other substances. Moreover, religious involvement could be the effect rather than the cause. It may be that individuals less likely to engage in substance abuse are inherently more likely to be religious. Also, substance abuse may prevent religious involvement. Larson and Wilson noted that alcoholics compared to nonalcoholic subjects had less involvement in religious practices, less exposure to religious teachings, and fewer religious experiences (Larson & Wilson, 1980).

Many clinicians and researchers, as well as patients, feel that spirituality should play a large role in cessation programs (Arnold, Avants, Margolin, & Marcotte, 2002; Dermatis, Guschwan, Galanter, & Bunt, 2004). Indeed, spiritual ideas already permeate many established programs such as Alcoholics Anonymous (Brush & McGee, 2000; Forcehimes, 2004; Li, Feifer, & Strohm, 2000; Moriarity, 2001). Studies have suggested that religious and spiritual practices may aid recovery (Aron & Aron, 1980; Avants, Warburton, & Margolin, 2001; Carter, 1998). A significant number of recovering intravenous drug abusers turn toward religious healing, relaxation techniques, and meditation (Manheimer, Anderson, & Stein, 2003). Data suggest that patients

often experience spiritual awakenings or religious conversion during recovery (Green, Fullilove, & Fullilove, 1998). However, not all studies have shown that religiously involved patients have better outcomes. The first RCTs failed to demonstrate sufficient clinical benefit from meditation (Murphy, Pagano, & Marlatt, 1986) or intercessory prayer (Walker, Tonigan, Miller, Corner, & Kahlich, 1997). In a study by Tonigan and colleagues, while subjects self-labeled as religious were more likely than agnostics and atheists to initiate and continue attending Alcoholics Anonymous meetings, their outcomes were not clearly better (Tonigan, Miller, & Schermer, 2002).

Religion may play a role in preventing risky sexual behavior that could potentially lead to sexually transmitted diseases and human immunodeficiency virus (HIV). In a study of African American adolescent females, religiosity correlated with more frank discussions about the risks of sex and avoidance of unsafe sexual situations (McCree, Wingood, DiClemente, Davies, & Harrington, 2003). Miller and Gur's study of over 3,000 adolescent girls found positive associations between personal devotion and fewer sexual partners outside a romantic relationship, religious event attendance and proper birth control use, and religious attendance and a better understanding of HIV or pregnancy risks from unprotected intercourse (Miller & Gur, 2002). But these findings are not universal. Some have found no relationship between religiosity and sexual practices (Dunne, Edwards, Lucke, Donald, & Raphael, 1994; McCormick, Izzo, & Folcik, 1985). In fact, religious traditions or environments may suppress open discussion of sex and contraception. Lefkowitz and colleagues found that adolescents who discussed safe sex with their mothers tended to be less religious (Lefkowitz, Boone, Au, & Sigman, 2003).

Some studies have looked at how religion and spirituality can promote exercise. Among Utah residents, people who attended church weekly were more likely to regularly exercise. However, differences in smoking and general health status seemed to account for this effect (Merrill & Thygerson, 2001). A study by McLane and colleagues suggested that incorporating faith-based practices in exercise programs may be attractive to certain people and improve participation in physical activity (McLane, Lox, Butki, & Stern, 2003).

Access to Health Care Resources

Along with encouraging healthy life-styles, religious groups may promote or provide access to better health care and sponsor health improvement programs (e.g., blood pressure screening, blood drives, soup kitchens, and food drives) (Heath et al., 1999; Koenig et al., 1998a; Stewart, 2001; Zaleski & Schiaffino, 2000). Groups such as the Catholic Church have substantial resources and positions that allow them to positively influence people in

ways that many secular organizations cannot. Additionally, many hospitals and health care clinics are supported by, affiliated with, or owned by religious groups.

General Well-Being

A large number of studies have explored the relationship between religion and mental health. Studies have demonstrated religiosity to be positively associated with feelings of well-being in white American, Mexican American (Markides, Levin, & Ray, 1987), and African American populations (Coke, 1992). Krause (2003) observed that older African Americans were more likely than similarly aged white Americans to derive life satisfaction from religion. Religious service attendance was predictive of higher life satisfaction among elderly Chinese Hong Kong residents (Ho et al., 1995) and elderly Mexican American women (Levin & Markides, 1988). Members of religious kibutzes in Israel reported a higher sense of coherence and less hostility and were more likely to engage in volunteer work than nonmembers (Kark et al., 1996). Similar findings were reported in a population of nursing home residents (House, Robbins, & Metzner, 1982). Hope and optimism were higher among religious individuals than nonreligious individuals in some study populations (Idler & Kasl, 1997a, 1997b; Raleigh, 1992). Using religious attendance as one of the markers of social engagement, Bassuk and colleagues determined that social disengagement was linked with cognitive decline in the noninstitutionalized elderly (Bassuk, Glass, & Berkman, 1999).

A few studies have compared different religions. For example, one study showed that among elderly women in Hong Kong, Catholics and Buddhists enjoyed better mental health status than Protestants (Boey, 2003). However, not enough data exist to generate any definitive conclusions.

Depression

Several investigators have studied the effects of religion on depression. Prospective cohort studies have shown religious activity to be associated with remission of depression in Protestants and Catholics in the Netherlands (Braam et al., 1999) and in ill older adults (Koenig, George, & Peterson, 1998). Prospective studies have also found religious activity to be strongly protective against depression in Protestant and Catholic offspring who share the same religion as their mother (Miller, Warner, Wickramaratne, & Weissman, 1997) and weakly protective against depression in female twins (Kennedy, Kelman, Thomas, & Chen, 1996). Cross-sectional studies have yielded significant (Koenig et al., 1997) and nonsignificant (Bienenfeld, Koenig, Larson, & Sherrill, 1997; Koenig, 1998; Musick, Koenig, Hays, & Cohen, 1998)

associations between different indicators of religiosity and a lower prevalence of depression in various populations.

Studies also have suggested an inverse correlation between religiosity and suicide. This was found to be the case in an analysis of the 1993 National Mortality Followback Survey data (Nisbet, Duberstein, Conwell, & Seidlitz, 2000) and also in an analysis of cross-sectional data of Judeo-Christian older adults from 26 countries (Neeleman & Lewis, 1999). Suicide may be less acceptable to people with high religious devotion and orthodox religious beliefs (Neeleman, Halpern, Leon, & Lewis, 1997; Neeleman, Wessely, & Lewis, 1998). But again, it is unclear whether suicidal individuals are less likely to hold strong religious beliefs, or individuals with strong religious beliefs are less likely to be suicidal.

Several RCTs have evaluated specific spiritual interventions and their impact on depression. One RCT demonstrated that directed and nondirected intercessory prayer correlated favorably with multiple measures of self-esteem, anxiety, and depression, but this study did not clearly state the randomization technique and did not account for multiple confounders (O'Laoire, 1997). Another RCT suggested that using religion-based cognitive therapy had a favorable impact on Christian patients with clinical depression, but the study may have contained too many comparison groups for strong cause-and-effect relationships to be established (Propst, Ostrom, Watkins, Dean, & Mashburn, 1992). Three RCTs suggest that religious (Islamic-based) psychotherapy speeds recovery from anxiety and depression in Muslim Malays, but the studies did not control for the use of antidepressants and benzodiazepines (Azhar & Varma, 1995; Azhar, Varma, & Dharap, 1994; Razali, Hasanah, Aminah, & Subramaniam, 1998). Thus, additional studies will be required to better elucidate the effects of spiritual practices on depression.

Coping with Medical Problems

Religious belief may provide meaning to and, in turn, help patients better cope with their diseases (Autiero, 1987; Foley, 1988; Patel, Shah, Peterson, & Kimmel, 2002). Although many major religions have deemed illness and suffering the result of sin, many believe that pain and suffering can be strengthening, enlightening, and purifying. According to various religious teachings, pain and suffering are inevitable and can be cleansing, test virtue, educate, readjust priorities, stimulate personal growth, and define human life (Amundsen, 1982).

Religions differ in how they confront suffering. Although generalizations are difficult to draw because considerable variability exists within and across religious traditions, many Buddhists believe in enduring pain matter-of-factly (Tu, 1980), many Hindus stress understanding and detachment from pain

(Shaffer, 1978), many Muslims and Jews favor resisting or fighting pain (Bowker, 1978), and many Christians stress seeking atonement and redemption (Amundsen, 1982).

Evidence suggests that religion provides more than just a distraction from suffering. The *diverting attention* and *praying* factors on the Coping Strategies Questionnaire have correlated with pain levels (Geisser, Robinson, & Henson, 1994; Swartzman, Gwadry, Shapiro, & Teasell, 1994; Swimmer, Robinson, & Geisser, 1992). The social network and support provided by religions may be associated with lower pain levels, and religious belief may improve self-esteem and sense of purpose (Hays et al., 1998; Musick et al., 1998; Swimmer et al., 1992). After following 720 adults, Williams and colleagues concluded that religious attendance buffered the effects of stress on mental health (Williams, Larson, Buckler, Heckmann, & Pyle, 1991). In another study of 107 women with advanced breast cancer, spirituality appeared to improve emotional well-being (Coward, 1991). Thus, religion and spirituality can provide important avenues toward coping.

THE NEGATIVE EFFECTS OF RELIGION ON HEALTH

Although most studies have shown positive effects, religion and spirituality also may negatively impact health. For example, religious groups may directly oppose certain health care interventions, such as transfusions or contraception, and convince patients that their ailments are due to noncompliance with religious doctrines rather than organic disease (Donahue, 1985). Asser and colleagues demonstrated that a large number of child fatalities could have been prevented had medical care not been withheld for religious reasons (Asser & Swan, 1998). After interviewing 682 North Carolina women, Mitchell and colleagues concluded that belief in religious interventions may delay African American women from seeing their physicians for breast lumps (Mitchell, Lannin, Mathews, & Swanson, 2002). In addition, religions can stigmatize those with certain diseases to the point that they do not seek proper medical care (Lichtenstein, 2003; Madru, 2003).

As history has shown, religion can be the source of military conflicts, prejudice, violent behaviors, and other social problems. Religions may ignore or ostracize those who do not belong to their church. Those not belonging to a dominant religion may face obstacles to obtaining resources and may experience hardships and stress that deleteriously affect their health (Bywaters, Ali, Fazil, Wallace, & Singh, 2003; Walls & Williams, 2004). Religious leaders may abuse church members physically, emotionally, or sexually (Rossetti, 1995; Tieman, 2002). And religious laws or dictums may be invoked to justify harmful, oppressive, and injurious behavior (Kernberg, 2003).

Additionally, perceived religious transgressions can cause emotional and psychological anguish, manifesting as physical discomfort. This religious or spiritual pain can be difficult to distinguish from physical pain (Satterly, 2001). In extreme cases, spiritual abuse (convincing people that they are going to suffer eternal purgatory) and spiritual terrorism (an extreme form of spiritual abuse) can occur either overtly or insidiously—that is, it can be implied, though not actually stated, that a patient will be doomed (Purcell, 1998a, 1998b). When a mix of religious, spiritual, and organic sources is causing physical illness, treatment can become complicated. Health care workers must properly balance treating each source.

THE EFFECTS OF SPECIFIC RELIGIOUS AND SPIRITUAL PRACTICES

Religious and spiritual practices have become highly prevalent and may be practiced in either religious or secular settings. Although many of these activities have been correctly or incorrectly linked to specific religions, practicing them does not necessarily connote certain beliefs. In fact, hundreds of variations of each spiritual activity exist, because many have been altered and combined with other nonreligious activities such as aerobics to develop hybrid techniques. As a result, some forms barely resemble the original versions. Thus, investigators must be very specific in describing the technique or activity that they are examining. Results from one form of meditation or yoga may not apply to other forms. A review of the literature shows that many studies do not clearly describe the form of spiritual activity under investigation.

Prayer

In Eisenberg and colleagues' survey of alternative medicine usage among Americans, one-fourth of respondents used prayer to cope with physical illness (Eisenberg et al., 1998). Evidence has been found that prayer may be associated with less muscle tension, improved cardiovascular and neuroimmunologic parameters, psychologic and spiritual peace, a greater sense of purpose, enhanced coping skills, less disability, and better physical function in patients with knee pain (Rapp, Rejeski, & Miller, 2000) and a lower incidence of coronary heart disease (Gupta, 1996; Gupta, Prakash, Gupta, & Gupta, 1997).

Poloma and Pendleton (1991) found that petitionary and ritualistic prayers were associated with lower levels of well-being and life satisfaction, while colloquial prayers were associated with higher levels. Leibovici (2001) reported on a double-blind RCT that showed remote, retroactive intercessory prayer was associated with shorter length of fever and hospital stay in patients with

bloodstream infection. A very small, double-blind study showed that intercessory prayer used as adjunct therapy decreased mortality among children with leukemia (Collipp, 1969). In Byrd and colleagues' well-known double-blind study of patients admitted to a coronary care unit, intercessory prayer was linked to significantly more "good" outcomes (163 versus 147) than "bad" outcomes (27 versus 44) (Byrd, 1988). Harris and colleagues (1999) found similar outcomes with remote intercessory prayer. However, subsequent studies were not able to replicate these findings (Aviles et al., 2001; Matthews, Conti, & Sireci, 2001; Matthews, Marlowe, & MacNutt, 2000; Townsend, Kladder, Ayele, & Mulligan, 2002). Another issue arises in the interpretation of such studies. If prayer does work, does it prove that God exists; and if prayer does not work, does it prove that God does not exist? Perhaps these studies are evaluating something other than religion, such as the effects of human consciousness. Regardless, the effect of such distant prayer or distant intentionality is controversial.

Meditation

Meditation and meditation-related practices are widely used as alternative therapy for physical ailments (Eisenberg et al., 1998). Many physicians routinely recommend meditation techniques to their patients and include them as part of integrated health programs such as Dean Ornish's popular heart disease programs and a Stanford arthritis self-care course. Meditative and relaxation techniques are often part of childbirth preparation classes.

Although evidence is not yet definitive, preliminary studies suggest that meditation may have a number of health benefits, such as helping people achieve a state of restful alertness with improved reaction time, creativity, and comprehension (Domino, 1977; Solberg, Berglund, Engen, Ekeberg, & Loeb, 1996) and decreasing anxiety, depression, irritability, and moodiness and improving learning ability, memory, self-actualization, feelings of vitality and rejuvenation, and emotional stability (Astin, 1997; Astin et al., 2003; Bitner, Hillman, Victor, & Walsh, 2003; Solberg et al., 1996; Walton, Pugh, Gelderloos, & Macrae, 1995). Preliminary studies suggest that meditative practices may benefit and provide acute and chronic support for patients with a variety of health problems such as hypertension, psoriasis, irritable bowel disease, anxiety, and depression (Barrows & Jacobs, 2002; Carlson, Ursuliak, Goodey, Angen, & Speca, 2001; Castillo-Richmond et al., 2000; Kabat-Zinn et al., 1992; Kabat-Zinn et al., 1998; Kaplan, Goldenberg, & Galvin-Nadeau, 1993; Keefer & Blanchard, 2002; King, Carr, & D'Cruz, 2002; Manocha, Marks, Kenchington, Peters, & Salome, 2002; Reibel, Greeson, Brainard, & Rosenzweig, 2001; Williams, Kolar, Reger, & Pearson, 2001). Evidence also exists that meditation can improve chronic pain (Kabat-Zinn, 1982; Kabat-Zinn, Lipworth, & Burney, 1985). In a study by Kaplan and colleagues, all 77 men and women with fibromyalgia who

completed a 10-week stress-reduction program using meditation had symptom improvement (Kaplan et al., 1993). Moreover, in several studies, meditators had better respiratory function (vital capacity, tidal volume, expiratory pressure, and breath holding), cardiovascular parameters (diastolic blood pressure and heart rate), and lipid profiles than nonmeditators (Cooper & Aygen, 1979; Wallace, Silver, Mills, Dillbeck, & Wagoner, 1983; Wenneberg et al., 1997).

Unfortunately, many studies did not specify or describe the type of meditation used. A wide variety of methods may be used, including some in which the body is immobile (e.g., Zazen, Vipassana), others in which the body is let free (e.g., Siddha yoga, the Latihan, the chaotic meditation of Rajneesh), and still others in which the person participates in daily activities while meditating (e.g., Mahamudra, Shikan Taza, Gurdjieff's "self-remembering"). So it is not clear which forms may be beneficial and what aspects of meditation are providing the benefits.

Although physically noninvasive, meditation can be harmful in patients with psychiatric illness, potentially aggravating and precipitating psychotic episodes in delusional or strongly paranoid patients and heightening anxiety in patients with overwhelming anxiety. Moreover, it can trigger the release of repressed memories. Therefore, all patients using meditative techniques should be monitored, especially when beginning to use meditation.

Yoga

Contrary to popular misconception, yoga predates Hinduism by several centuries, and, as the American Yoga Association emphasizes, because yoga practice does not specify particular higher powers or religious doctrines, it can be compatible with all major religions. In fact, many religions, including many Christian denominations, have adopted yoga techniques. Yoga is also widely used by the general public, often for regular exercise.

Yoga is based on a set of theories that have not been scientifically proven. Yoga practitioners believe that blockages or shortages of the life force can cause disease or decreased resistance to disease and that yoga can restore the flow of the life force to different parts of the body. They use a series of stretching, breathing, and relaxation techniques to prepare for meditation and use stretching movements or postures (*asanas*) that aim to increase blood supply and *prana* (vital force) as well as increase the flexibility of the spine, which is thought to improve the nerve supply. Yoga practices also incorporate breathing techniques (*pranayamas*) to improve brain function, eliminate toxins, and restore energy reserves in the solar plexus region.

The few limited clinical studies on yoga have been encouraging, showing reduced serum total cholesterol, low-density lipids, and triglyceride levels and improved pulmonary function tests in yoga practitioners (Arambula, Peper, Kawakami, & Gibney, 2001; Birkel & Edgren, 2000; Schell, Allolio, &

Schonecke, 1994; Selvamurthy et al., 1998; Stancak, Kuna, Srinivasan, Dostalek, & Vishnudevananda, 1991; Stanescu, Nemery, Veriter, & Marechal, 1981; Udupa, Singh, & Yadav, 1973). Studies have also suggested that yoga may be associated with acute and long-term decreases in blood pressure (Murugesan, Govindarajulu, & Bera, 2000; Sundar et al., 1984) and may benefit patients with asthma, hypertension, heart failure, mood disorders, and diabetes (Jain, Uppal, Bhatnagar, & Talukdar, 1993; Malhotra, Singh, Singh, et al., 2002; Malhotra, Singe, Tandon, et al., 2002; Manocha et al., 2002; van Montfrans, Karemaker, Wieling, & Dunning, 1990). Two small controlled but non–double-blind studies showed Hatha yoga to significantly alleviate pain in osteoarthritis of the fingers and in carpal tunnel syndrome (Garfinkel, Schumacher, Husain, Levy, & Reshetar, 1994; Garfinkel et al., 1998). However, yoga is not completely benign, because certain *asanas* may be strenuous and cause injury. In fact, yoga practitioners believe some *asanas* can cause disease.

More studies are needed to determine the benefits (and potential dangers) of yoga. Like meditation, many forms of yoga have emerged. Some involve significant aerobic exercise. Others involve significant strength and conditioning work. Many yoga practices include changes in diet and life-styles. Thus, it is difficult to distinguish between yoga and other practices that have established health benefits such as exercise. Therefore, future studies should focus on specific yoga forms and movements and avoid making general conclusions about all yoga practices.

Faith Healing

Faith healers use prayer or other religious practices to combat disease. Surveys have found that a substantial number of patients in rural (21%) and inner-city (10%) populations have used faith healers, and many physicians (23%) believe that faith healers can heal patients (McKee & Chappel, 1992). Despite numerous anecdotes of healing miracles, no consistent and convincing scientific proof has been reported that faith healers are effective (King & Bushwick, 1994). Additionally, it has not been determined whether faith healers affect patients psychologically or physiologically and what factors may make them effective. Conclusions cannot be drawn until further research is performed.

CONCLUSIONS AND FUTURE DIRECTIONS

In general, clinical studies of religion and spirituality on health are fraught with challenges. Designing studies that are able to establish cause-and-effect relationships is difficult. This is especially true in the study of religion and health, where many confounding factors abound. However, there is evidence

that religion can provide health benefits. It is clear that religion can bring social and emotional support, motivation, healthy life-styles, and health care resources. Clinical studies are valuable in identifying possible associations, raising further questions, and guiding subsequent research. Clinical studies can also confirm possible cause-and-effect relationships elucidated by physiologic studies.

There are a number of future directions for research. Many of the accompanying and confounding factors need to be isolated to determine their relative roles. The clinical impact of findings from physiologic studies needs further investigation. Many diseases have not been studied. Many religious groups and sects have not been included in the early studies, and hence a broader impact of religion and religious behaviors needs to be surveyed. The effect of varying demographic parameters such as age, gender, and location also deserves further inquiry. Moreover, religious and spiritual activities may serve as adjunct therapy in various disease and addiction treatment programs. In the future, additional specific spiritual interventions may prove beneficial.

The findings to date have clinical implications. Religion is clearly important to many patients, and their religious concerns may need to be better addressed in the health care setting. Health care providers must be aware of how religious involvement can affect symptoms, quality of life, and patients' willingness to receive treatment. Perhaps more importantly, health care providers need to better understand how to manage these issues and deal with patients in which such issues play a prominent role.

The study of religion and health, as well as the integration of religion into the health care setting, is likely to grow. At the same time, new ways of researching this discipline may emerge and provide a substantial challenge to existing scientific methodologies. Unless the relationship between religion and health care cycles back to antagonism, many exciting new findings and approaches may appear.

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CHAPTER 5

The Common Core Thesis in the Study of Mysticism

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Two extreme poles have defined the psychology of religion since its inception. On one extreme are psychologists convinced of the falsity of religious beliefs and committed to a naturalistic reductive interpretation of religious phenomena. Perhaps most illustrative of this view is Freud's assertion that religion is not only an illusion (motivated by desire) but ultimately a *delusion*, fated to be abandoned as humankind progresses in its scientific understanding of the natural world, the only one there is (Hood, 1992, 1997b). On the other extreme are psychologists committed to a religious worldview who seek to defend the ontological claims of religion in what Beit-Hallahmi (1985) has identified as essentially a religious apologetics disguised as scientific psychology. In Beit-Hallahmi's terms, the former psychologists perform a legitimate function in developing a psychology of religion that is necessarily reductive, and the later distort the science of psychology, cloaking it in a religious psychology that cannot ultimately be valid as a scientific psychology.

Although the extremes are worthy of note, a well-established middle ground is open to a dialogue between various psychological and religious claims. It was best defined by William James, who is most noted to psychologists of religion for his *Varieties of Religious Experience* (1902/1985) continuously in print since its initial publication and universally acclaimed as the one true classic in the psychology of religion. However, few psychologists of religion make reference to James's first and also classic text, *The Principles of Psychology* (1890/1981). Over a decade in the writing and published at the turn of the previous century, it made the case for a psychology bound by no

other metaphysics than those that support a natural science framework. Yet struggle as James did to reject the necessity of religious concepts in that text (for instance, the soul), he eventually concluded that psychology was far from an established science; nor did he think it could become one in purely naturalistic terms. Thus, as I have argued elsewhere, the *Varieties* can be read as a sequel to the *Principles* (Hood, 1995, 2002). The *Varieties* resolves issues left hanging in the *Principle*s insofar as religious experience was ignored in that text (as it still is in most general psychological texts unconcerned with religion). We learn from the *Varieties* that when religious experience is taken seriously, the methods and scope of psychology must be extended (Hood, 2002). In the first section of this chapter, I note several assumptions that define the range and scope of this extension in order to form the basis for my defense of the common core thesis in the study of mysticism. These assumptions leave open the ontological issue of the reality of what is experienced in mysticism. Thus, the assumptions are neither a priori apologetic nor reductionistic. These six assumptions do, however, lay the foundation for my defense of what is the common core thesis in mysticism.

BASIC ASSUMPTIONS

In what many identify as a postmodern world, claims to foundational realities can be perpetually problematic. Hence, I will not debate these assumptions but simply identify them explicitly as foundational to the frame of my discussion of the common core thesis. These six assumptions can be the focus of philosophical debate that is not without merit, yet on a purely cognitive level can be interminable. Yet this applies to any other set of assumptions and so, in a postmodern sense, does not differentially apply to our own view (Rosenau, 1992).

The first assumption is that in James's language, personal religious experience has "its root and centre in mystical states" (1902, p. 301). The claim is that, within all religious traditions, a mystical stream flows. Further, it is that stream that gives life and, for many, is an essential sustenance to faith traditions. As Katz (1983) and others have noted, those for whom religion is a powerful life-sustaining presence have had a troubled but passionate commitment to the particulars of their religious faith. We must explore the basis for the troublesome presence of mysticism *within* faith traditions and note as well the emergence of mysticism *outsid*e of faith traditions. The irony, as James knew well, is that faith traditions draw their strength from the very presence of those whose experience troubles what James referred to as secondhand believers—those for whom mystical experience is foundational to their faith but lurks as a threat to the dogmatic defense of the particulars of the tradition. James's words are worth quoting here, for they imply a theory of religious development that is not unrelated to the emergence of mysticism independent

of faith traditions—something that is of recent historical development. Here James waxes poetic as he provides both a description and a theory of mystical development from what he terms a "genuine first hand experience," which, he claims,

> is bound to be heterodoxy to its witness, the prophet appearing as a mere lonely madman. If his doctrine prove contagious enough to spread to any others, it becomes a definite and labeled heresy. But, if it then still prove contagious enough to triumph over persecution, it becomes itself an orthodoxy, and when a religion has become an orthodoxy its day of inwardness is over: the spring is dry; the faithful live at second hand exclusively and stone prophets in their turn. The new church, in spite of whatever goodness it may foster, can be henceforth counted on as a staunch ally in every attempt to stifle the spontaneous religious spirit, and to stop all later bubblings of the fountain from which in purer days it drew its own supply of inspiration. (1902/1985, p. 270)

The second assumption follows from the first and is sympathetic to James's lack of concern with religious orthodoxy. James does not go quite as far as Scharfstein (1973) does in dismissing the noetic claims based on mystical experience as "ontological fairy-tales" (p. 45), but his dismissal of them as "over beliefs" (James, 1902/1985, p. 402) comes close. It is the priests, not the prophets, who defend orthodoxies. Orthodoxies are fashioned secondhand and weight the interpretation of experience more than the experience itself. To defend the common core thesis, I too focus on the inwardness of religious experience and not its outward expression in interpretation and belief that tends to reify into orthodoxy. I recognize this is a controversial issue, especially among those who assert that some form of constructionist thesis has trumped all other options. By constructionism is meant the crucial, even definitive, role interpretation is claimed to play in constructing experience, and not simply its interpretation. This dominant and dominating view (e.g., Katz, 1978b, 1992; Proudfoot, 1985) essentially takes a neo-Kantian turn and argues that experience is always mediated (phenomena) and that unmediated experience of whatever is ultimate (noumena) is neither possible nor describable. However, as Parsons (1999) has noted, to make this claim is simply to assert what many mystics deny based on their own experience and to take a curiously Western neo-Kantian perspective that is not accepted as nonproblematic in Eastern modes of thought. Eastern philosophies have long accepted that unmediated experiences of reality are possible. However, part of the persuasion is in the level of illumination of those who make the claim. As Huxley (1944) rightly noted long ago, "Kant was right only as regards minds that have not yet come to enlightenment and deliverance. . . . The thing in itself *can* be perceived—but only by one, who, in himself, is no-thing" (pp. 223–224, emphasis in original).

A caveat is that we acknowledge that any claim to experience is partly an interpretation. To identify anything as if it could be pulled from the stream of consciousness in bucketfuls (to paraphrase James) is to confuse the water in the bucket with the stream from which it came. It is interpretation that is the bucket that pulls water from the stream that continues on. It is not merely metaphor when mystics fumble to describe their experience as if a river flowing into the sea or as a drop of water from the ocean of life. The ability to discount the description of experience in favor of experience itself is essential to any understanding of mysticism and to our support of the common core thesis. Thus, there is no description of experience that involves no interpretation whatsoever (Stace, 1960, p. 203). Even if mystical experiences are unmediated, neither their recollection nor their description can be. This is the basis for Stace's (1960) claim that mystical experiences are "allegedly ineffable" (p. 79).

A third assumption follows closely. Mystical experiences are ineffable. The experience itself is ineffable, and absolutely so. Royce, James's great friend and adversary to whom the *Varieties* was largely addressed, once quipped something to the effect that mystics have experiences that are ineffable, and that is all they should say. However, the irony is that mystics write volumes. Among religious studies scholars, an almost exclusive emphasis on mystical texts accentuates the influence of language on mystical experience (Katz, 1978, 1992; McGinn, 1994). However, rather than a study of mystical texts, left as skins shed by serpents who have moved on, we seek the experience referenced by such texts, available to everyone disciplined or fortunate enough to be graced with experiences that, although ineffable, can be referenced in language and used to evoke what it cannot describe. The language of the mystics is many faceted, often used to evoke experience in the reader rather than describe the experience of the author (Katz, 1978a, 1992, pp. 5–15; Scholem, 1941, pp. 59–60). The language of the mystics is not to be taken as literally descriptive of an experience for which language is ill equipped by its very nature of subject/object distinctions to describe. In the tradition of the Sufi mystics, those who say do not know; those who know do not say.

A fourth assumption is that mystical experiences are neither simply emotive states nor are they simply cognitive recollections of truths available to the discursive intellect (to paraphrase James again). Yet they are noetic. The noetic claim of the mystic is to have known reality, often elevated to Reality or God. Both in personal (God) and impersonal (Godhead; Reality; One) terms, mystics provide us with hypotheses that must be explored as possible ontological claims regarding the nature of God or Reality. The knowledge is not as much *about* reality as *of* reality, in which the unity of the subject and the object is noesis. In James's (1902/1985, p. 332) succinct phrasing, "In mystic states we both become one with the Absolute and we become aware of our oneness." It is this that Stace (1960) refers to as the "dissolution of individuality" (pp. 111–113) actually experienced by mystics and by its very nature ineffable.

The fifth assumption is that, in order to adequately explore mystical experience, one must include phenomenological methods. As Staal (1975) has persuasively argued, if one wants to know what it is like to experience reality as the mystics do, one must experience it directly. Likewise, as James says in the *Principles* (1981/1890), "*Introspective observation is what we have to rely on first and foremost and always*" (p. 185, emphasis in original). If modern psychology has denied this proposition, it is, in the words of Stace (1960), "their loss and their folly" (p. 58). The mystical claim to unmediated experience of reality can with only little profit be studied from the outside. Investigators who do explore mysticism from the "outside" can at best produce correlational or causal claims to phenomena that remain obscure to those who have not had the experience (Hood, 1994; Staal, 1975). Again from the Sufi tradition we are reminded that only those who taste know. Likewise, as noted above, the assertion that all experience is mediated experience can be directly refuted by those whose experience of reality is unmediated. The skeptic can attempt to experience the same or to simply rest assured with the dogmatic assertion that "*There are* NO *pure (i.e. unmediated) experiences*" (Katz, 1978a, p. 26, emphasis and italics in original). In this sense, Wulff (2000) is more than merely suggestive when he states that the study of mysticism may be best acknowledged as leading to a change in the methods by which such experiences are investigated.

A sixth and final assumption is what Stace (1960) has referred to as "causal indifference" (pp. 29–31). This phrase is meant to include any and all mystical experiences regardless of the proximate context or conditions that precede the experience. Most controversial is the possibility that entheogens (formerly called psychedelics) can facilitate mystical experience. One cannot discount the reality of the experience as genuinely mystical because it was facilitated by a chemical or any other proximate cause. As James long ago noted, one cannot dismiss an experience because one can identify the physiological conditions that may accompany it. James's (1902) discussion of "medical materialism" (pp. 11–29) reminds us that, even if experience is both embodied and contextualized, neither condition can be used to dismiss the validity of the experience nor determine its existential value. Furthermore, identifying triggers of an experience cannot be used to reduce the experience to a causal claim that it was the trigger that caused the experience. Triggers may allow one to move beyond mediation to unmediated experience of reality, the lasting claim of the mystics of all faith traditions. It may be that entheogens are one such set of triggers (see Spilka, Hood, Hunsberger, & Gorsuch, 2003, pp. 283–288).

EXAMPLES OF MYSTICISM: INTROVERTIVE AND EXTROVERTIVE

Having stated our assumptions explicitly, we can now identify what is meant by mysticism. The term is of recent coinage, and for the vast majority

of recorded history it is unlikely that anyone would identify him- or herself as a "mystic" (McGinn, 1994; Troeltsch, 1931). However, within and eventually outside of the great faith traditions, mysticism has flourished. A common assumption of many social scientists is that mysticism is like suicide: difficult to study because of its rarity and the limited ability of social scientists to identify the presuicidal person. Social scientists are not able to predict with any accuracy who will report mystical experiences, but survey studies of the report of mystical experiences reveal that as much as one-third of British and American people report having had such experiences (see Spilka et al., 2003, pp. 300–314). Scharfstein (1973) notes that social scientists have likely grossly underestimated the frequency of mystical experiences and goes so far as to talk of a common everyday mysticism—so common that the reader of this chapter has likely had such an experience. An easy way to "measure" this is simply to record the mystical experiences of others and to ask people to rate themselves on the degree to which they have had a similar experience.

Because the focus of this chapter is on the empirical study of mysticism, it will be helpful to give an example what is being measured. A widely cited mystical experience from the English poet John Symonds is one of three examples chosen by David Wulff (2000, pp. 399–400) and is favorably cited by Stace as well (1960, pp. 91–93). Both identify the original description in James's *Varieties* (1902/1985, p. 306) in which James took the description from a biography of Symonds. My example is taken from the Religious Episodes Measure, which is composed of descriptions of religious experiences culled from James's *Varieties:*

> I would suddenly feel the mood coming when I was at church, or with people or reading, but only when my muscles were relaxed. It would irresistibly take over my mind and will, last what seemed like forever, and disappear in a way resembling waking up from anesthesia. One reason that I disliked this kind of trance was that I could not describe it to myself; even now I can't find the right words. It involved the disappearance of space, time, feeling, and all the things I call my self. As ordinary consciousness disappeared, the sense of underlying or essential consciousness grew stronger. At last nothing remained but a pure, absolute, abstract self. (in Burris, 1999b, p. 224)

This description of a mystical experience contains the essentials of what Stace called introvertive mysticism. Here, an experience of union timeless and spaceless and devoid of any content defines what mystics claim to be an unmediated union with reality. A dissolution of individuality into a universal consciousness identified as God, Reality, One, or Pure Consciousness. In a phrase not quoted above, but part of Symond's original description, Symonds concludes what is the essential introvertive mystical claim: "*The universe*

became without form and void of content. But self persisted" (Stace, 1960, p. 91; emphasis in original).

It is important to note that this claim violates neo-Kantian assumptions and is not argued for as much as it is declared to be an unmediated experience of reality. At this point, rather than argue the case for or against mediated realities, I simply note that the report of such unmediated claims can be reliably measured. Of course, the measurement is of the reports of such experiences and not of the experiences themselves. However, before explicitly discussing this thesis, I will cite another example of a mystical experience—one that Stace refers to as extrovertive mysticism. Here the experience is more like sense perception and looks "outward" rather than "inward."

In extrovertive mysticism, the experience of unity is perceived through the multiplicity of the objects of perception. A common phrase that describes this type of experience is "all is one." An example cited by Stace has both beauty and simplicity. Stace took it from Otto's *Mysticism East and West* (1932). The quote is from Meister Eckhart: "All that a man has here externally is intrinsically One. Here all blades of grass, wood, and stone, all things are One" (in Stace, 1960, p. 63). Likewise, from Abulafia's *Book on Untying Knots* from the thirteenth century, we have:

> All the inner forces and the hidden souls in man are distributed and differentiated in the bodies. It is, however, in the nature of all of them that when their knots are untied they return to their origin, which is one without any duality and which comprises the multiplicity. (in Scholem, 1961, p. 131)

Both Eckhart's and Abulafia's quotes are presented as declarations but are obviously based on personal experiences. The unity that is One also suggests the same described in Symond's introvertive experience noted above. The claim that there are two unities (Stace, 1960, p. 133) is logically refuted on the simple basis that with an undifferentiated experience of unity there is no *principium individuatonis* (Stace, 1960, pp. 133, 153).

Having established the nature of these two experiences at the purely descriptive level, it is time to consider the claim to a common core that can be found within various faith traditions. The common core is quite simply mysticism, whether introvertive or extrovertive.

MYSTICAL EXPERIENCE: THE COMMON CORE

Scholem's (1961, p. 5) claim that there is no such thing as mysticism in the abstract reminds us that mysticism has historically been found *within* the great faith traditions. However, his claim that "There is no mysticism as such, there is only the mysticism of a particular religious system" (p. 6) goes too far, as we will see in the discussion of the emergence of mysticism as an

independent type. Further, neither does Scholem's claim mean that one cannot identify mysticisms that share a common unity in the particulars of various faith traditions. It is this unity that forms the common core thesis. Although expressed within various faith traditions, this common core simultaneously transcends them. James (1902/1985) expressed the thesis directly:

> In Hinduism, in Neoplatonism, in Sufism, in Christian Mysticism, in Whitmanism, we find the same recurring note, so that there is about mystical utterances and eternal unanimity which ought to make a critic stop and think and which brings about that the mystical classics have as has been said, neither birthday nor native land. (p. 332)

James's "essential unanimity" does not entail a common set of higher-order beliefs and practices shared by all religious traditions. It is decidedly not a perennial philosophy (Huxley, 1944) nor a perennial psychology (Forman, 1998). What is does entail is the claim that, *at the experiential level*, there is a common experience of unity (either extrovertive or introvertive) that is the firsthand basis on which mystics of diverse faith traditions provided the basic experiential fodder that different religious dogmas, rituals, and practices both protect and give expression to. Religions move far beyond what experience alone provides. However, we can ignore much of religion since our focus is on the nature of mystical experience that transcends any particular interpretation. Even if Scharfstein (1973) is correct in claiming that most interpretations of mystical experience are "ontological fairy-tales" (p. 45), the experience remains what it is, in itself (Kant not withstanding)

Although James is often cited favorably in defense of the common core thesis, it is Stace (1960) who has been most often the target of criticism in the conceptual literature (Gimello, 1978, p. 195). Much of this criticism is contained in two texts edited by Katz (1978a, 1992). The claim to unmediated experience noted above has been declared invalid, as if the authority Western philosophy has granted Kant was absolute. Yet, as noted above, the claim to unmediated contact with reality is commonplace enough in mysticism to be its central defining feature. The issue to be engaged is why scholars deny the possibility of unmediated experience that is the essence of the experience of the dissolution of individuality reported in mystical experience. As Parsons (1999, p. 121) notes, it is an open possibility that one could develop a post-Kantian epistemology congruent with the mystical noesis. And to this I add that one could develop a post-Kantian psychology that is congruent with this noesis as well. To do this, I reaffirm my assumptions stated at the beginning of this chapter by noting my opposition to a too-strongly constructionist position insofar as constructionism demands that all experience be mediated experience.

First, it is an open question as to whether a post-Kantian epistemology and a psychology derived from it can be developed that supports the mystic claim

to unmediated experience. Although I agree with James that the authority of mystical experience is only absolute for those who have the experience, it also must be accepted that the report of mystical experience is a valid source of hypothesis-testing for researchers. One hypothesis to be tested is whether there are unmediated experiences, and suggestions have been made on how to do this (Almond, 1982). My position leaves the ontological issues open and accepts that mystics may be correct in the report of their experiences as simple empirical fact, introspectively or phenomenologically revealed.

Second, I accept that both mystical texts and their contexts must be respected. The claim to a common core is not simply a reductive assertion of identity that ignores differences in reports of experience. It is not a perennial philosophy or psychology that claims a higher-order interpretation common to all faith traditions. Mystics have supported a wide range of interpretations of their experience, from monism to dualism and from theism to pantheism and even atheism. But the brute phenomenological fact remains that an experience of undifferentiated unity is just that. Matilal (1992) has rightly noted that a salient feature of mysticism, however interpreted, is that it "promotes a special type of human experience that is at once unitive and nondiscursive, at once self-fulfilling and self-effacing" (p. 143). Why this particular experience is so often reported within various faith traditions must be explored as well as its emergence independent and outside of faith traditions.

If Katz has marshaled authors critical of Stace, others have begun to marshal authors to support the common core thesis. In two edited works, Forman (1990, 1998) has essentially argued that introversive mysticism, which he identifies as pure consciousness experience (PCE) necessarily lacks content and as such is independent of both culture and person. The fact that PCEs are variously interpreted after the fact can account for much of the diversity that is only apparent across mystical traditions. Again, the differences in mystical experience are at the interpretative, not experiential, level.

While the debate about whether mystical experiences share a common core is largely based on texts in the conceptual literature, it has become apparent that there are four significant literatures on mysticism, each unfortunately isolated from the other. McGinn (1994) refers to an "unrealized conversation" (p. 343) between three literatures that he has identified: the theological, the philosophical, and the comparative-psychological. Like Katz, McGinn focuses on texts and their interpretation for his illumination of mysticism. However, to these largely textually based literatures, I add a fourth: the empirical study of mysticism. Particularly useful is the empirical study of mysticism that links the phenomenological investigation of mysticism with measurement-based studies of contemporary persons reporting these experiences (Hood, 1997b). It is the fourth area that has lent considerable support to the common core thesis and to which we now turn.

PSYCHOMETRIC SUPPORT FOR THE COMMON CORE THESIS

The most common measurement scale for the study of mysticism is the Mysticism scale or M-Scale (Burris, 1999a). For purposes of this chapter, it is important to note that the 32 items of the M-scale were specifically derived from Stace's delineation of the common core that he derived phenomenologically (Hood, 1997b, 2001, in press). Thus, the M-scale is directly linked to the phenomenological (and hence conceptual) literatures. However, what it adds to our understanding of mysticism is its ability to assess the report of mystical experience among contemporary persons.

The M-scale consists of 32 items, two positively worded and two negatively worded items, all but one (paradoxicality) of the original common core criteria of mysticism proposed by Stace. Independent investigators have supported Hood's original work, indicating that the M-scale contains at least two factors (Caird, 1988; Reinert & Stifler, 1993). For our purposes, it is important to note that Factor I consists of items assessing an experience of unity (introvertive or extrovertive), while Factor II consists of items referring both to religious and knowledge claims. This is compatible with Stace's claim that a common experience (mystical experience of unity) may be variously interpreted. Other factor analyses of the M-scale by Caird (1988) and Reinert and Stifler (1993) support the original two-factor solution to the M-scale. Reinert and Stifler also suggest the possibility that religious items and knowledge items emerge as separate factors. This splits the interceptive factor into religious and other modes of interpretation, a possibility not inconsistent with Stace's phenomenological classification. This would allow for an even greater range of interpretation of experience, a claim to knowledge that can be either religiously or nonreligiously based. This is consistent with the distinction between spirituality and religion discussed below. However, the factor analytic studies cited above are far from definitive and suffer from inadequate subject-to-items ratios. Overall, they are consistent in demonstrating two stable factors: one an experience factor associated with minimal interpretation, the other an interpretative factor, probably heavily religiously influenced. However, two-factor analyses collapse introvertive and extrovertive mysticisms and do not permit independent identification.

LANGUAGE AND THE M-SCALE

A persistent problem with the M-scale is that it attempts to be neutral with respect to religious language (Hood, 2001). For instance, the scale refers to experience with ultimate reality, not to experience of union with God. However, the language of neutrality is perplexing as emphasized by theorists that oppose the common core thesis (Katz, 1992). How do we know

that union with God is the same experience as union with ultimate reality? Two issues are empirically relevant.

First, no language is neutral. Hence, an attempt to speak of union with "God" or "Christ" in language that references only "ultimate reality" suggests to some conservative religionists a "New Age" connotation. Likewise, to reference "God" or "Christ" is itself problematic for secularists. While the distinction between experience and interpretation acknowledges that language is an important interpretive issue, it also forces one to focus on the experiential basis from which genuine differences in interpretation can arise. Like texts, measurement scales use particular language and thus confound the distinction between interpretation and experience. However, empirical methods are available to suggest how this confound can be clarified. One method is to show similar factor structure despite different language use (Hood & Williamson, 2000).

Second, some individuals demand that profound experiences be interpreted. In Barnard's (1997) extended treatment of James's theory of mysticism, mystical experience is defined as one that is necessarily transformative with respect to contact with some transpersonal reality. Although I do not accept this definition of mysticism as properly Jamesean, it does indicate that intense, transformative experiences will be acknowledged in some language that identifies, defines, and expresses what the experienced transpersonal reality is. In Jamesean terms, this language is less constructionist of the experience than descriptive of it. Therefore, those who have experienced ultimate reality may not wish to claim it as God. Moreover, Christians may want that reality to be identified as Christ, something that non-Christian mystics may eschew. Thus, the claim of what is experienced is important as part of the social construction of the expression of experience. However, differently expressed experiences may have similar structures if confounds with language issues can be avoided.

Hood and Williamson (2000) created two additional versions of the M-scale. Each paralleled the original M-scale but, where appropriate, made reference to either God or Christ. Both the original M-scale and either the God-language version or the Christ-language version was given to relevant Christian committed samples. The scales were then factor-analyzed to see if similar structures emerged. Basically, whether the language of the M-scale referenced God, Christ, or simply reality, the factor structures were identical. Furthermore, the common factor structure for all three versions matched Stace's phenomenologically derived model quite well. For all versions of the scale, clear introvertive, extrovertive, and interpretation factors emerged. The exception is that, as anticipated, ineffability emerged as part of the introvertive factor in all samples and not part of the interpretation factor as suggested by Stace. However, as Hood and Williamson note, an experience devoid of content is inherently "ineffable," because there is no content to describe. This is also Stace's (1960) claim with respect to the introvertive experience in that

he claims the experience itself is ineffable but the recollection of it is not (pp. 297–298).

In additional studies directly testing Hood's modification of Stace's phenomenological classification, confirmatory factor analysis was used. Hood and his colleagues translated the M-scale into Persian and administered this scale to a sample of Iranian Muslims (Hood et al., 2001). The scale in its original English version was also administered to a sample of Americans. Confirmatory factor analysis was then used to directly test Hood's model of mysticism in both samples (with ineffability as part of introvertive mysticism) to other possible models, including Stace's (where ineffability was part of the interpretative factor). Results showed that, overall, both Stace's and Hood's models were better than any other models and that, overall, Hood's model of mysticism was better than Stace's. Thus, empirically, there is strong support for the claim that, as operationalized from Stace's criteria, mystical experience is identical as measured across diverse samples, whether expressed in "neutral language" in either English or Persian or in specific religious language uses "God" or "Christ" references with appropriate samples. Furthermore, three factor solutions that do not collapse introvertive and extrovertive experiences

Table 5.1 Phenomenologically Derived (Stace) and Empirically Derived (Hood) Models of Mystical Experience

Phenomenologically Derived Model of the Common Core

Introvertive mysticism	Extrovertive mysticism
A Undifferentiated pure consciousness	A. The perception of unity in diversity
B. Timeless/spaceless	B. Inner subjectivity to all

Interpretation
A. Noetic
B. Religious
C. Positive affect
D. Paradoxicality (not measured in M-scale)
E. Ineffability (alleged)

Empirically Derived Model of the Factor Structure of the M-Scale

Introvertive mysticism (12 items)	Extrovertive mysticism (8 items)
A. Pure consciousness items	A. Unity in diversity items
B. Time/space items	B. Inner subjectivity items
C. Ineffability items	

Interpretation (12 items)
A. Noetic items
B. Religious items
C. Positive affect items

of unity fit well with Stace's model (Hood, Morris, & Watson, 1993; Hood & Williamson, 2000; Hood et al., 2001). The basic structure of mysticism that emerges from empirically based measurement studies is directly compared to Stace's phenomenological classification shown in Table 5.1.

Three factor solutions to the M-scale are not simply the most adequate overall measure of mysticism in psychometric terms, but they offer strong empirical support for Stace's common core thesis. Both introvertive and extrovertive mysticism can be clearly identified with ineffability as a defining component of the actual experience of introvertive mysticism. Likewise, regardless of the language of the M-scale, the basic structure of the experience remains constant across diverse samples and cultures. This is a way of stating Stace's common core thesis in measurement-based terms. It also allows us to return to the issue raised by James's view of religious experience. The possibility that mysticism emerges within religious traditions which then come to oppose this primary source from which they derive their existence can be explored empirically. The common core thesis, supported by measurement studies, makes clear that the interpretation of mystical experience can be religious but it need not be.

MYSTICISM WITHIN AND OUTSIDE RELIGION: TROELTSCH'S MODEL

The unfortunate fact of an unrealized conversation between literatures noted by McGinn can partly account for the fact that psychological studies of mysticism have ignored a powerful theory of mysticism embedded in the work of Troeltsch (1931), usually referenced only in the sociological literature (Hood, 2003).

Troeltsch, like Bouyer (1980), saw mysticism as an inherent tendency to seek personal piety and an emotional realization that serves to intensify commitment to a religious tradition. This is mysticism that is inherent and foundational to any and all faith traditions. It is a religion infused with spirituality. Troeltsch classified the traditions into ideal types. The church type is open to all who profess belief, while the sect type is more exclusive as it seeks to purify a church tradition that has been perceived to have strayed from the rigors and pure demands of the faith tradition. The sect thus demands firmer criteria for membership and opposes a strict exclusiveness to the universality and openness of the church type. Both churches and sects are defined as much by their beliefs and rituals that, as noted above, are not directly derivable from mystical experiences. Here is the essence of James's claim that the faithful live by criteria that are far removed from and only indirectly related to firsthand religious experiences, including mystical ones. If churches or sects cannot keep this inward spirituality alive, some seek it elsewhere. Likewise, if either the church or sect closes off the possibility of such experiences, some will seek their spiritual nourishment from other sources.

Only when mysticism emerges as an independent religious principle as a reaction to the church and the sect type does it become a new social force and seeks an independent philosophical or psychological justification. This is mysticism as a third ideal type. This justification can be outside of the faith tradition, and indeed, as noted above, mystical experiences need not be religiously justified at all. Thus, there are two forms of mysticism: one integral to any and all faith traditions and another that can emerge out of and be independent of any faith tradition. These two forms of the mystical type must be clearly distinguished; something social scientists have failed to do. Garrett simply identifies these as M1 and M2 (Garrett, 1975; Troeltsch, l931, pp. 214–215).

In the widest sense, mysticism is simply a demand for an inward appropriation of a direct inward and present religious experience (Bouyer, 1980; Troeltsch, 1931, p. 730). It takes the objective characteristics of its tradition for granted and either supplements them with a profound inwardness or reacts against them as it demands to bring them back "into the living process" (Troeltsch, 1931, p. 731). This is Garrett's M_1, or Troelstch's "wider mysticism." We identify this as *religious mysticism* because it is a mysticism that Troeltsch (1931, p. 732) and Bouyer (1980, p. 51) assert is found within all religious systems as a universal phenomena. Thus, as an empirical fact, it entered Christianity partly from *within* insofar as Christianity entails the same logical form as all traditions relative to this type and partly from *without* from other sources that were "eagerly accepted" by Christianity (Troeltsch, 1931, p. 732). Concentrating among the purely interior and emotional side of religious experience, it creates a spiritual interpretation of every objective side of religion such that mystics typically stay within their tradition (Katz, 1983). However, Troeltsch (1931) also identifies a "narrower, technically concentrated sense" of mysticism (p. 734). This is Garrett's M2. It is a mysticism that has become independent in principle and contrasted with religion. It gives rise to persons who identify themselves as "spiritual but not religious." It claims to be the true inner principle of all religious faith but is not contained within any particular tradition. This we refer to as *spiritual mysticism*, but the term "spiritual" is redundant. Mysticism now breaks away from religion which it disdains. It accepts no constraint or community other then self-selected and realized. It is a spiritual religion with the term "religion" as redundant here as "mysticism" was above. It is what many today profess to be spirituality as opposed to religion. It is a mysticism not linked to the interpretative mandates of any one faith tradition.

EMPIRICAL EXAMPLES OF RELIGIOUS AND SPIRITUAL MYSTICISM

Pargament and his students have taken the lead in descriptive and correlational work identifying distinctions between religious and spiritual

self-identification (Zinnbauer et al., 1997). I focus on one study to illustrate the conceptual distinction between the two mysticisms noted above. One motivation for this study was to paraphrase part of the title of the article in which these data are presented—to "unfuzzy the fuzzy" (a phrase first coined by Spilka). If critics of religion find it too constraining, critics of spirituality find it is not constrained enough. Using an essentially forced-choice procedure, participants were asked to endorse one of the following five options: (1) Religiousness and spirituality overlap, but they are not the same concept. (2) Spirituality is a broader concept than religiousness, and includes religiousness. (3) Religiousness is a broader concept than spirituality and includes spirituality. (4) Religiousness and spirituality are the same concept and overlap completely. (5) Religiousness and spirituality are different and do not overlap. In addition, participants rated themselves on spirituality and religion on a five-point scale. Participants also identified themselves as either *religious*, *spiritual*, *both*, or *neither*, in a forced-choice context. Finally, a content analysis was performed on the participant's personal definitions of religiousness and spirituality.

Data were solicited from 11 small convenience samples, ranging from "conservative Christian college students" to "New Age groups." Most of the 364 participants were either college students or members of some religious group. Exceptions included small samples of residents of a nursing home ($n = 20$) and of mental health workers ($n = 27$). Overall, 78 percent of participants identified themselves as religious, while 93 percent identified themselves as spiritual. Most religious persons considered themselves to be spiritual (74%). Overall, few persons thought religiousness and spirituality to be identical concepts (2.6%) or entirely nonoverlapping concepts (6.7%). Thus, for most, religiousness and spirituality are somehow and variously intertwined. Nearly identical percentages identify themselves as religious but not spiritual (4%) or as neither (3%). Very few people consider themselves religious but not spiritual. Hence, for most, religion is inherently involved with spirituality.

Content analysis for personal definitions of spirituality and religiousness revealed a fact consistent with our discussion of the interview data above: the most common categories for spirituality were *experiential* while those for religion were *belief*. For all groups, self-rated spirituality equals or exceeds self-rated religiousness. Not surprisingly, the greatest differences between self-ratings are among participants who are members of religious groups distant from traditional expressions of faith, such as New Age groups and Unitarians. While members of more traditional faith groups differ in levels of self-rated religiousness and spirituality, within specific groups (such as Roman Catholics) there is no significant difference. Among New Age groups, self-rated spirituality greatly exceeds self-rated religiousness. Furthermore, conservative religious groups make less distinction between spirituality and religiousness (Zinnbauer et al., 1997, pp. 554–567).

These data are congruent with previous empirical work. In particular, the finding that mental health workers are more spiritual than religious replicates previous work on mental health professionals. Shafranske (1996) reviewed the empirical research on the religious beliefs, associations, and practices of mental health professionals. Focusing primarily on samples of clinical and counseling psychologist who are members of the American Psychological Association, Shafranske noted that psychologists are less likely to believe in a personal God or to affiliate with religious groups than other professionals or the general population. In addition, while the majority of psychologists report that spirituality is important to them, a minority report that religion is important to them (p. 153). Shafranske summarizes his own data and the work of others to emphasize that psychologists are more like the general population than previously assumed. However what Shafranske lumps together by various indices as the "religious dimension" (p. 154) can be misleading. Psychologists are not like the general population. In fact, psychologists neither believe, practice, nor associate with the institutional aspects of faith ("religion") as much as they endorse what Shafranske properly notes are "noninstitutional forms of spirituality" (p. 154). One could predict that, in forced-choice contexts, they are most likely to be "spiritual but not religious." Empirically, three facts about religious and spiritual self-identification ought to be clear.

First, most persons identify themselves as both religious and spiritual. These are largely person's sampled from within faith traditions for which it is reasonable to assume that spirituality is at least one expression of and motivation for their religion (e.g., institutional participation). Hence, many measures of spirituality simply operate like measures of religion (Gorsuch & Miller, 1999). Here is a mysticism that is comfortable within the bounds of a specific faith tradition. This is religious mysticism.

Second, a significant minority of individuals use spirituality as a means of rejecting religion. However, what is rejected is religious belief and claims to exclusiveness, not the mysticism contained within the tradition This is particularly obvious in qualitative studies in which individuals identify their spirituality in defiant opposition to religion. They oppose various aspects of the institution of religion such as its authority, its more specific ("closed") articulation of beliefs ("dogma") and practices ("ritual"), and they seek to move away from religion to be "more developed" spiritually. The move is from belief to experience, as Day (1994) has perceptively noted. To this I add that experience need not seek explicit interpretation. The common core of mysticism can break free of any interpretative bounds.

Third, religiousness and spirituality overlap considerably, at least in American populations. The majority of the population is religious *and* spiritual, both in terms of self-identification and in terms of self-representations. Exceptions are easy to identify, but one ought not to lose sight of the fact

that they are *exceptions.* Significantly, they include not only scientists in general but psychologists in particular (Beit-Hallahmi, 1977; Shafranske, 1996). Among these people, a hostility to religion as thwarting or even falsifying spirituality is evident. This hostility is readily revealed in qualitative studies in which there is some degree of rapport between interviewer and respondents (see Hood, for review). These persons report mystical experiences without the need for faith-bound interpretations. Indeed, persons within and outside religious traditions who report mystical experiences seldom refute the experiential claims of one another. As Stace (1960) has perhaps overstated the case, "There is no instance of a person who has been illumined denying or disputing the teachings of another who has passed through the same experience" (p. 33). Neither are they bound by each other's interpretation of what the experience might mean. There emerges no perennial philosophy from the common experiential core.

SUMMARY AND CONCLUSION

This allows us to come full circle with the common core thesis. Religions are much more than efforts to confront mystical experience. However, there is little doubt that mystical experiences, whether introvertive or extrovertive, share a common core. They can elicit a sense of the scared that demands some form of religious interpretation. Most mystics struggle within their faith tradition to give expression to this primary experience. Huxley (1944, p. 132) reminds us that mystics both make theology and are made by it. However, as religions emerge with some hostility toward these experiences or demand a too-constrictive dogmatic interpretation, mystics can break away from churches and sects, become indifferent or hostile to religion, and identify themselves as simply "spiritual" or indeed as simply "mystics." They may seek secular interpretations of their experience or be satisfied with the experience itself. This dynamic process can be found throughout mystical traditions in all cultures. The tension is always between an experience that is ineffable and the claims to describe it. Stace (1960) noted this as well. His common core thesis led him to conclude, as did Huxley (1944), that the link between mysticism and religion exists only insofar as each claim to acknowledge a transcendence that is both sacred and holy. However, as noted above, mysticism may be both a self-fulfilling and a self-effacing experience of oneness—or perhaps, as the common core thesis suggests, it is also self-authenticating. While the fascination with the issue of unity and diversity, the one and the many, has largely been linked in the history of thought with a religious sensitivity (Copleston, 1982), mysticism has emerged independent of religion and can exist without it. Whether mysticism persists depends much on how the issues of religion and spirituality play out. Regardless, mystical experience remains what it is, self-authenticating for the mystic in all its ineffability.

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