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LISA J.
MILLER

A photograph of a forest path. The path is made of dirt and is flanked by tall, thin trees. Sunlight filters through the trees, creating a dappled light effect on the path and the surrounding vegetation. The path leads into the distance, disappearing into the forest.

≡ The Oxford Handbook of
**PSYCHOLOGY AND
SPIRITUALITY**
SECOND EDITION

The Oxford Handbook of Psychology
and Spirituality

OXFORD LIBRARY OF PSYCHOLOGY

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The Oxford Handbook of Psychology and Spirituality

Second Edition

Edited by Lisa J. Miller

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The History and Current Status of the Psychology of Religion and Spirituality

Ralph W. Hood, Jr.

Abstract

Religion and spirituality were major concerns of the early American psychologists. Many of the early psychologists sought to give reductionist explanations for both religion and spiritual phenomena as they sought to dissociate psychology from the popular cultural association of psychology with parapsychology and spiritualism. William James was the most notable exception, insisting on the possible ontological reality of both religious and psychic phenomena. Psychoanalysis influenced by the French medical tradition continued exploring religion, with Sigmund Freud offering an explanation of religion first simply as an illusion but finally as a mass delusion, thereby linking religion and madness. As American psychology sought to emulate the German tradition of experimental psychology within the limits of natural science, interest in religion waned. The reemergence of a psychology of religion came in the 1960s, partly influenced by interim concerns with prejudice and cognitive dissonance theory, both of which had a marginal concern with religion. The cultural unrest of the 1960s rekindled interest in new religious movements and psychedelic states of consciousness, both of which fueled the psychology of religion. The field is now well established with a division in the American Psychological Association and an APA journal. However, two psychologies have emerged. One committed to naturalism and the other to a postmaterialist psychology, each with radical different ontological assumptions and criteria for appropriate methods.

Key Words: cognitive dissonance, consciousness, conversion, history, naturalism, postmaterial, psychoanalysis, ontological, parapsychology, prayer

Introduction

In the first edition of this handbook, I documented a brief history of Division 36 of the American Psychological Association (Hood, 2012). We noted the struggle on name changes for Division 36 that often were emotionally volatile as individuals varied widely on views of the proper relationship between psychology and religion. As Benjamin (2009) noted, "History is not what happened in the past. It is what historians tell us happened in the past" (p. 1 [emphasis in original]). Until recently, histories of psychology have been Whig histories, written by insiders in the discipline rather than trained historians, and thus tend to support one view of psychology among many differing views as how to define the discipline (Benjamin, 1977; Butterfield, 1931/1965; Hood 2012). Taylor has

documented this with respect to the almost iconic history of experimental psychology of Borings (1929) in which William James's own priority in establishing a laboratory of psychology at Harvard is minimally recognized in favor of Wundt's laboratory in Leipzig, Germany, in order to bolster Boring's vision of psychology as necessarily an experimental science in the tradition of the natural sciences. How one defines psychology is part of the means by which a given history is recognized. The history of psychology has its own divisional status (Division 26) that precedes that of the psychology of religion in the American Psychological Association (APA), yet as a research specialty the history of psychology is still quite young (Benjamin, 2009, p. 1). Thus, the issue of tracing the history of the psychology of religion depends on how each discipline is conceived. Robinson (2002) suggested a needed conversation between psychologists who would identify cognition and claims to neurological substrates as determinants of not simply thought but experience (a broader term) with those who have yet been persuaded that psychology is, ought, or even can be a natural science. Yet for many psychologists of religion, the phrase "psychological science" is a mantra, one even more closely identified with a competing organization, the Association for Psychological Science. "Psychology" is clearly a much broader term than "psychological science." The latter is used to differentiate it from "softer" and more clinical forms of psychology, as well as humanistic and transpersonal psychology whose claims to scientific status are challenged. The counter is that psychological science itself is based on a narrow ontology that is essentially materialistic and hence not truly psychological at all in the broader sense of the term. Kelly et al. (2010) argue for a psychology that acknowledges spiritual realities only possible with a broadened ontological view, which is in the title of their book, *Beyond Physicalism*. Here is ample room for psychology and religion to engage in a dialogue. Religion has always been concerned with spirituality, even if often only to constrain it. Maslow (1964) long ago noted that a narrowly conceived psychology and an equally narrowly conceived religion would have little to dialogue about.

As we revisit our history from the first edition of this text, we have the advantage of expanding on our decision to avoid a psychology *of* religion, an enterprise Belzen (2010) argued is fraught with conceptual pitfalls. Our focus then as now is on psychology *and* religion, that short-lived divisional name for what is likely in the future (whether *of* or *and*): the wedding of religion with spirituality as has happened now with Division 36 of the APA (Hood, 2012). Nowhere is the relevance of the history of the name disputes in Division 36 more evident than in the comparison of two handbooks, each now in a second edition. Both are edited by distinguished researchers. The *Handbook of the Psychology of Religion and Spirituality* by Ray Paloutzian and Crystal Parks (2005, 2013) continues to capitalize on the addition of "spirituality" to the name of Division 36 for reasons we have noted previously (Hood, 2012). However, as with her first edition (2012c), Lisa Miller continues to avoid "religion" in this aptly titled *The Oxford Handbook of Psychology and Spirituality*. In what might appear as minor difference ("of" vs. "and" and "religion" vs. "spirituality"), dealing with one psychology is more like the well-known vase illusion

of Rubin (1915). Here two faces can be seen staring at one vase. What is crucial here is each stares at one another and thus necessarily in the opposite direction. Leaving the issue of the illusory vase aside for now, we simply note that the methodological and ontological commitments quite explicit in both handbooks clash. Whereas Paloutzian and Park remain committed to psychological science and to naturalism, Miller is committed to a spiritual psychology that directly address a broadened ontology. Her favored term is a postmaterialist psychology (Miller, 2012b, p. 1). Thus, in addressing the current status of research in the psychology of religion and spirituality, we will focus on differences methods make as psychologists claim to study the same phenomena. Methods and ontology cannot be separated as we will illustrate throughout this chapter.

We are not alone in challenging the naturalism of psychological science. Robinson has most severely challenged the intellectual basis of a scientific psychology wedded to naturalism. He noted that reductionist strategies (indicated by “of”) are not merely premature but finally misguided (Robinson, 2002, p. 47). We have developed Robinson’s argument fully elsewhere (Hood, in press). Here we simply support’s Miller plea for a broadened ontology and contrast a psychological science committed to the gold standard of experimental methods based on natural science as inappropriate for a science of psychology *and* spirituality. As Robinson (1995) concluded, “In a wide variety of settings, this method [experimental] has yielded fairly stable functional relationships between dependent and independent variables under so unlike the domain of interest as to render generalizations jejune” (p. 332). Accepting Robinson’s conclusion allows us to consider Miller’s plea for an expanded ontology in light of the historical conditions under which psychology came to restrict itself to the view of scientific naturalism. We can do no better than to acknowledge the relevance of William James, whose name heads the most prestigious award given by Division 36 for research. The question is, could William James have received the award that bears his name? We suggest probably not. As we shall see contemporary psychologists have failed to engage James as a full conversation partner whether their focus is on religion or on spirituality (Kime & Snarey, 2018, p. 307).

The Emergence of Psychology and Religion in America

It is widely acknowledged that the early American psychologists concerned themselves with both religious and spiritual issues, including spiritualism (Coon, 1992; Taves, 2014). European histories of the psychology of religion noted its roots in diverse sources such as Sir Francis Galton on prayer, Sir James Frazer on comparative religion, and theologians such as Dean Inge on mysticism and religious experience (Hearnshaw, 1964), but the psychology of religion emerged as largely an American psychology and remained deeply rooted in American culture. The newly emerging discipline of psychology tried to steer a path between the Syclla of spiritual and occult phenomena and the Charybdis of religious experience (Taves, 2014). James was one of the few who kept a keen eye on both. His focus on experience was a means of confronting rather than avoiding an expanded

ontology for psychology. He thought psychology ought to confront the truth claims of both religious and spiritual realities (Hood, in press; Salter, 2009). Part of this concern was the cultural fact of the American Protestant experience with its focus upon revivals and conversion experiences which early psychologists of religion studied. Taves (1999) identified the tension between psychologists and religionists as they struggled to explain religious experience as opposed to experiencing religion. The fear for some and the hope for others was that religious experience could be adequately explained by psychological processes absent the need for any supernatural reference. James refused this option and not only argued for the study of religious experience but did so with an expanded ontology in which religious and spiritual phenomena shared in the ontological reality of the world (Hood, 2008b; Slater, 2009).

With the exception of William James, almost to a person the earliest psychologists of religion believed in a psychology of religion, not a psychology and religion. In this sense, they championed the scientific naturalism of Paloutzian and Parks's handbook. For instance, in the early months of 1881, G. Stanley Hall delivered a series of public lectures at Harvard University. His topic was religious conversion, and much of the material he covered was later incorporated into his classic two-volume study of adolescence (Hall, 1904). Those committed to psychology as a natural science were courageous enough to tackle some of the most profound and meaningful religious phenomena of the time as lacking any supernatural necessity. While many associated the new science of psychology with the documentation of the reality of occult and spiritual phenomena, American psychologists divided along lines claiming to debunk or support such phenomena (Hood, 2008a; Taves, 2014). Hall eventually went on to write a two-volume treatise entitled *Jesus, the Christ, in Light of Psychology* (1917), foreshadowing psychohistorical works on religious figures most commonly associated with psychoanalysis, the psychology that emerged not out of German experimentalists but from the French medical tradition and, of course, the influence of Sigmund Freud. However, when psychologists trained in the German experimental model studied religion, they focused upon Protestantism associated with American culture. Thus, not surprisingly, American psychology of religion emerged as a psychology of North American Protestant Christianity—a bias that still dominates the field to this day (Gorsuch, 1988). The two major topics of concern were religious experience and conversion.

Religious Experience and Conversion

Edwin Starbuck and James H. Leuba had been Hall's students at Clark University, arguably the only school of the psychology of religion in the early period. Leuba (1896) published the first psychological journal article on conversion; this was rapidly followed by an article by Starbuck (1897) on conversion and by his first book-length treatment of the topic (Starbuck, 1899). Not surprisingly, Leuba's and Starbuck's research methods paralleled Hall's, including the use of questionnaires and personal documents. Another early

investigator, Coe (1916), added quasi-experimental techniques to the investigation of religious converts influenced by the American Protestant experience and revivals. These early investigators tended to focus upon dramatic cases of sudden conversion, using purely psychological principles that provided essentially reductionist interpretations. Pratt (1920), one of James's students at Harvard, focused upon gradual converts, whose experiences were less dramatic, required intellectual seeking, and were hypothesized to be more genuinely characteristic of conversion within both Christianity and other religious traditions. He most anticipated the current focus on individuals who identify as spiritual but not religious (Streib & Hood, 2016). However, as revival phenomena declined in American culture, so did psychologists' concern with conversion, so much so that as the 1960s approached, W. H. Clark (1958) bemoaned the fact that psychology had all but abandoned the study of conversion. He was to miss the anticipation of the renewed concern with religious conversion as the psychology of religion reemerged after lying dormant as behaviorism quickly dominated academic psychology.

The Exceptional Case of America's Exceptional Psychologist

If the early American psychologists sought to define psychology as natural science providing for a reductionist explanation of religious and spiritual phenomena, William James provided a nonreductionist basis for not a psychology of religion but for a complementary psychology and religion. In this sense, he anticipated the recent call by Jeeves and Ludwig (2018) for complementary models where both science and religion provide mutual enrichment. James's widely acknowledged first classic text, *Principles of Psychology* (1890/1981 [hereafter PP]), limited psychology to an ontology associated with the German commitment to scientific naturalism. However, he abandoned this commitment as only "provisional" in the abridgement of this text (James, 1892, p. 468), and in the second of his classic texts, he produced what is less a psychology of religion than a text on psychology and religion (Hood, 2008a, in press).

The second classic work by James (1902/1985), *The Varieties of Religious Experience* (hereafter VRE), has continued to influence psychologists since it was initially delivered as the Gifford Lectures at the beginning of the 20th century. James set the tone for contemporary empirical work in the psychology of religious *experience* that is nonreductive (Hood, 1995). He also anticipated the current concern with spirituality as opposed to religion, and in the words of Fuller (2001, p. 130), was the exemplar of what it means to be "spiritual but not religious." Consistent with this handbook Gorsuch and Miller (1999) suggested that if James were writing today, he would title his lectures varieties of *spiritual* experience. Likely, however, the subtitle would still be *A Study in Human Nature*, suggesting that being spiritual may be more basic to humans than being religious, the former likely more resistant to secularization than the latter (Watts, 2017). In this sense, the long history of spiritual philosophies from Hegel, Kierkegaard, Eliade, and Otto, culminated in America, with William James and some version of *homo religious* (Hood,

2002). Essential is that if religion is rooted in spiritual experience, there is no substantial objection to human consciousness surviving bodily death (James, 1898). James made the case that empirical data then as now are consistent with one of two conceptual options: the brain generates consciousness (naturalism) or the brain transmits consciousness (post-materialism). In VRE, James opted for the latter having seen the limitations of the naturalism he championed in the PP. The spiritual child movement associated with Miller (2015) made the assumption that children need not to be taught to be spiritual but in fact are simply spiritual beings. Kelly et al. (2010) made James's objections center stage in reviving a transmission theory of consciousness with James's and Frederick Meyers' work an integral part of their critique of psychological science's materialists theories of mind or what Robinson (2002, p. 51) called the "biologizing of the mind."

Like many American psychologists, James sought to illuminate conversion, relying heavily upon the research of his contemporaries, especially Starbuck and Leuba. However, unlike many of the American psychologists of religion, James argued that religious thought was warranted by the fact that psychological reductive theories of religious experience were incomplete. A science of psychology must accept that ontological possibility of transcendence variously interpreted by religions. That aspect of human nature from which religions emerge was for James mysticism. James rejected a reductive view of mysticism as insufficient on both methodological and conceptual grounds. The natural science limits provisionally acknowledged in the PP were transcended in the VRE. This is no more evident than in the contrasting evaluation of mysticism by James and the staunch defender of the naturalist Germanic experimental tradition, Leuba. Leuba (1925) argued that mysticism was at best an inferior or pathological state, whereas for James (1902/1985, p. 301) it was the "root and centre" of religion and an empirical indicator of a broader consciousness James (1902/1985) referred to this fact as simply evoking an awareness of something "MORE" (p. 401 [emphasis in original]). Further he argued that this more is "*conterminous and continuous with a more of the same quality, which is operative in the universe outside him*" (James, 1902/1985, p. 400 [italics in original]). Faith traditions both secular and religious struggle to interpret this more. Religions arise out of this spiritual base. Thus, even though the VRE comes early in the first period of the psychology of religion, it foreshadowed the lack of concern with religious belief by psychologists, who all but adopted methodologies and frameworks such as behaviorism that left religion bereft of any serious ontological claims for psychologists committed to naturalism. Psychologists began to see psychology and religion as supporting incompatible ontological claims (Leuba, 1916, 1934). James's approach was rejected by American psychologists and became part of what Taylor (1999) termed a "shadow culture." The exception was the French medical tradition, which birthed the science of psychoanalysis associated with another exceptional psychologist, Sigmund Freud. Its history is best documented by Ellenberger (1970), whose history of dynamic psychology is both authoritative and indicative of the close relationship between this species of psychology and, as well

noted by Rosenbaum (2012), is linked to the “elephant in the room.” The elephant refers to psychoanalysis and Freud’s interest in psi phenomena, especially telepathy. A recent text critical of the ontological narrowness of psychological science acknowledges the legitimacy of psi phenomena, an interest shared by both James and Freud. Kelly et al. (2010, p. xiii) claimed that “the materialist consensus which undergirds practically all of current mainstream psychology, neuroscience, and philosophy of mind is fundamentally flawed.” Both Freud and James left the question of the reality of psi phenomena open. Like Miller, they supported a postmaterialist psychology.

Psychology of Religion: The Case of Freud and Psychoanalysis

While Ellenberger (1970) made the case for the centrality of essentially religious concerns in the diversity of theories, he subsumed under the phrase “dynamic psychology.” American psychology of religion focused in the early period upon Freudian theory and its claim to have found a natural scientific explanation for religion. While the concern with religion among the German tradition of a laboratory-based natural science waned, psychologists in the emerging psychoanalytic tradition took up the mantle of religion in training schools loosely affiliated with universities but heavily influential in programs concerned with clinical psychology. The early parallel is with James, whose treatment of psychology as if it were or could be a natural science was provisional and was countered by Freud’s insistence that psychology as a natural science was finally achieved with the science of psychoanalysis (Grünbaum, 1984, 1987). Hence, Grünbaum, rightly noted that like all natural science theories, psychoanalytic theories in general and Freud’s theory of religion in particular are to be judged by empirical criteria. Elsewhere I have explored this issue (Hood, 1997, 2010). Here the issue is not to explore Freud’s view of religion in depth but simply to note that this tradition of French medical concerns balanced the Germanic concern with laboratory science as the most influential effect on American culture and on popular ideas of psychology. No psychology has had as much influence on culture, arts, and literature as psychoanalysis. It also provided a powerful reductive explanation of religion that few contemporary psychologists of religion, even within the psychoanalytic tradition, support (Belzen, 2009). Ultimately, Freud saw religion as a falsification of reality. God was interpreted as a projected idealized father derived from the Oedipal drama. The decline of religion was predicated on Freud’s assumption that it characterized the infantile stage of humankind. While American academic psychology largely ignored religion from 1930 through 1960, psychoanalysis in its classical Freudian variety produced literally thousands of articles and books, providing a huge cultural impact on how Europeans and Americans viewed themselves. Efforts to test psychoanalytic theories by naturalistic scientific methods have, not surprisingly, found psychoanalytic theories largely deficient, especially in their reductionist claims with respect to the objects of religious belief (Belzen, 2009; Meissner, 1984; Pruyser, 1968). Thus, psychoanalysis paralleled the early German-influenced experimentalists in exhausting within the first generation of scholars what

psychology as a natural science could say about religion. The instructive exemplar here is the only meeting between the two exceptional psychologists (James and Freud) who provide our integrating theme for the early period of the psychology of religion in America.

James and Freud

If James was self-consciously aware of the provisional nature and likely limits of natural science with respect to psychological questions that are accentuated in the psychology of religion, Freud was less open to the possibility of such limits (Meissner, 1984). In his analysis of the Freud/Pfizer correspondence, Meissner documented that Pfizer had raised the issue about Freud's rhetorical use of "science" as both an effort to establish the legitimacy of psychoanalysis and a rather naïve commitment to a particular metaphysic (Meissner, 1984, pp. 73–103). James did the same in his critique of Freud. Having only met him once (at Clark University), Ernst Jones, one of Freud's earliest biographers, reported James to have said, "The future of psychology is yours" (Richardson, 2006, p. 514). However, this is less likely correct in light of Freud's letter to Ms. Calkins of September 19, 1909. There James noted a more cautious appreciation of Freud and psychoanalysis:

I strongly suspect Freud, with his dream-theory, of being a regular *hallucinè*. But I hope that he and his disciples will push it to its limits, as undoubtedly it covers some facts, and will add to our understanding of "functional" psychology, which is the real psychology. (Perry, 1935, p. 123)

Likewise, in the VRE, in a less thinly veiled reference to Freud, James echoed what has become a standard critique of classical Freudian theory: the refusal to abandon or limit the pansexual motivation *for* and explanation *of* the content of certain religious beliefs. James rejected the claim that religious belief was "perverted sexuality" (James, 1902/1985, p. 18).

The plain truth is that to interpret religion one must in the end look at the immediate content of the religious consciousness. The moment one does this, one sees how wholly disconnected it is in the main from the content of sexual. (James, 1902/1985, p. 19)

With James championing the immediate content of religious consciousness, a descriptive psychology of religion merged with the narrative psychology that foreshadowed James as paving the way for the phenomenological psychology of religion that would find its place in the reemergence of an American psychology of religion in the 1960s, where mysticism would be the focus of systematic empirical study, with much of it from the perspective of James (Hood, 2003, 2008a). However, in the eclipse of the psychology of religion after the first generation of American interest, two areas of research kept religion at least within the focus of those developing psychological theory within a natural science

perspective. Those areas were prejudice and cognitive dissonance and prophecy. Each in its own way would contribute to the emergence of the identification of two complementary paradigms for the psychology of religion, both, however, limited to the naturalism of psychological science.

Religion and Prejudice

Research on prejudice stimulated psychological interest in religion at least as an aside when religion per se was of little interest to American psychologists. The concern with prejudice and religion came from Allport, who would initiate what would be the major focus of the reemergence of the psychology of religion in America, the measurement of religious orientation and the various links between religious orientation and prejudice. Here we need but note that Allport's classic text on prejudice was published in 1954 during the eclipse of the psychology of religion, and his seminal paper on religious orientation and prejudice was published in the middle decade of the reemergence of the psychology of religion in America (Allport & Ross, 1967). Thus, prejudice and religion were empirical themes in the period of the eclipse of the psychology of religion that made its reemergence possible as the discipline found a new footing in America in the 1960s. The essential move was Allport's claim to have clarified the relationship between religion and prejudice by focusing upon the purity of motivation of believers. Does one live or use their religion? I have reviewed this massive literature elsewhere (Hood et al., 2018, pp. 435–451). Here I will link it to a case study of a research tradition that has been widely accepted as authoritative outside the psychology of religion but has little authority within the field for those appreciative of the wider ontological implications of a spiritual psychology. The tradition I will explore is cognitive dissonance which initially had close ties to the American psychologist's fascination with conversion.

Two Social Psychologies

There is little doubt that the cultural fervor of America in the 1960s contributed to the reemergence of the psychology of religion in America (Stevens, 1987). Just as the role of religious revivals and awakenings in American culture led the early psychologists to be concerned with conversion (Taves, 1999), the emergence of what became identified as new religious movements led psychologists to focus upon the process of conversion once more. One of the most widely adopted social psychology textbooks of the 1960s teamed a psychologist (Paul F. Secord) with a sociologist (Carl W. Backman), who tried to create an interdisciplinary social psychology, noting that "social psychology can no longer be adequately surveyed by a person trained in only one of its parent disciplines" (Secord & Backman, 1964, p. vii). They set the stage for what is now widely recognized as two social psychologies, one more compatible with psychological science and causal claims and the other with a more narrative understanding focused on purpose and meaning (Hood, 2011; Watts, 2017). Associated with a return to interest in conversion and

the new paradigm of active seeking was the process of deconversion, or the process by which one leaves a religious group either because they are exiting religion altogether or are seeking alternative religious groups. The complexity of deconversion is as empirically complex as that of conversion and in some ways represents a mirror image (Streib et al., 2009). However, what is clear is that exclusive reliance upon reductive naturalism is too limiting to capture the complexity of conversion or deconversion. Here we abbreviate our case study of cognitive dissonance (Hood, 2011). Our purpose is to explore how the two social psychologies with different methodological commitments led to different research trajectories and contributed to the differences that have now emerged in the psychological study of religion and spirituality: one reductive naturalism, the other accepting of an expanded ontological reality demanding a spiritual psychology.

Cognitive Dissonance and Failed Prophecy

Festinger (1957) first proposed cognitive dissonance, and it was being further modified during his famous field study of a flying saucer group that prophetically predicted the end of the world. Yet the success of the theory was not in field research on apparently failed prophecy but in the laboratory and experimental tradition of the German psychological tradition, which William James only provisionally endorsed. The failure of the theory with respect to religious prophecy is almost total (Tumminia & Swaots, 2011). However, theory has been so successful in experimental social psychology that just four years before Festinger's death, Jones (1985) claimed, "Because the main propositions of dissonance theory have been confirmed with sufficient regularity, there is not a great deal to be gained from further research in this area" (p. 57). We have treated the distinction between a more narrow experimental psychology and a psychological-based social psychology and a broader sociological social psychology elsewhere (Hood, 2011). Here we simply note that Festinger's theory became successful by ignoring the broader context in which prophecy actually operates. Basic to Festinger's theory is that cognitions more or less map reality. Hence, there is pressure for individual beliefs to be congruent with reality—whether physical, psychological, or sociological (Festinger, 1957, pp. 10–11). Having made this claim, one must define the ontological basis of what constitutes reality. This has led some researchers to puzzle over how it is that individuals can maintain membership in religious groups when they make predictions that are falsified, assuming that spirituality realities can be easily detected to have failed. The classic study by Festinger et al. (1953) is entitled *When Prophecy Fails*, framed within the natural science assumption that failed prophecy was an empirical fact. This deceit-based participant observation study of a religious group that predicted the end of the world provided a fortuitous opportunity to test a belief that Festinger and his colleagues were sure would be falsified within the limits of their own ontological assumptions. In light of the general focus on consistency in psychological social psychology, it was assumed that a clearly falsified prophecy would produce an objectively identified state of dissonance that would motivate the believers to both increase

their commitment to their beliefs and seek to increase proselytization. Hence, the interest in prophecy was simply a concern with disconfirmed belief in a real-life setting and not any genuine interest in the psychology of religion per se by dissonance theorists.

Festinger (1957) did attempt some historical speculations on “unfulfilled prophecies and disappointed messiahs” (pp. 3–32) in a time when American psychologists were largely ignoring religious issues. Part of the appeal of the theory of cognitive dissonance has always been its counterintuitive predictions. In an obituary for Festinger in the *American Psychologist*, the renowned social psychologist Zarjonec (1990, p. 661) equated Festinger’s standing in social psychology with that of Freud in clinical psychology. Two central counterintuitive hypotheses are as follows: Clearly falsified beliefs will be held even more intensely after falsification; and when prophecies fail, groups will increase active proselytization. As we shall see, only the former hypothesis has been supported in the laboratory. The assumption of a real-world stance when prophecies are clearly confirmed or disconfirmed is a black-and-white realist stance that Festinger brought from the laboratory to his participant observation field study. However, after affirming support for his theory in this field study, theorists largely abandoned the distinctive religious issue of failed prophecy for creative laboratory studies of cognitive dissonance. This indicated that the interest of social psychologists was not in researching religious issues but in simply noting how a theory partly derived from a study of apparently failed prophecy could claim by creative laboratory studies to establish a counterintuitive psychological theory that could apparently be easily extrapolated to religious prophecies of little interest and unstudied by a psychology wedded to experimental methods and creative laboratory studies (Zarjonec, 1990, p. 661).

A Failed Theory Not Failed Prophecy

Several scholars have noted that Festinger’s interpretation of historic cases in light of dissonance theory are flawed. For instance, Melton (1985) argued that the Millerites were not simply focused upon prophecy, and they did not disband in the manner Festinger claimed. Melton (1985, p. 20) further noted that “within religious groups prophecy seldom fails.” Finally, after several critical reviews, it seems the failure of prophecy best reveals the failure of dissonance theory to appropriately address prophecy (Bader, 1999; Stone, 2000; Tumminia & Swatos, 2011; van Fossen, 1988). This is a critique that will link our critique to studies of intercessory prayer discussed below.

How can the two social psychologies have such a different evaluations of dissonance theory in respect to prophecy? The answer is largely methodological. Psychologists typically take an outsider perspective and assume they can identify dissonant beliefs by objective criteria. Thus, the experimenter is the ultimate authority to identify “unequivocal and undeniable” disconfirmation of a prophecy (Festinger et al., 1956, p. 3). Yet, as Coyle (2001, p. 150) notes the term “religious gap” has become common with reference to the difference that exists between social science professionals and the general population

regarding religious beliefs. It is this fact that largely explains why psychologically oriented social psychologists fail to acknowledge what sociologically oriented social psychologists consistently document: prophecy seldom fails in the real world (Tumminia, 1998). It is largely this distancing from beliefs far from one's own that leads social scientists astray when they claim to have laboratory-mediated access to the cognitive process of their believing subjects (Hood et al., 2005).

The religious gap hypothesis is relevant when a researcher claims to interpret when beliefs are dissonant and when prophecy has failed. This is crucial, since Festinger's theory requires that beliefs be proved false. In the authors' exact words, the evidence is "unequivocal and undeniable" (Festinger et al., 1956, p. 3). Such an objectivist stance is naïve with respect to how beliefs actually operate in real-life contexts. As Carroll (1979, p. 184) commented when applying cognitive dissonance theory to biblical prophecy, there are no simple objective criteria by which one can identify failed prophecy. What outsiders, especially researchers, see as failed prophecy is seldom seen that way by insiders. Sociologist Tumminia (1998, p. 165) said that not only is there a transcendent dimension to prophecy, but what appears to be seemingly irrefutable evidence of irreconcilable contradictions to outsiders, like Festinger, can instead be evidence of the truth of prophecy to insiders."

The Bracketing of Ontological Claims

While early psychologists of religion addressed ontological claims relative to religion, a second generation of psychologists made progress by bracketing ontological claims—essentially claiming that psychology cannot address ontological issues. The best exemplar of this is the history of psychoanalytic theory. Freud's theory was not that religion is simply illusion (a product of wish fulfillment) but that it is fact delusion; a claim about a reality that is false and in light of critical philosophical scrutiny (Grünbaum, 1984, 1987). The issue allowed a second generation of psychoanalytic theorists to focus upon object relations and the psychological process involved in experiences of God images (Meissner, 1984; Rizzuto, 1979). Many contemporary psychoanalysts avoid the controversy surrounding Freud's theory of religion by denying that psychoanalysis needs to address ontological issues (Belzen, 2009). The issue that psychology cannot directly address ontological issues also heavily influenced American clinical psychology, where the APA cautions that terms such as "hallucination" must be interpreted in terms of the believer's culture. The last several revisions of *The Diagnostic and Statistical Manual of Mental Disorders* (DSM) have included cautions about identifying hallucinations as pathological if there is normative support for these practices, often provided by those committed to religious ontologies (Hood et al., 2019, pp. 333–347).

The effect of bracketing the psychologist's ability to assess ontological claims has the effect of freeing the contemporary psychology of religion to explore the psychological processes involved in religiously interpreted phenomena without regard to their correspondence to reality. Thus, both religious apologists and those in opposition to religion

stand on equal footing. Although this is an advantageous move, it is limiting if there is to be a dialogue between ontological assumptions of psychology and of religion (Hampson & Boyd-MacMillan, 2008).

The Ontological Question Revisited

Psychologists are poorly trained in philosophical options for the discipline (Robinson, 1995, 2002). Both Freud and James gained wide audiences not simply for their psychology but because they confronted ontological questions integral to religion. What the poet Auden said of Freud could be said of James as well, “To us no more a person/Now, but a whole climate of opinion” (1940, p. 33). Given his belief in the phylogenetic origin of religion, Freud denied the central historical truth claims of Christianity. He may have been wrong (and most psychoanalysts think he was), but the point is that he could deny the ontological claims of one tradition given his belief in the ontological claims of his own findings (Badcock, 1980). The widely acknowledged abandonment of the seduction theory has been shown to mask truth claims integral to feminist concerns with actual seduction and abuse (Hood, 1997). On the other hand, James was confident that the empirical facts of his study of varieties of religious experience warranted the ontological claim of expanded consciousness integral to the great faith traditions (Hood, 2008b; Taylor, 1996). Thus, the psychology of religion cannot be satisfied with simply bracketing out ontological claims but must acknowledge how its findings and theories support certain ontological possibilities over others. It is not simply the search for the sacred that is important but also the response to it (Hampson & Boyd-MacMillan, 2008; Porpora, 2006). What is responded to is not to be ignored, even if the issue forces psychologists of religion to be more philosophically and theologically informed. Sociologist Pitrim Sorokin, a founding member of the Society for the Scientific Study of Religion, provided a model for the incorporation of the ontological claims of religion in his treatise on love, which was then incorporated into part of the framing by Poloma and Hood (2008) of their study of an emerging Pentecostal church in which the claim that Godly love was a major motivating force was empirically explored in terms of Sorokin’s model.

The Importance of Parapsychology

The ontological issue noted earlier interfaces with the well-established relationship between reports of religious and spiritual experiences and a variety of parapsychological phenomena (Hood, 1989, 2008a). The empirical associations are of less concern than the fact that the psychology of religion has a long history of linkage to psychic phenomena. James is again the exemplar, maintaining memberships in both the American Psychological Society and the American Society for Psychical Research. Many of the early founders of the psychology of religion in America were members of both groups but dropped membership in the latter when it refused to deny the ontological reality of paranormal phenomena (Coon, 1992; Taylor, 1996). Yet it is clear that parapsychology

is the legitimate heir of the spiritualism that occupied much of James's interest (Kelly et al., 2010; Walach et al., 2009). This handbook is one of the few that not only accept the ontological claims associated with psi phenomena but include chapters by scientists widely associated with postmaterialist spiritual science. The relationship between belief in paranormal or psi phenomena and religion is complex (Hood et al., 2018, pp. 369–372). Psychologists committed to naturalism have largely assumed reductionist explanations of those reporting psi abilities or experiences that suggest at best they are illusion or at worse fraud. Believers in psi phenomena are treated much as believers in spiritual or religious phenomena. For instance, Orenstein (2002) used data from Project Canada, which polls a representative sample of Canadians every five years. Using 1995 data based on 1,765 cases, he found that persons who reported conventional religious beliefs were *more* likely to report paranormal beliefs. He concluded that some amount of religious belief is a necessary condition for belief in the paranormal. However, religious belief should not be equated with religious participation: Orenstein found that among those who were religious (church, etc.) attenders, there was a decreased belief in the paranormal. Thus belief in the paranormal was strongest among religious believers who were not religious attenders. This suggests that such persons are more spiritual than religious and that spirituality and psi phenomena share the same ontological space. Schwartz (2012, p. 586), writing in the first edition of this handbook, summarized Tart's (2009) controversial thesis in his book the title of which is the theme of much of this handbook, *The End of Materialism*. Tart proposed a kind of "Big Five" in which five phenomena (precognition, telepathy, clairvoyance, psychokinesis, and spiritual healing [Schwartz, 2012; Tart, 2009]) are accepted as foundational established phenomena that challenge the dominant materialist paradigm associated with scientific naturalism. Acceptance of these phenomena within the restricted naturalism of psychological science is difficult. However, Piedmont and Wilkins (in press) have documented that belief in spiritual realities (whether accepted by the researcher or not) adds additional variance explained over and above the widely used five-factor model of personality across a wide spectrum of psychological variables that science seeks to explain. Reverting to quantum physics allows for some expansion and is enhanced when viewed in terms of consciousness. This greatly expanded postmaterialist ontology allows not only for nonlocal causation (Walach et al., 2009) but for the acceptance of what Miller calls a consciousness-driven science. As she noted, "Consciousness is in us, through us, and around us" (Miller, 2012a, p. 612). This is not far from James's insistence noted above that in mystical experience, persons are conscious of the continuity of their own consciousness with a greater consciousness. In a world of entanglement, separate selves are impossible. Summarizing his own lifetime reflection on his personal experience and study of mysticism, Marshal (2019) concluded that we are not a world of separate selves but are all interconnected in a cosmic unity that is divine. This is the new postmaterialist paradigm that in our allusion to Rubin's vase has one face staring in a direction the other is not.

In his own reflection on his lifelong interest in parapsychology, James (1909) noted, that it would perhaps take centuries to mark the slow progress of psychic research. We are beginning to make that progress. The expanded ontology requires new methodologies compatible with spiritual realities. It also is best framed in terms of James's transmission theory relating brain and consciousness. As Miller noted, "The brain detects consciousness not merely constructs consciousness (2012a, p. 612). It will require acceptance of the reality of paranormal or psi phenomena that arguably are routinely rejected by psychological science that rules out what others who entertain an expanded ontology find more than persuasive. Even for those who argue for the double-blind studies as the gold standard for experimental designs, Sheldrake surveyed more than 1,500 published papers from (1996–1998) in various research fields. The percentage of blind studies in psychological science was only 7% compared to 85% in parapsychology (Sheldrake, 2012, p. 303). Watt and Nagtegaal (2004) replicated these findings in a survey of 1,214 verifying that parapsychologists by far use blind studies at over three times the rate used by psychological science. Averaging the findings of both these surveys indicates that approximately 82% of parapsychological studies are blinded compared to only 15% of psychological science studies. Ironically, the appeal to double-blind studies as the gold standard for medical research are more common in medicine than in psychological science but still less frequent than in parapsychological research (Sheldrake, 2012; Watt & Nagtegaal, 2005). However, it provides a case study of confusing methods appropriate for materialist science as the stand for an expanded ontology recognized by postmaterial psychology. This effort to test the efficacy of intercessory prayer provides a nice case study in what ironically we can note is a methodological limit of naturalism commitment to blinded methods.

The STEP Study

Here we cite what is arguably the Templeton Foundation's most discussed funded study, commonly known as the STEP study (Benson et al., 2006). It has been extensively discussed in the literature from a purely psychological science perspective too vast to review here (Spilka & Ladd, 2013, pp. 139–160). It also was argued in advance against funding by faith-committed psychologists committed to biblically based Christianity (Jeeves & Ludwig, 2018; Meyers, 2018). We will take a clue from the case study by Schwartz and Dossey (2012) in the first edition of this handbook to suggest how the acceptance of an expanded postmaterialist ontology requires appropriate methods compatible with spiritual realities. A brief consideration of this case study will complicate our own on cognitive dissonance and allow us to identify methodologies appropriate to a postmaterial psychology in which consciousness is fundamental but not isolated to individual selves.

Our focus on Benson's works acknowledges what many have noted, a multimillion-dollar grant associated with a prestigious American university, the cooperative participation of six hospitals, and an authorship by 14, including those with medical and divinity degrees (Benson et al., 2006). The focus was on intercessory prayer using the

gold standard in a randomized clinical trial of patients undergoing coronary artery bypass grafts (CABG). There were clear operational measures of both complications and “major events” all clearly defined by professional appropriate professional societies (Benson et al., 2006, p. 935). Measures were taken for 30 days. Intercessory prayer intervention (“independent variable”) was provided by two Catholic and two Protestant groups. Prayers were given the first names of persons and asked to pray for no complications and a quick recovery. Prayers were started the night before each patient’s surgery and continued for 14 consecutive days. Of 3,295 eligible patients 45% (1,493) refused participation in the study. Of the remaining 1,802 (55%), participants were randomly divided into two major groups, uncertain and certain.

The certain group was told they would receive prayer and in fact did receive prayer ($n = 601$). The uncertain group was divided into those uncertain if they would receive prayer who did not receive prayer ($n = 597$) and those uncertain if they would receive prayer who did receive prayer ($n = 604$). In the cases where patients refused CABG the assumption was they had complications. Lost to follow up were ($n=2$) in each uncertain group and ($n=6$) in the certain group (Benson et al., 2006, p. 936).

The clearest results suggested that intercessory prayer *increased* the risk of complications from CABG for those certain of prayer (58.6%) and had no differential effect for those uncertain of receiving prayer, whether they received prayer (52.2%) or not (50.9%). The most cautious interpretation of these data by Benson et al. was simply that these findings failed to support previous positive finding of the *positive* effects of intercessory prayer in CABG; that additional research was needed; and that the study was not intended to explore whether God exists, whether God answered intercessory prayers, or whether prayers from different faith groups all work the same (Benson et al., 2006, p. 942).

Here we avoid the standard methodological critiques associated with psychological science that can be applied to these intercessory prayer studies (Gorsuch, 2008; Spilka & Ladd, 2013). Instead we look at two persons who have provided radically different methodological critiques based on how they situate the discipline of psychology in the two distinct ontological spaces, natural causal ontologies or spiritual ontologies. As we shall see, how this question is answered links our case study of cognitive dissonance above with the STEP study.

In a separate chapter written for the book by Jeeves and Ludwig, Meyers (2018) indicates his strong opposition to the STEP study and his general concern with studies of intercessory prayer, many reporting positive outcomes. As a confessed person of faith Meyers, had a notary public sign his personal statement of predicting null effects in the STEP study prior to its beginning. From his faith perspective, he discussed several factors in which he predicted null effects, including that the study was more akin to magic than religion, the study was close to blasphemy, and history suggests that finite minds cannot manipulate an infinite God (accessible on Meyers.org, letter notarized May 28, 1997). Here is an example that indicates how a rigorous attempt to test a causal scientific theory

can be seen as incommensurate with the religious content of belief. It baffles the mind to even consider how one could double-blind God. However, writing in the first edition of this handbook Schwartz and Dossey (2012) have thrown down a methodological gauntlet for those who within a natural science perspective assume well-documented observer-expectancy effects are merely local. This is part of the demand for the gold standard of a double blind that the STEP studied tried to emulate, and from an expanded ontology it can be seen as a fatal flaw.

While psychologists have long accepted that obvious and overt attitudes can affect results, Schwartz and Dorsey accepted the spiritual view of an expanded ontology in which the obituary for prayer studies with double-blind controls is premature—not that more studies of greater precision are needed but that we are now just beginning to know the right questions to ask. What were the attitudes of the researchers? The hospital staff? A new view of consciousness is recognized, one that is neither local nor confined to individual brains. Consciousness is everywhere and nonlocal. We are co-creators of phenomena we observe and thus co-creators in our own and others' destiny. This is decidedly a spiritual vision and makes mockery of psychological studies based upon deception or, to return to cognitive dissonance research, to think that one could even begin to deceive the faithful in a world where prophecy is assumed to be at best delusional when it succeeds and at worst impossible and fraudulent if it cannot fail.

The Future of Religion and Spirituality and Funded Research

Much of the current debate between religion and spirituality is empirically linked to the authority institutions have over individual views. Religion is often seen as involving institutional rules, rituals, and regulations based on beliefs defended as dogma. Those who accept this have a powerful vehicle with which to express their spirituality. However, an emerging minority in America and already a majority in some European countries see themselves as spiritual but not religious (Streib et al., 2008). Hence, Miller's handbook addresses the spirituality integral to being human and expressed in a wide variety of ways, only some of which are what have typically been identified as religions (Streib & Hood, 2016). However, the ontological reality of spirit must be recognized.

The psychology of religion has always been influenced by wealthy individuals and foundations seeking to fund particular patterns of research. As we have noted, first-generation psychologists of religion readily accepted funds to study psychic phenomena associated in popular American culture with psychology. However, they took funds and used them to debunk psychic claims (Coon, 1992; Taves, 2014). James was the major exception, and this is why he was more rejected than accepted among the first generation of psychologists (Hood, 1995, 2002, 2008b; Taylor, 1996, 1999).

Although psychologists have a variety of funding agencies to which they can appeal for research grants, until recently all were committed to natural science assumptions and would be unlikely to fund any research that took the ontological issues in the

postmaterialist psychology of religion seriously. The Sir John Templeton Foundation has altered this dramatically for the psychology of religion and is likely to direct much of the research in the psychology of religion for the future. For the first time, massive grants are readily available, many in the millions, and most are perceived as seeking to explore positive aspects of religion consistent with the late Sir John's view, but as with the STEP study, from a rigorous natural science perspective. Some psychologists of religion have bemoaned this as essentially introducing a conservative Christian bias into prominence in the discipline (Wulff, 2006) and Christian psychologists have responded with options from dialogue to integration or pleas for complementarity (Jeeves & Ludwig, 2018; Watts, 2017). However, psychologists of religion need not conform to any Templeton agenda. The issue is simply that entire areas emerge largely due to Templeton funding. The parallel is to pharmaceutical companies that direct the path of much of the research on drugs. What is at stake is whether psychologists of religion will continue to pursue research outside the major funding agencies as well as whether major funding agencies will begin to accept grants working with a postmaterialist paradigm. It was largely unfunded research that contributed to the reemergence of the psychology of religion, and it need not succumb to the temptation to alter course based on available funds. It is also worth emphasizing that Templeton-funded research is often published in high-quality, peer-reviewed journals, so it is not the quality but the direction of research that seems perplexing to some. The question for the immediate future is whether the considerable ontological limits psychological science has confined itself to can continue to ignore spiritual realities acknowledged in a postmaterialist paradigm and whether foundations such as Templeton will acknowledge a broadened vision of psychology, including postmaterialist psychology, in which an expanded ontology demands appropriate methods, no less scientific because they are beyond the purely physical.

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Theoretical and Epistemological Foundations

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Abstract

Contemporary psychology of religion and spirituality (PRS) is generally understood as a scientific enterprise involved in empirical hypothesis testing. However, an exploration of the philosophy of science at work in the field reveals a more complex picture. Much PRS inquiry is actually underlaid by a particular set of assumptions about science and the nature of the world that often inhibit our ability to understand what PRS studies. Ontological assumptions like naturalism assume that religious and spiritual phenomena act in a describable law-like manner independent of human values or any inherent meaning, a stance which is fundamentally at odds with the worldview of the religious and spiritual individuals we study. Ethical assumptions can include epistemic values like parsimony in explanation that may unintentionally oversimplify phenomena that are irreducibly complex. Moreover, such assumptions often claim that religion and spirituality are no different than any other kind of phenomena we study, and so the methods generally used in psychology can be applied without alteration in PRS. Uncritical PRS acceptance of these types of assumptions has negatively affected the work of thoughtful investigators, often making the results of their research of little benefit to those they seek to study and help. Analyses that draw on the resources of religious and philosophical thought can provide possible correctives to the problems of these assumptions. One such approach—hermeneutical theory—allows a more contextualized understanding of PRS and comes from a more developed awareness of the assumptions and biases that researchers bring to their work.

Key Words: methodology, hermeneutics, ontology, epistemology, philosophy of science

Introduction

The state of theory in the psychology of religion and spirituality (PRS) is a study in contrasts. William James, the founder of the field, was one of the greatest theoretical psychologists of all time. His writings not only provide a fine legacy of thinking about religious experience but also include many profound works on the nature of knowledge and human inquiry. Given this history, one would expect the field of PRS to have a rich body of discussions about the theoretical foundations of the discipline.

Sadly, the current state of affairs does not match these expectations. Recent commentators (e.g., Hood et al., 2009) have noted the need for theory in PRS. Some have

complained about the lack of an overarching theoretical model to help tie together results in the field (e.g., Kirkpatrick, 2005). It is also the case that PRS depends heavily on theory from other branches of psychology such as psychodynamic thought, social psychology, evolutionary thought, and cognitive neuroscience, but has contributed little unique theory of its own.

We believe that these theoretical problems are a symptom of deep philosophical difficulties in PRS. In particular, we believe that most PRS researchers operate using an antiquated and inadequate philosophy of science, and that this deficiency inhibits progress in our field. In this chapter, we attempt to outline and illustrate these problems and provide some possible solutions.

Definitions and Concepts

Many researchers view science as a hypothesis-testing enterprise. In this traditional view, investigators develop and test hypotheses based on *models* that specify structural relationships among constructs in a theory. These *hypotheses* are propositions about states of affairs—properties of things or relations between things (Armstrong, 1997, p. 1) that are proposed by a *theory*, a cluster of statements expected to provide an accurate *description* and *explanation* of phenomena, as well as guidance in the development of study methodology. Quantitative studies are often thought to be the best way of confirming (or disconfirming) these types of propositions (Carnap, 1974/1995, pp. 105–114).

However, this view of scientific research is only partly correct, as it leaves out a number of important parts of the picture. First, testing and verification are just half of the epistemological enterprise in science. The other part is *discovery*, the uncovering of new ideas that can form the basis for hypotheses to be tested. A vibrant, progressive scientific enterprise must eventually look outside the cycle of hypothesis and old theory for new possibilities. The discovery of new ideas links up with the verification process to form the *scientific epistemological cycle* of exploration and testing. In general, PRS has been much weaker in the discovery end of this cycle.

Also often overlooked is the issue of *underdetermination*, the fact that any given set of data can be interpreted in several ways and may support other theories or hypotheses not being tested in a study (Bruner, 1991; Crowe, 2005). It is a logical error to assume that just because data fit a particular hypothesis, they *only* fit that hypothesis or explanation for the data. Data are, in principle, consistent with a limited number of other hypotheses and do not determine or prove any of them conclusively (cf. Gahde & Stebmuller, 1986; Quine, 1953, pp. 20–46). In this sense, they also do not “tell” us the “reality” of the phenomena under investigation. Scientific data are not a “map of” or “reflection of” reality; they are, in fact, not very meaningful until they are interpreted, and many interpretations are possible.

This interpretative element of science means that empirical findings are dependent upon more than just data (Lakatos, 1978; van Fraassen, 2002, p. 124). Scientists hold

unproven assumptions that guide their interpretations of the data, and the conduct of their investigations (Godfrey-Smith, 2003, pp. 149–155; cf. Barrow, 1998; Nagel & Newman, 2001, pp. 109–113). Unfortunately, the significance of these assumptions is often underestimated. Four types of presuppositions are of particular importance—ontological or metaphysical, ethical, epistemological, and methodological.

Ontological and metaphysical assumptions are fundamental to the other three categories. These presuppositions are ideas about what is in the world and how it works. Some of these are *entailed assumptions* that must be true in order for the research program to be valid (cf. Quine, 1953, pp. 1, 130), whereas others are *gratuitous assumptions* that may be dearly held but are not necessary for the program to produce valid scientific knowledge. Although scientists often believe that their work is free of metaphysics, in fact all scientific progress is dependent on such assumptions—one cannot have a theory of knowledge without some ideas about the objects that the area of knowledge seeks to understand (Bhaskar, 1989, pp. 13–27; cf. Gasser & Stefan, 2007).

An ontological claim that is often made in psychology of religion research is that the things that we study are *natural kinds*, that is, they are mind-independent categories or groupings that when instantiated contain objects that possess similar properties. This assumption has a long and distinguished history in Western thought, dating back to the Platonic idea that in our study of the world, we should attempt to “carve nature at its joints” (*Phaedrus*, 265e, in Plato, 1997). Ontological assumptions can include implicit claims about *realism*, whether or not the kind being studied (e.g., “religion”) actually exists, and if so in what form. A *naïve realism* assumes that the object of study exists in a mind-independent function that can be studied. Since the object is mind-independent, it is possible to use language terms as “rigid designators” (Kripke, 1980), which are valid identifiers of a thing that is being studied regardless of context. In the PRS context, a claim of rigid designation implies that terms like “religion” or “religiousness” can be defined in such a way as to be true and valid in every context.

Naïve realism is largely rejected by contemporary analytic philosophers of science, who prefer to argue for *semirealist* positions, like *essentialism*, that properties or kinds really exist that are modally necessary in all possible worlds (Khalidi, 2013), or for *structuralism*, which holds that causal relationships are the only things that have real existence in science (e.g., Ladyman & Ross, 2007; Worrall, 1989). Along with this rejection of naïve realism, the idea that terms are able to function as rigid designators has also been rejected by philosophers of science (cf. Mumford, 2005). While rejecting naïve realist positions, these scholars also reject strong *antirealist* perspectives such as *constructivism*, a kind of idealism holding that our organization of the world is entirely mind-dependent.

Assumptions can also include metaphysical ideas about the way the world works such as “naturalism.” While the use of this term in philosophy of science is somewhat incoherent due to a multiplicity of definitions (Rea, 2002), it is often taken to be the claim that

the world functions in a law-like manner that is independent of human values or inherent meaning. In strong versions of naturalism, these laws are thought to be universals that function in all possible worlds (i.e., regardless of context, time, and place).

Ethical assumptions in science revolve around the goals or values that stand behind the research program and standards for acceptable research practices. These presuppositions provide an often unacknowledged foundation for scientific methodology and epistemology. They include what are typically called *epistemic values*—the aspects of inquiry that are deemed important, such as coherence, simplicity of explanation, and strength of explanatory power. Typically a balance of these virtues is desirable. For example, a focus only on complexity produces models too difficult to test, while an exclusive emphasis on simplicity produces explanations that lack fit with reality or explanatory power (Lewis, 1973, pp. 73–74, 1986, pp. 121–124, 1999, pp. 231–236; Mittelstaedt & Weingartner, 2005, pp. 142–154; Popper, 1935/2002, pp. 110–115; Rescher, 1973; van Fraassen, 1989, pp. 47–50). Also at issue are *epistemic virtues*—qualities, skills, or capacities of the investigator that are desirable in the pursuit of knowledge, such as fairness, open-mindedness, or the ability to think holistically. These are similar in many ways to general virtues studied by ethicists (Garcia, 2003; Hookway, 2003; Zagzebski, 1996).

Epistemological assumptions are beliefs about the nature of knowledge and provide an often unrecognized backing for methodological assumptions made by researchers. These assumptions limit the kinds of questions that can be asked in research studies (Rescher, 1982, p. 151) and the sorts of empirical data that are considered relevant.

One unsupported assumption that is often made with regard to epistemology is that it is *ontologically independent* (i.e., how we are able to know things is completely independent of the kinds of things we seek to know), suggesting the possibility of a kind of universal methodology of study. The opposite position is one of *ontological interdependence*, that the nature of knowledge and how we gain it will vary according to the nature of thing studied. If we wish to look for a black cat, our epistemological stance and method of investigation will be affected by our initial conception of what a cat *is*.

Another epistemological assumption that is often made relates to the nature of the knowledge that is produced in scientific inquiry. In contemporary philosophy of science as practiced in psychology, knowledge is thought to be a posteriori: we *discover* things about natural kinds through empirical investigation not reason, so our knowledge appears to be mind-independent. This is thought to work because natural kind properties or relationships are *projectible*—they emerge from the data, allowing for the discovery and confirmation of new knowledge (Schwartz et al., 1970). However, when uncritically applied, a posteriori assumptions can be taken to mean that epistemological inquiry is not dependent upon any prior propositions, including those that are logically entailed by the research strategy, a highly problematic assumption.

Methodological assumptions are beliefs about how scientific research should be conducted. They have been central to the identity of modern psychology as a whole and PRS

in particular. The modern definition of psychology—the scientific study of behavior—specifies a *method or logic of approach* as well as an object of study for the field.

We first describe these four categories of assumptions in more detail, and then we illustrate them with an analysis of typical PRS guidelines from the widely accepted work of Paloutzian and his colleagues. We believe that this description and illustration will provide a critical theoretical framework that helps us understand research in PRS.

Traditional Research Programs in PRS

Most mainstream PRS researchers presume, knowingly or unknowingly, a particular system of these four categories of assumptions drawn from the philosophies of naturalism and positivism (Nelson, 2006, 2009, pp. 43–66; Slife, 2004b; Slife & Whoolery, 2006). Although there is little consensus among theorists about the exact description of these philosophies (cf. Rea, 2002), *naturalism* is often thought to involve a quest for natural laws or law-like causal regularities in the universe. *Positivism* is a complex philosophical position developed in the early 19th century by Auguste Comte and modified by early 20th-century philosophers of the Vienna school like Rudolf Carnap and Herbert Feigl. We call the combination of these philosophies *positivistic naturalism* (PN).

In the sections below, we describe PN in detail and its effects on the scientific practice of PRS. We illustrate our points using a number of high-quality studies as examples, although the themes we describe can be found in virtually any mainstream PRS investigation. Our intention here is not to criticize or even fully analyze these studies; our aim is to use them to illustrate many of the strengths and weaknesses of PN. Since the strengths of this research tradition are well known, we describe these only briefly, putting an emphasis on delineating weaknesses that are less frequently acknowledged.

In the philosophy of science, methodological assumptions are thought to be the least fundamental and to depend in part on prior ontological, ethical, and epistemological commitments. However, the field of PRS generally holds methodological assumptions to be the most important, so we treat these areas in reverse order.

Methodological Assumptions

Although ontological and metaphysical assumptions are the most fundamental part of a research program, PN discussions of theory begin (and typically end) with methodology. This is because the key to obtaining knowledge in PN revolves around the methodological practice of *operationalization*, where the experimenter constructs a study to (a) measure publicly observable phenomena, using (b) methods that maximize repeatability and reliability (law-like regularities), sometimes even at the expense of validity (Bridgman, 1927/1993; Feigl, 1949). In operationalization, validity can be assumed if the procedure seems reasonable; it is established later in other studies, thus giving it a subsidiary role to reliability. In PRS, it is typically further assumed that much of human behavior could be conceptualized as discrete variables that have direct and typically

linear relationships with phenomena exhibiting a normally distributed frequency of occurrence. For instance, this kind of thinking can be seen in a thought-provoking study on spiritual transcendence and religious involvement (Piedmont et al., 2009), where the authors state that in order to “disaggregate” religion and spirituality, they have developed measurement scales “to operationalize these two sets of constructs in a manner that solidly grounded them in both psychological theory and sound measurement practice” (p. 163). Many of these assumptions are rarely stated explicitly in PRS research but are tacitly assumed in the statistics employed during data analysis and interpretation. This is not surprising given the a posteriori epistemological assumption that underlies most PRS research.

Moreover, virtually all investigations in mainstream PRS use operationalizations of one sort or another. The researcher frequently has an interest in some “variable” that is not directly observable, and thus they must change it to something else—operationalize it—in a way that is acceptable to PN methods. For example, spirituality and religiosity are themselves not directly observable, so these constructs are routinely operationalized as questionnaires and scales. No researcher assumes that the scores on these scales are identical with a person’s spirituality or religiosity, yet the relationship between what is measured (performance on the questionnaire) and the unobserved topic being operationalized (e.g., spirituality) is rarely discussed.

These method assumptions obviously have many perceived advantages and benefits. For instance, many scholars consider these assumptions to lend an important specificity and clarity to what is studied. Also, the observability of operationalizations permits them to be easily replicated by other researchers, because other scholars can presumably observe the same phenomena, and thus come to the same findings, if they are valid and generalizable.

However, PN operationalization is also deeply problematic. First, the fact that many of the variables of interest in PRS (and psychology generally) are not directly publicly observable led natural scientists such as Percy Bridgman (who developed operationalization) to oppose its use in disciplines like psychology. Hugs and kisses are not love, and a score on a spiritual transcendence inventory is not spirituality. Because the relationship between the unobserved construct and the observable operationalization is not itself observable, it is in principle not knowable from an empirical perspective, and is thus uncertain. It seems highly unlikely that any of the current operationalizations of important constructs such as “religion” or “spirituality” or their relationships with other variables completely represent all aspects of what they hope to measure. Certainly current operationalizations have been criticized on a number of grounds (Slife et al., 2005), such as the need for measures that take into account important aspects of cultural context (Kisala, 2003; Presser & Stinson, 1998; Sherkat & Ellison, 1999). Thus, PRS studies in the PN tradition do not yield a certain relation to their unobserved topic of interest, nor is there a way of completely correcting this problem using PN methods.

Second, repeatability and reliability require the further assumption that all people will respond to a particular measurement procedure in similar ways, an assumption that is questionable in many circumstances, particularly when using an instrument with people from very divergent cultural backgrounds (van de Vijver & Leung, 1997). Questionable measurement assumptions and procedures such as these make it difficult to interpret findings like the differential response of various cultural groups, for example, in studies looking at correlates of religiosity like well-being (e.g., Lavric & Flere, 2008).

Third, because scales are operationalizations designed to test the ideas of an experimenter, there is a danger of circularity—building into the scale the very thing the researcher hopes to find. For instance, the scale used to measure spiritual transcendence in Piedmont et al. (2009) is extolled as a good scale because of its strong reliability. However, the scale (a) has items that assume practices like prayer or worship have the same meaning regardless of culture or religious tradition and (b) explicitly reflects an understanding of spirituality that is “very distinct from theological understandings of the concept” (p. 5). The data from the instrument are then used to support the claims that spirituality is (a) invariant across cultures and (b) different from religiousness—in other words, the very thing that was assumed in the construction of the scale. The justificatory power of such an argument seems questionable, yet this illustrates some of the typical problems of PN methodological assumptions. The addition of more methods or questionnaires (cf. Paloutzian & Park, 2005) does not solve this difficulty if these new methods are built on the same problematic assumptions.

Epistemological Assumptions

In PN, knowledge consists of abstract propositions that are “naturalistic” and describe law-like regularities. A law-like explanation is one that attempts to characterize a phenomenon in abstract terms and point to its regularity. It depicts relations between phenomena as necessary and causal, perhaps offering predictive power (Armstrong, 1983, pp. 96–99; Rescher, 1970, p. 12; van Fraassen, 1989, pp. 26–38; cf. Harker, 2008; Hempel, 1968; Kistler, 2006, pp. 143–144; Mittelstaedt & Weingartner, 2005; Nagel, 1961, pp. 73–38). In the PN view, the propositions are thought to be best if they are universal and independent of context.

PRS research often follows the assumption that looking for invariant, causal relationships should be the focus of investigation. Authors (e.g., Piedmont et al., 2009) attempt to identify “causal relationships” or “causal precedence” between variables (pp. 164–165). They argue that invariant definitions fill a “basic scientific need” (p. 175), and that if such definitions cannot be found, perhaps “the numinous should be eliminated from research altogether” (p. 175). True to the invariance valued by PN, only universals appear to matter, and if a particular aspect of religion or religious practice is not a universal phenomenon, it is not worthy of scientific study. This line of thinking rejects the suggestion of

Hill et al. (2000) that universal definitions for some terms (e.g., religion or spirituality) are inappropriate or impossible.

Many articles in the field also appear to assume the PN view that investigators are “passive sensors of given facts” (Bhaskar, 1989, p. 51), and that it is possible to examine the world as a completely neutral observer, having a “view from nowhere” (Nagel, 1986). Reviews that emphasize the empirical basis of PRS (e.g., Hood et al., 2009, pp. 21–53, 477–488) often seem to imply the achievability or at least desirability of this kind of scientific objectivity.

The philosophy of science literature has long recognized many problematic features about these PN epistemological assumptions:

1. Scholars who study scientific method and practice reject the idea that all relationships are causal (cf., e.g., Smith, 2007), which means that a primary, if not exclusive, focus on causality may lead authors to claim the existence of causal relationships that are not actually supported by their analyses. Authors in PRS frequently recognize this problem by acknowledging that their analytic procedures “cannot prove causality among a set of variables” but then often fail to follow through with this observation and argue that some variables have “a causal impact” on others (Piedmont et al., 2009, p. 170). These types of statements have a further problem in that they are descriptive rather than explanatory, and so provide little information about why the relationship exists or how it works. Statements of mechanism rather than regularity may be more informative (cf. Rodgers, 2010; Wright & Bechtel, 2007).
2. It is widely acknowledged that even classical natural laws are not universal but are only valid at certain levels of explanation or under certain conditions and circumstances (Carrier, 1998; Chalmers, 2009; Fodor, 1991; Mittelstaedt & Weingartner, 2005, p. 176; van Fraassen, 1980, pp. 124–126). For example, boulders don’t have religion, but people do, and so regularities about it function only at the human level. Yet, the contextual particularity of religious and spiritual regularities is rarely recognized in PRS programs of research. It goes without saying, perhaps, that every study or set of studies is relative to a particular population at a particular time and place, yet many researchers discuss their findings as if they are *automatically* generalizable to other populations, times, and places without providing justification for this assumption.

PRS researchers who recognize this problem have used a number of unsuccessful strategies to deal with it. Some investigators acknowledge problems of generalizability, but this is then forgotten as other PRS scholars make use of their work assuming it applies to their subjects. In other words, they

merely assume that most populations, times, and places are interchangeable parts, and thus the results produced by one set of “parts” are generalizable to other parts of the world. Other scholars try to avoid the problem by focusing on phenomena that they consider to be universal (e.g., Sinnott, 2001), but this closes the door to research on important topics that do not appear to meet this criteria. Some research (e.g., Piedmont & Leach, 2002) has attempted to correct the problem by including important contextual variables like culture, but although the intent of such work is admirable, it often suffers from methodological problems and fails to meet contemporary standards for cross-cultural research (cf. van de Vijver & Leung, 1997).

In fact, the need for universal definitions and findings is only important if one is bound within the confines of the PN research program. For instance, one could reject the PN universality assumption and consider the possibility that the relationship between religion and spirituality varies from group to group, perhaps individual to individual and era to era. We could ask, for example, whether individuals who are spiritual and religious might have different correlates of their spirituality than those reporting themselves to be spiritual but not religious.

3. Most philosophers of science would reject the idea that detached objectivity is possible. As we have seen, both the practice of science and the interpretation of its data are dependent upon the theoretical presuppositions of the investigator, who is thus inextricably part of the picture. Perhaps the term “fairness” would be a better statement of a realistic epistemic value.

Ethical Assumptions

PN generally takes an *instrumental* view of science, which means that the primary purpose of an inquiry is to increase human power and our ability to pursue desired goals (Nelson, 2009, p. 57). It is assumed according to this view that the participants in the research need not directly benefit from their involvement (i.e., they are “instruments”), although they should not be directly harmed by it. The subjects of these studies are means to other ends, such as an increase in predictive power or some attractive outcome like practical clinical applications that might be achieved in the future.

However, PN claims of substantial benefits are often vague about the exact nature of these benefits or how they will come about. Exactly what desired goals will be achieved and how exactly will the research findings lead to their successful attainment of those goals? Past PRS studies in the PN tradition are said to be “amazingly vast, involving high-level research” that “spoke directly to human life” with “myriad sophisticated methods and data-analytic techniques,” providing “the starting point from which the psychology of religion can step forward to make its most important contributions to the science of psychology and to human welfare” (Paloutzian & Park, 2005, p. 4). These are glowing

assessments, but what are the actual concrete applications of these data, and how will these applications be made? What is the relationship between the often small amount of variance predicted and the practical significance of the study findings? These tantalizing hints of greater benefits for humanity remain unspecified. Moreover, many scholars have questioned the ethic of treating study “participants” as a means to some other end (Clegg & Slife, 2005). The notion that participants “gain research experience” is sometimes used to justify this form of research, although this hardly seems like an important contribution to human welfare. The point here is not that the PN tradition lacks ethics but that its research does not appear to be making significant progress toward the important values and goals it hopes to achieve. Unfortunately, many psychologists may not even know of an alternative to an unrealized instrumentalism. We describe such a system below.

Ontological and Metaphysical Assumptions

At the general level, it is questionable whether PN as it is practiced in the psychology of religion has a coherent ontology. Traditionally, positivists have held semirealist positions. According to the PN view, naïve realism entails metaphysical commitments to things that cannot be directly observed. Instead, some PN research assumes a structural view that observations give us access to relationships between things (e.g., “religion” and “coping,” a structural view), while other studies assume a kind of essentialism (e.g., empirical research gives us the “real” qualities of spirituality). However, the language used in PN studies is neither structuralist nor essentialist but instead implies a naïve realism that is rejected by its methods. For instance, article titles and conclusions portray “religion” as a real object that we can study and learn about through psychology of religion research. This naïve realism is reinforced by the assumption of rigid designation, for example, that when we use the terms like “religion” or “religiousness” in reference to Christianity they mean the same thing as when they refer to Islam, Hinduism, or Buddhism. PN research thus uses semirealist positions when it is convenient to do that, and naïve realist positions in other contexts.

More specifically, PN has three implicit primary ontological and metaphysical commitments: physicalist monism, individual essentialism, and the Law of Three Stages.

1. *Physicalist monism* is the view that (a) the only real things are material objects and the laws of physics that govern them (Armstrong, 1997, p. 6), and (b) this physical world is organized in a simple, unified, hierarchical fashion, with physical, chemical, and biological processes and structures at the foundation. In PRS, this implies that psychological, social, and spiritual processes ultimately and completely depend on these lower-level processes, and thus it is possible to understand phenomena at higher levels on the basis of lower-level processes: psychology can be reduced to physics, and spirituality can be reduced to psychology or biology. Ironically, this

also means that PN researchers begin (before conducting any research) by rejecting certain beliefs (e.g. the existence of a nonphysicalist God) that are fundamental for many of the religious traditions they are studying (cf. Slife & Reber, 2009).

This assumption seems to be common among contemporary researchers. Kirkpatrick (e.g., 2005, pp. 2–10), for example, has argued that evolutionary theory can provide a single monistic physicalist framework for PRS. Paloutzian and Park (2005) also argue that PRS can be integrated in a common framework with the life sciences, although they also assert that religion is a unique phenomenon, which seems to sit uneasily with their monistic views. Other scholars, however, note that good science may not form grand systems of explanation but rather lots of mini theories appropriate to a particular context (e.g., James, 1909/1996b; van Fraassen, 1980, p. 87; Wendt & Slife, 2009).

2. *Individual essentialism* is the PN position that in the human realm, the primary reality is that of the individual. Relationships and group membership may be important but do not make up what is essential about the human person. Within PRS, this emphasis can be seen in the focus on individual religious behavior, as opposed to the few studies that have been devoted to understanding the activity of religious communities (e.g., Pargament et al., 1983). Individualism is inherent in most PRS work but is more obvious in some lines of research, such as hedonic models of spirituality (cf. Cantor & Sanderson, 1999; Diener et al., 1999). A focus on “spirituality” (defined as an individual activity) as opposed to “religion” (in part a group phenomenon) fits well with this individualistic emphasis (cf., e.g., Sinnott, 2001).
3. The *Law of Three Stages* is the meta-ontological position that the best statements about reality are scientific ones, and that theological or philosophical statements involve more primitive stages of thinking that will eventually be replaced by scientific discourse (Comte, 1830–1842/1998). Logical positivists in the 20th century strengthened the Law of Three Stages and held that any type of metaphysical or ethical statement was nonsensical or merely an expression of emotion. Thus, discussions about ontological or metaphysical assumptions were thought to be unnecessary and empty of content (e.g., Carnap, 1950). This is sometimes referred to as a *deflationary* metaphysical stance.

The Law of Three Stages appears in PRS research in at least two ways. First, there is a general absence of any discussion about philosophical presuppositions. Even basic assumptions required by statistical procedures are rarely addressed, leaving the reader uncertain about the accuracy of the inferences made in the data analysis. Second, there is an apparent reluctance

to deal with theological or religious concepts. Studies often attempt to separate themselves from metaphysical or theological concerns, and some journal editorial policies specifically exclude many studies that attempt to grapple with these issues (e.g., Piedmont, 2009).

These ontological assumptions are not problem-free. In fact, a host of scholars have examined these presuppositions (see section “References”) and identified a number of difficulties:

1. Physicalist monism appears to be inaccurate because complex dynamic systems—such as the human mind and social organizations—have emergent properties that are unique and are not entirely explainable from a knowledge of lower-level laws (cf. Bhaskar, 1989, pp. 63, 77–80; Murphy, 1998). The partial independence of these levels suggests that the program of attempting to unify science around a single theory and method is not realizable (Morrison, 2000; cf. Carrier, 2000; Dupre, 2004; Wendt & Slife, 2009; Rescher, 1999; Mittelstrass, 2000).
2. Individual essentialism is problematic, because the reduction of social constructs to personality variables limits our ability to understand the relational nature of religion and spirituality. Individual essentialism is also not consistent with what we know about the intensely relational nature of human person (Gergen, 2009; Slife, 2004a).
3. The Law of Three Stages causes numerous difficulties for scientific work by creating a problematic blindness toward assumptions and presuppositions (Nelson, 2009; Slife & Williams, 1995)—they are “philosophical” and so not part of “real science.” For instance, all statistical procedures used in psychology make assumptions; normal distribution of variables, linearity of relationships, and independence of error terms are common presumptions. Complex procedures and phenomena may have additional or different assumptions, such as multivariate normality. Violation of these assumptions may lead to inaccurate interpretations of the data. Unfortunately, these possibilities are rarely discussed in PRS reports, and we cannot merely take for granted that these assumptions have been met, particularly for complex spiritual and religious phenomena.

The avoidance of theological constructs appears to offer no benefits and significant disadvantages. If in fact spirituality is a universal phenomenon, it should appear in the world’s theologies and religious traditions, and the wisdom of those traditions should be of essential relevance to any understanding of the topic. Practices we study (e.g., prayer) also have a religious or theological meaning that must be part of any full understanding of the

behavior (cf. de Boer, 1997). Rejection of this “data” of wisdom seems counter to the empirical and scientific ideal of considering all the data and evidence relevant to answering a question.

Conclusions About PN

There is no question that the PN research program has brought with it some advantages and positive outcomes. First, PN contains within it an optimistic assessment of scientific progress that has motivated researchers to conduct many empirical investigations. This has led to a large body of work and taught us much about religion. Second, the dominance of PN as a general model in psychology as well as PRS has encouraged the application of traditional psychological theories to the study of religion, often with interesting results. These are tremendous achievements that must be appreciated.

Unfortunately as we have seen, the PN program also has a number of serious weaknesses. Its allergy to philosophy and religious thought has hampered our ability to discuss important theoretical issues and presuppositions. This has led to meager development of theory (O'Connor, 1997), problematic study design or data interpretation, and other problems. These weaknesses in PN are seldom recognized in the PRS literature because alternative philosophies of science for investigating religion and spirituality are rarely acknowledged. In other words, PN has essentially been the “only game in town” for the PRS, so its comparative advantages and disadvantages have not been well understood (Slife et al., 2012). In order to correct this, in the section “Illustrations of an Alternative—Hermeneutics” we outline briefly a hermeneutic alternative, which is admittedly too brief to serve as a “how to,” but may help prevent the reification of PN as “the only real science” and aid in the understanding of its strengths and weaknesses.

Increasing Recognition of PN Difficulties

As it happens, some scholars and researchers have begun to see the weaknesses of PN and articulated various concerns about that research program (e.g., Browning & Cooper, 2004; Jones & Butman, 1991; Nelson & Slife, 2006; Yarhouse et al., 2005). Authors like Richard Gorsuch (2002a, 2002b) have suggested that the scientific study of religion, particularly if it is conceived from a PN point of view, has important limitations:

1. Science generally expects that information be objectively connected in a public manner so that other scientists may repeat and verify the findings. However, many of the things discussed by religious traditions are inherently nonrepeatable events (e.g., religious experiences), and so do not fit well within this methodology.
2. Philosophy (and sometimes theology) can and should have a role in helping psychologists to sort out theoretical issues, as it offers a “big picture” that empirical psychologists often lack.

3. There is a fundamental difference between the nomothetic, “that which can be generalized,” and the idiographic, “that which is unique (and therefore not generalizable)” (Gorsuch, 2002a, p. 50). Science is a process that assists us in identifying the nomothetic, but we live in an idiographic world that requires other approaches for its full understanding and appreciation, such as the arts. Spirituality also assumes that there are valid sources of knowledge beyond science, so that a rigid scientism is misplaced (cf. Audi, 2003).

A critical discussion that is more sympathetic to the traditional PN framework is that of Hood et al. (2009). They argue that the field’s “status as a science is based largely on its methodology—that is, its use of scientific methods to study the phenomena of interest” (p. 21). Measurement is the crucial issue, how things are operationalized, they tell us “what a researcher means” by a particular term (p. 11). In line with an emphasis on law-like regularities, reliability is prioritized before validity (p. 28), and quality depends on how definitions and studies conform to “certain standards of good measurement” (p. 12). They assume that a “naturalistic perspective” underlies all scientific investigation, even though reductionism risks “sacrificing the richness and depth of the object of study” (p. 25). The metaphysical and epistemological assumptions inherent in this perspective are nowhere discussed.

On the other hand, Hood and his colleagues also see many of the limitations involved in PN. They acknowledge that theory is important to inquiry, and that PRS has largely been dependent on other areas of psychology for theoretical models (pp. 6, 482). They accept the nomothetic–idiographic distinction offered by Gorsuch (p. 26) and appear to argue that ideographic exploration using qualitative and other methods is an appropriate part of PRS, thus trying to avoid some of the reductionism found in PN accounts of religion. However, it is not clear how this embrace of ideographic investigation and methods is consistent with their commitment to naturalism, since the version of naturalism practiced in psychology (PN) involves a commitment to law-like explanation. The use of qualitative methods without challenging the PN framework does not necessarily produce advantages. Many qualitative methods are underlain explicitly with non-PN philosophies of science (Denzin & Lincoln, 2005; Slife & Gantt, 1999), so that conducting qualitative methods without their respective philosophies of science could undermine their unique benefits.

The critique of PN assumptions within traditional PRS has led to a couple of strategies designed to overcome the weaknesses of the PN program. First, investigators with religious orientations have developed research programs based on traditions such as theism or Buddhist thought (cf. Epstein, 1995; Murphy, 2007; Slife & Reber, 2009b). These types of discussions have more recently tended to be constructive rather than critical, and to focus on personal and professional ways of integrating traditional psychology with

religious ideas and practices (e.g. McMinn et al., 2009; Mikulas, 2007; Sandage & Shults, 2007). However, they largely neglect to build a philosophy of science that could offer a better alternative to the PN program. Second, other scientists have attempted to formulate a new and more adequate philosophy of science for PRS using hermeneutic theory. We now turn to this alternative.

Illustration of an Alternative—Hermeneutics

This section illustrates the ontological and methodological assumptions of hermeneutics and contrasts them with similar assumptions made in PN. Specifically, we analyze typical PRS research using the exemplary work of Paloutzian and his colleagues. Representative of that work is a clearly written proposal for researcher guidelines going forward, Paloutzian and Park (2021), which is our focus here. In fact, this chapter leads a recent special issue of one of the flagship journals of PRS, the *Psychology of Religion and Spirituality*. We draw liberally from an invited reply to this proposal that is expressly both hermeneutic critique and hermeneutic alternative (Slife & Reber, 2021). First, however, we offer a bit of general context on hermeneutics; then we provide a more extensive hermeneutic analysis of the Paloutzian and Park article.

Hermeneutics in Context

Fundamental to hermeneutics is the view that no understandings of the world can operate apart from our prior understandings and presuppositions. Knowledge increases when we critique these prior views based on new information in what is commonly referred to as a hermeneutic circle or interpretative process (cf. Ricoeur, 1981, p. 93). Indeed, key to the viability of *any* investigative endeavor is an awareness of our prior understandings and a willingness to alter them. While the philosophical roots of hermeneutics stretch back into the classical period, modern theory is based on the work of a number of Continental philosophers, including Wilhelm Dilthey (1989), H-G. Gadamer (1989), and Paul Ricoeur (1992).

Some authors see the hermeneutic approach as standing in opposition to PN (cf. Luyten & Corveleyn, 2007), whereas others see it as complementary, focusing more on the discovery aspect of the scientific epistemological cycle in contrast to the PN focus on verification (cf. O'Connor, 1997). Many hermeneutic ideas resonate with the pragmatic psychology developed by William James (1902/1961, 1912/1996a, 1909/1996b), such as his emphasis on lived experience as well as his concepts of radical empiricism and a pluralistic universe. Hermeneutists also eschew the scientism inherent in the PN approach, which privileges psychological and scientific understanding over its object of study and the wisdom available in religious traditions (Gantt & Williams, 2018; cf. Leuba, 1912). Hermeneutics works better with a conceptualization of PRS as a dialogical endeavor that treats psychology and religion as equal partners who can learn from each other (Nelson, 2009).

Illustration

Hermeneutics is perhaps best understood in practice, in actually putting its alternative assumptions to use in reflection upon an exemplar article. With that in mind, we have chosen for comment the work of Paloutzian and Park (2021). Their article is an excellent one for reflection because: (a) their work is highly respected, (b) the article is representative of the PRS literature, and (c) their article is featured in the *Psychology of Religion and Spirituality*, a leading journal in the PRS literature. To introduce this article, we begin with a portion of its abstract:

In this article, we attend to issues central to the psychology of religion and its sometimes companion term spirituality, and promote intellectual perspectives that will enable this field to maximally contribute to psychology and allied fields. We address how to best conceptualize the field and conduct research in an increasingly international psychology of religion context. We advocate for clarity about the nature of questions answerable by psychological science, what a valid scientific explanation of religiousness is, and the intellectual and methodological boundaries of this science, which are matters rooted in the questions of what constitutes evidence and why knowledge is public with no private, unverifiable privileged positions.

As the abstract indicates, one of the main themes of Paloutzian and Park's article (2021) is "the intellectual and methodological boundaries of science." The authors contend, as would the authors of many psychological methods texts (Clegg, 2009), that the rules and boundaries of method somehow define what is scientific: "the science of the psychology of religion lives by the same rules as do all sciences" and must therefore remain solidly within the bounds of empirical science (Paloutzian & Park, 2021, p. 8). Indeed, they describe these rules and boundaries as if they were the fixed canons of science: "a theory or tentative explanation *must* be capable of being studied using empirical tests" (p. 20 [emphasis added]).

Hermeneutists, on the other hand, would not only view these rules and boundaries as less fixed but also want to examine the authors' assumptions about these rules and boundaries. In other words, hermeneutists would hold that the research project of Paloutzian and Park, as with all researchers, is not a mere *description* of the reality of the world. It is better understood as an *interpretation* of the world, indeed, *one* interpretation among many. In this sense, the authors' desire to move away from "unverifiable privileged positions" (in the abstract) is intriguing because the hermeneutist would be suspicious that the very methods used to "verify" PRS research could themselves contain hidden "privileged positions" or interpretations of the world.

If this is even possibly true, several underlying questions about the claims of Paloutzian and Park are raised: Why these boundaries and rules? Why boundaries and rules at all? And why are they believed to be fixed? Questions such as these lead to pivotal assumptions

about scientific methods, assumptions the hermeneutist would at least want to identify, if for no other reason than to allow other scientists to examine them. Yet we are aware that such assumptions are typically considered outside the province of psychological research, extradisciplinary issues, and thus rarely even mentioned in psychological publications. The Paloutzian and Park article is no exception in this regard.

Still, the concern of this particular article illustrates nicely why the hermeneutist would care about assumptions and even perhaps consider “extradisciplinary” resources to examine them. Consider, for example, how philosophers of science are often the ones who formally study the boundaries of science, not to mention helped to formulate the PN method rules that are supposedly so fixed. Indeed, these philosophers have a special term for how *non*-fixed these boundaries are—“the demarcation problem” (Laudan, 1983, p. 111). In other words, the demarcation between science and nonscience is a *problem*, not a solution. As Larry Laudan (1983) demonstrates, it has been debated literally for centuries, with no end in sight. The point here is that this “extradisciplinary” investigation of general assumptions might just question the entire enterprise of setting fixed rules and boundaries in science.

Many in psychology, including Paloutzian (2017, p. 54), have considered the demarcation problem solved with Karl Popper’s conception of falsifiability. Again, however, extradisciplinary resources can be helpful. In the eyes of those philosophers who have systematically examined these solutions, Popper’s demarcation criterion is a “failure” (Okasha, 2002, p. 16) “for excluding legitimate science . . . and for giving some pseudosciences the status of being scientific” (Hansson, 2019, §4.2, ¶3). Popper’s formulations are, of course, not the only attempts at such demarcation boundaries. Still, after reviewing the major attempts throughout the history of science, Laudan (1983) has concluded (along with Okasha, Hansson, and many others, e.g., Gieryn, 1983) that all such demarcations, however well-intended, have “failed to deliver the relevant goods” (p. 111).

The preliminary hermeneutic lesson here is that a general examination of assumptions is vital to any PRS enterprise—no matter how popular these assumptions might be or how extradisciplinary that examination might seem. Psychologists liberally borrow from biology; hermeneutists see no reason why they should not borrow from other disciplines, including philosophy, especially when philosophers were and are vitally involved in the formulation and reform of psychology’s methods. Consequently, the hermeneutist beckons us to delve more deeply into a few of the categories of assumptions described above, not only to see how PN assumptions might fare but also to see whether such a hermeneutic examination might yield alternatives. To continue our illustration, we probe the Paloutzian and Park article with two general categories of those assumptions in mind—ontological and methodological assumptions.

ONTOLOGICAL ASSUMPTIONS

As mentioned, most assumptions are implicit rather than explicit in the PRS literature, and that is especially true with ontological assumptions. This does not mean that hermeneutists would criticize the authors for *making* these assumptions, consciously or unconsciously. As philosophers of science have long known, these assumptions are inescapable, whether deliberate or inherited (Bradley, 1897; Jaspers, 2003). Ontological assumptions, in particular, are necessary for scientists to know how to form their methods, so they can study the phenomena they believe are most real and/or fundamental. Hermeneutists would criticize PRS researchers, instead, for not *explicitly identifying* them (or perhaps not being aware of them), so that the discipline can examine them and their consequences. Indeed, as we will soon see, the common omission of ontological assumptions among PRS researchers could be detrimental to the enterprise of psychology of religion.

This omission is not detrimental because the assumptions are necessarily connected to full-blown, *explicit* systems of ontology, at least for the hermeneutist. As mentioned, psychological researchers rarely assert such systems of ontology. Rather, they are detrimental because they are connected to less formal, *implicit* assumptions about what is real or most fundamental. When ontology is understood in this less formal manner, one of Paloutzian and Park's chief assumptions becomes obvious: naturalism. As described above, naturalism is the worldview that natural events and explanations are most real and fundamental (De Caro & Macarthur, 2010). The following quotes, among many, reveal Paloutzian and Park's assumption of naturalism in their article: "These guidelines and assumptions [of psychology, and thus of science more generally] are predicated on the idea that under study are the processes of the natural world" (p. 8); "claims about supernatural or otherworldly processes or those otherwise posited to be outside the world of nature. . . . have no bearing on the conduct or interpretation of psychological research" (p. 4).

Again, the hermeneutist does not require that such statements reflect the authors' *ultimate* ontological or metaphysical position, such as "natural events are the only events that are real or fundamental for every context and every investigative activity." These authors could even embrace the reality of supernatural events in other contexts (e.g., religious beliefs). The ontological assumptions of interest to the hermeneutist here pertain to a more context-specific ontology, where the authors are *clearly making naturalistic ontological assumptions about the specific context of psychology of religion research*. In other words, what they allow to be real and fundamental for the purposes of study, for the purposes of the field of psychological science, is the natural *only*.

The Appropriateness of Naturalism

Paloutzian and Park's ontology for psychology of religion research would be curious to the hermeneutist. The very thing that is ruled out (as being real) at the outset of any study (because it is an implicit ontological assumption) is perhaps the most distinctive thing about much PRS subject matter—belief in the supernatural. In other words, the belief

of many PRS study participants is a belief that the supernatural is real in some fashion. Perhaps most popular in Western culture is the belief in the reality of some divine or spiritual being, such as a god. Curious to the hermeneutist is that Paloutzian and Park would prohibit the PRS researcher from having that supernatural belief in the research context. Recall their clear instruction that researchers should be studying “the processes of the natural world” (p. 8), as if the processes of the supernatural world, the processes that most distinguish the informal ontology of many religious people, could never matter in the research context.

We acknowledge that Paloutzian and Park, as well as many other PRS researchers, frequently study the supernatural meanings of religious participants. There is also little doubt that these researchers intend to honor the spiritual beliefs of their study participants. However, when researchers *interpret* these meanings, the data of their studies, Paloutzian and Park are clear—the researchers are limited solely to naturalistic interpretations and explanations. Again, this limit is not to say that the researcher cannot give credence to these beliefs outside their research, such as in their personal lives.

Even so, study participants might rightly wonder just how much their researchers are truly honoring their informal ontological beliefs when Paloutzian and Park assert that: “claims about supernatural or otherworldly processes . . . have no bearing on the conduct or *interpretation* of psychological research” (p. 4 [emphasis added]). It seems unlikely that such participants would exempt psychological research from spiritual influences, not to mention the spiritual influences they might assume are involved in the religious processes being studied. Yet, researchers are prohibited from giving any credence to these types of participant beliefs in their research and publication. Instead, they must reframe these interpretations as if the divine interpretations of their participants are somehow inappropriate or wrong for the context of the study.

Consider, for example, a set of researchers studying changes in a church congregation, such as how the congregation makes decisions. If members of the congregation attribute these changes to some supernatural entity, such as a god, these researchers are not allowed to give those attributions credence in their own explanations of those changes. Indeed, if members of the congregation were to read the researcher’s interpretation of those changes, it seems possible they would experience their own supernatural interpretations as at least not confirmed, if not wholly undermined. In fact, it does not seem a stretch to infer that enough of these disconfirming “results,” given the power of science, could begin to undermine participant faith in these types of beliefs. After all, naturalistic explanations are not the same as supernatural explanations, and thus may be experienced as competing with one another, at least for the participants.

METHODOLOGICAL ASSUMPTIONS

The hermeneutist would hasten to note that Paloutzian and Park’s restriction to naturalistic explanations and interpretations is not a requirement of the methods of science. Recall

(above) the underdetermined relationship between theory and data. Underdetermination means that what “determines” the interpretation of data is not solely the data; other factors come into play, including the ontological and methodological assumptions of the interpreters themselves. For this reason, what data indicate or mean is never solely determined by the data themselves; there is always more than one interpretation that can be made of any data set (Slife & Williams, 1995). Is it possible, for example, that a spiritual interpretation could make sense of much of the PRS data (e.g., changes in the church congregation)? If so, why would such respected researchers as Paloutzian and Park be so adamantly opposed to this interpretation?

One answer to the latter question is surely the authors’ ontology, which we just reviewed. However, another probable source of the opposition to spiritual interpretations of data, from a hermeneutic standpoint, is the confounding of methodological and ontological assumptions. It is well known, for instance, that psychologists generally embraced the methods of natural science in their historical search for ways of investigating their subject matter (Leahey, 2013). However, when they adopted the methodological naturalism of the natural sciences, they also *implicitly* assumed a framework for interpreting data came along with it—ontological (or metaphysical) naturalism (Viney & King, 2003). They confounded the two. The emphasis on “implicitly” here is important because researchers more *explicitly* assumed, like the positivists who inspired them, that their methodological commitments did not entail ontological assumptions (hence the lack of reporting these assumptions). The net effect is a peculiar position in which they *assume* their methods have no ontological commitments while at the same time they underestimate the naturalistic ontological commitments they *presumed* historically.

The hermeneutist, on the other hand, would, first, want to make all these assumptions and presumptions explicit, so that they could be openly discussed and debated. Second, hermeneutists explicitly argue that methodological commitments (the logic of method) entail, inescapably, ontological assumptions. As mentioned in a prior section, the forming of methods entails assumptions (however implicit) about the phenomena scientists believe are most real and/or most fundamental (e.g., observables). However, the *data* produced by such methods do not require an interpretative framework with the same assumptions as the method. Data from a naturalistic method underdetermine, and thus do not require, interpretation from a naturalistic theory. Consider, for example, how many religious people experience the “data” of everyday natural events, such as the birth of a baby, but they interpret these experiences with an informal, *non*naturalistic ontology—a miracle. And there is no in-principle reason this interpretation is not available to researchers.

Paloutzian and Park, however, do not merely require methodological naturalism; that is, “These guidelines and assumptions are predicated on the idea that under study are the processes of the natural world” (p. 8). They *also* require metaphysical naturalism: “claims about supernatural or otherworldly processes . . . have no bearing on the conduct or

interpretation of psychological research” (p. 4 [emphasis added]). These authors, along with many other PRS researchers, may not realize that this extra move, this move to restrict interpretation, is a clear move into ontological naturalism.

The hermeneutist would readily sympathize with this lack of realization in one sense. The move from methodological to ontological naturalism is deceptively slippery (Slife & Reber, 2012). One could even characterize it as a *slippery slope*, especially when ontological assumptions are left unidentified. Hidden ontological assumptions in *method* can too easily slide into *general* ontological assumptions in data interpretation (e.g., Forrest, 2000). Indeed, Burt (1999) characterized this same propensity in the natural sciences as “making a metaphysics of [one’s] method” (p. 229).

The pivotal point here is that there is no scientific reason for this slide, whether scientific in the sense of process or method or scientific in the sense of content or findings. It is true that natural scientists rarely interpret their data in a spiritual manner, but it does not follow from this frequent practice that they are prohibited from doing so. The hermeneutist would also readily acknowledge the possibility of scientific customs, what Kuhn might call paradigms, that tend to tacitly restrict interpretations of data. Again, however, customs and prohibitions are two very different things. The presence of such paradigms does not imply that the methodology of science *requires* such prohibitions and boundaries.

Moreover, the main reason the natural sciences rarely stray from naturalism may involve their subject matter. Particles of physics and ions of chemistry are unlikely to have informal ontological beliefs that help to form their experiences and identities. The participants of many PRS studies, however, do. This issue circles back to the question raised at the outset of this section: the appropriateness of naturalism for PRS research. Put another way, a pivotal question for the hermeneutist is whether the subject matter of such research should be tailored to fit its methods and assumptions—the data of spiritual participants tailored to fit naturalistic methods and assumptions—or whether the methods and assumptions of science should be tailored to fit its subject matter. In this sense, PN seems to endorse the former and hermeneutics the latter.

Conclusions: Needs for Theory in PRS

Good science is progressive, helping us to discover new points of view that remain fallible but have advantages over the previous viewpoints (Mittelstrass, 2000; Rescher, 1982, pp. 100, 172–174, 210–215, 246–247). However, it is impossible to fully evaluate the rationality and truth value of an individual viewpoint or body of research unless we also understand the underlying assumptions behind the research (cf. MacIntyre, 1977). We believe that the sophisticated tools provided by philosophers of science can help us to understand our tradition, identifying and potentially correcting its problems and limitations.

As a case in point, our conceptual analysis of the PN program in PRS indicates that its assumptions, though advantageous in some respects, nevertheless lead to a number of methodological and interpretative problems. Perhaps most prominently, PN provides no systematic facilitation of the discovery aspect of the scientific epistemological cycle, leading ultimately to less PRS progress. Many other serious limitations with the PN system are only readily apparent in light of an alternative, such as hermeneutics. Hermeneutics has its own advantages and disadvantages (Slife, 2010), but the predominance of PN calls for at least a new awareness, if not an entirely different way of doing things. A reflection on the problems of PN and alternative possibilities, such as hermeneutics, suggests a number of needed changes:

Removal of the PN “allergy” to philosophy so that PRS scholars can have open, constructive discussions about important theoretical issues that affect their work.

Movement beyond the 19th- century suspicion of theological and religious ideas so that those in the field better appreciate their object of study and take advantage of the ideas it has to offer.

Reevaluation of the suitability of an implicit naturalistic law framework for PRS, involving at the least a movement away from trying to describe abstract natural laws toward a focus on contextual and particular mechanisms that can help us better understand the phenomena of interest.

Recognition that a hermeneutic approach to PRS would overcome some of the problems inherent in the PN research program. Eventually, this would lead to more use of qualitative methods and a strengthened ability for the field to generate its own new ideas.

How might PRS come to grips with these attractive possibilities? While gazing into the future is always hazardous, several possible scenarios present themselves.

1. The field could undertake a deep self-examination leading to broad acceptance of many changes. This is the most desirable but least likely alternative. Psychology as a discipline has shown a remarkable ability to ignore or marginalize the discussion of theoretical and philosophical issues, suggesting that attempts for progress in PRS will not meet with eager acceptance.
2. PRS could totally reject any discussion of these issues and any of the proposed changes. This also seems unlikely, as many scholars recognize the need for new ideas in the discipline, and calls for broader use of qualitative methodologies are increasingly heard at professional meetings and on PRS listserves. The increasing internationalization of PRS will also make resistance to change difficult as scholars from other cultures begin to question traditional Western Enlightenment values that underlie the PN research program.

3. A subgroup of scholars within PRS might recognize the need for reform and undertake changes in their own work, while the mainstream community continues in the old PN tradition. This creation of a new academic subcommunity within PRS is similar to how the field has responded to past critiques, as in the creation of Christian professional societies, training programs, and journals in the latter part of the 20th century. This offers advantages but also can lead to fragmentation in the field and an inability of various subcommunities to learn about and utilize knowledge acquired by colleagues working in other groups.
4. A dialogical pluralism would recognize and support the existence of competing research programs, at the same time providing means of mutual respect and dialogue (Richardson et al., 1999; Slife & Gantt, 1999). This seems the most likely desirable change outcome, but one that will not occur unless professional structures (e.g. journals and meetings) are created to support dialogue and not systematically exclude scholarship from competing research programs. This must be a high priority of professional societies related to work in PRS.

In both the past and the present, PRS has a tradition of attracting many of the finest minds in psychology to its task. Our hope is that these scholars will recognize the exciting possibilities opened by new ways of doing things and embrace these as we move into a second century in the psychological study of religion and spirituality.

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Parameters and Limitations of Current Conceptualizations

Fraser N. Watts

Abstract

This chapter reviews the current state of the psychology of religion and spirituality. The recent broadening of the psychology of religion to include the psychology of spirituality reflects the growing number of people who are “spiritual but not religious.” At present, the psychology of religion is too selective in the range of phenomena it covers, and it should be broader geographically and in terms of spiritual traditions. In view of the diversity of religion, better ways of classifying religious phenomena are needed if research is to work with homogeneous categories. Though questionnaire methods have played an important role, the psychology of religion would benefit from making more use of both experimental methods and qualitative, first-person accounts. The “outsider’s” perspective of the psychology of religion could usually be brought into a dialogue with the insider’s perspective of practitioners. In addition, it would be mutually beneficial if the psychology of religion and spirituality had closer links with general psychology. Finally, there is a case for developing an approach to the psychology of religion that tackles practical issues while remaining research-based.

Key Words: spirituality, experience, taxonomies, data, practitioners, applications

There have been relatively recent significant changes in the nature of spirituality, its place in society, and its relationship to religion. Sheldrake has provided a helpful overview of the history of spirituality (Sheldrake, 2013), which has emerged from a religious perspective. Until recently, we would have assumed that spirituality was nested within religion, but that has gradually changed.

First, various forms of religious spirituality developed, with a more experiential, emotional, and individualistic focus. That focus was clearly evident in the revivalist movements of the 18th century, such as Methodism in the UK and the Moravian Church in Germany. In late 19th-century movements (e.g., theosophy and Christian Science), forms of individualistic spirituality developed outside conventional religion. Later still, from the 1960s onward, an increasing number of people regarded themselves as spiritual but not religious (SBNR) (Erlandson, 2000), many of whom were not adherents of any spiritual movement at all, whether conventionally religious or otherwise. The historical origins of

the present upsurge of SBNR individuals, thoroughly discussed by Robert Fuller (2001), are complex.

It has sometimes been suggested that nonreligious spirituality is a temporary phenomenon, found in the “baby-boomer” generation, a transitional stage between religion and secularism and one that will not last. However, current research on millennials shows that many millennials are spiritual but not religious, and that it is indeed the prevailing indigenous spirituality of our time. It is no longer an unusual form of spirituality; it has become mainstream. However, in some ways it is misleading to say that this new spirituality is not religious; it is possible for it to be religious even though it doesn’t prioritize religion. Galen Watts’s intriguing research on Canadian millennials shows that essentially the same form of “religion of the heart,” or self-focused spirituality, can be found in a purely secular setting such as Toastmasters, a broadly spiritual setting such as Twelve Steps, and an explicitly religious setting such as a C3, a charismatic evangelical church (G. Watts, 2022).

The relationship of spiritual practices to religion is quite complex and can take several different forms. First, spiritual practices can be located explicitly within a faith tradition, and, until recently, that is where spirituality was usually to be found. However, spirituality can also be located outside faith traditions, and here there are two further possibilities: (a) spirituality contrasts favorably with religion, and (b) some forms of non-religious spirituality can be quite antagonistic to religion. Alternatively, spirituality can simply draw a veil over its religious origins, as is the case with mindfulness therapy or positive psychology, and become so completely secularized that it is neither part of religion nor contrasted with it.

Religion is a divisive issue in our society; it often polarizes people. Psychologists working in the psychology of religion are often personally sympathetic to religion, even if that is not explicit in their work. In contrast, those working in the study of spirituality or transpersonal psychology often come from outside the religious arena and are distrustful of religion. The psychology of religion largely studies spirituality in the context of religion, though it has recently tried to broaden out. It has rebranded itself as the “psychology of religion and spirituality” and now tries to study spirituality wherever it occurs, whether within religion or outside it; however, its main focus remains on religion. In contrast, both the psychology of spirituality, and transpersonal psychology (Friedman & Hartelius, 2015) usually study spirituality outside religion and are often explicitly committed to doing so. My position is an irenic one: there are similarities and differences between spirituality inside and outside religion; both are worth studying, and the differences between them are interesting and worth exploring.

It probably makes an important difference whether or not spirituality occurs in a religious context. There is a more pragmatic approach to spiritual practice outside religion than within it. Outside religion, people engage in spiritual practices not just because they are the right thing to do but for the benefits they deliver. Religion has operated

largely, though not exclusively, with rule-based ethics, whereas spirituality outside religion is often operating with more consequentialist ethics. From the religious camp, it can be argued that secular spiritual practice is corrupted by its pragmatic approach. In contrast, it could be maintained that spirituality within a religious framework is costly and sacrificial, undertaken simply out of obedience and faithfulness and all the better for that.

Forgiveness is an interesting example of a religious virtue that has migrated across into the world of secular therapy. The development of forgiveness as a kind of therapy has drawn a strong theological critique (e.g., Jones, 1995) that, in secular hands, it becomes “cheap grace,” a pale shadow of the costly thing that religious people know authentic forgiveness to be. Though there is much current interest in forgiveness in both psychology and religion, there has been surprisingly little cross-fertilization between them (Watts & Gulliford, 2004).

The Concept of “Religion”

Contrasting spirituality with religion raises the question of what is meant by “religion.” The concept of religion is culturally specific and a product of the Enlightenment, and it can itself be subjected to deconstruction (see Lash, 1996). It is a concept that has gone through a radical transformation over the last 200 years or so, as parts of the world have become more secular. “Religion” is a very different phenomenon in a culture where almost everyone shares the same faith tradition from what it is in a culture that is multifaith and partly secular. Elective religions like Christianity and Western Buddhism are radically different from those such as Islam and Judaism, which are both inextricably intertwined with cultural identity. We have, as yet, only the most rudimentary understanding of the psychology of such nonelective religions.

The psychology of religion needs to broaden the range of cultural contexts in which it studies religion. Psychology has often been very restricted in its sources of data. The era of the “white rat” in psychology is largely over, but all too much psychology is still based on the study of American college students, though there are some special populations, such as those receiving some form of healthcare, which have been studied quite extensively. The psychology of religion is probably better from this point of view than many other areas of psychology, as it has often studied people who are engaged in religion outside campus settings. However, its scope is still not as broad as it should be.

One limitation is geographical in that the vast majority of current data is from North America. There is a significant body of data from northern Europe, but too little from the rest of the world. There are some areas of psychology, such as sensory psychology, where we can expect findings to be universal, and there it matters less if the source of data is restricted. However, that is not true of religion; we cannot extrapolate what we know about American religion to global religion.

Another limitation is that the vast majority of current psychology of religion is concerned with the Christian religion. There are exceptions: there is a certain amount

of empirical psychology of Judaism (see Linke, 1999) and a journal devoted to the *Psychology of Judaism*. However, there is as yet very little comparable psychological study of Islam. There has been a good deal of research on certain Indian religious practices, such as Transcendental Meditation, and states such as mindfulness; there is also a coherent theoretical psychology emanating from Buddhism. However, the psychological study of Indian religion is, so far, very selective and limited compared to the study of Christianity.

These two problems (geographical narrowness and selectiveness in the faith traditions studied) are, of course, interrelated. Most psychological research on religion is carried out in America, and non-Christian religions are generally not well represented there, though it is perhaps surprising that there has not been more psychological study of American Judaism. Yet it is not just that we cannot generalize from one faith tradition to another without checking that the generalizations are justified. The more radical point is that we cannot justifiably assume that there is a general category of “religion” that encompasses such diverse examples as Christianity and Buddhism. There are good reasons for thinking that “religions” are markedly dissimilar.

Psychological Engagements With Spirituality and Religion

There have been two main phases of activity in the psychology of religion. It was a very active area in the early decades of psychology and considerable advances were made between 1890 and 1930. Then, after a lull in the middle of the 20th century, there was a second wave of increasingly vigorous activity in the latter decades of the 20th century (see Paloutzian, 1996).

The uneven development of the psychology of religion (with a vigorous early phase, followed by a lull, and then a revival) calls for comment. The decline of the psychology of religion toward the middle of the 20th century was probably associated partly with secularization (if not of society as a whole, at least of the community of academic psychologists) and partly with the methodological turn toward behaviorism. The revival of the psychology of religion was in turn associated with the methodological emancipation of psychology that took place in the 1970s, with a return to the admissibility of a broader range of data and theories. However, in this new phase, the psychology of religion was mainly the interest of a minority of religiously sympathetic psychologists rather than of the discipline as a whole. In this it differed from the cognitive science of religion that has developed in the 21st century, which has been predominantly the interest of people unsympathetic to religion.

The movement to broaden the psychology of religion to include the psychology of spirituality as well is a welcome development, and it reflects a growing concern with values and practices that are broadly “spiritual” but lie outside organized religion. The psychology of spirituality tends to have a broader concern with the whole population, not just with those who self-identify as religious. There are interesting differences in approach

between the psychology of religion and the psychology of spirituality that go beyond differences in what is studied.

The psychology of religion generally tries to be objective and detached, even if those engaged in it are personally sympathetic to religion. This detachment is part of the positivistic inheritance of psychology, even if it is now somewhat attenuated. The emerging psychology of nonreligious spirituality, in contrast, is more interested in experiential research and participative methods. It is inclined to see the spiritual transformation of the researcher as an integral aspect of the research. Transpersonal psychologists, for example, are more likely to think that people have to be personally engaged in spiritual practice to understand spirituality. This is similar to the assumption made in psychotherapy that you have to be personally involved in therapy to understand what is going on.

The engagement between the human sciences and spirituality often struggles with this dilemma, whether to simply *study* spirituality objectively or to *integrate* with spirituality. Galen Watts has distinguished between the study “of” spirituality and the study “for” spirituality (G. Watts, 2017). There is an important distinction to be made between how social scientists study spirituality and the approach to spirituality of those in more applied fields such as health studies or education. The former are usually engaged in the study “of” spirituality whereas the latter often study spirituality not to understand it better but to examine the practical benefits of a spirituality that they already endorse.

Those engaged in the study *for* spirituality often like to label what they are studying as “nonreligion” and to contrast it with religion. However, those engaged in the study *of* spirituality might think that spirituality involves the development of a new form of quasi-religion. The psychology of spirituality sometimes wants to incorporate the values of spirituality and to become a distinctive integration of psychology and spirituality. What then emerges is a kind of hybrid between psychology and spirituality. Looked at one way, it is psychology; looked at another way, it is spirituality. It is like one of those ambiguous figures such as the Greek vase that you find in undergraduate textbooks about perception. Insofar as the integration of psychology and spirituality is antithetical to religion, it may be because it implicitly aspires to replace religion. However, there can equally be a psychology of spirituality that is rigorous, detached, and objective. I see value in both these strands and would want to hold together the objective psychological study of spirituality with a more committed and participatory engagement.

Facets of Spirituality and Religion

Religion is always a multifaceted phenomenon. Several overviews of the psychology of religion (e.g., F. Watts, 2017) have identified at least three distinguishable facets: practices/behavior, experience, and thinking/beliefs. It is important in any adequate psychology of religion to keep all these in focus, and to be alert to the relationship between them.

Different facets have come to the fore in different phases of religious development. In medieval times, Christian thinkers such as Aquinas saw “religion” as mainly a matter of virtues and practical commitments. In the Enlightenment period, a more experiential religion of the heart started to become increasingly important, with a growing emphasis on mysticism and spirituality. Since the development of atheism, there has been a growing tendency to see belief in God as the defining feature of religion, and atheists generally define religion in that way.

More than most topics in psychology, religion cannot be studied adequately without taking into account behavior, beliefs, and experience. It could well be that religion provides a particularly good opportunity for examining how behavior, beliefs, and experience interrelate in a systemic way. I suggest that spirituality is also a multifaceted phenomenon, and that the same three facets—practices, experience, and beliefs—are as important in spirituality as in religion, though they take different forms. The multifaceted nature of spirituality is probably one reason why it has proved hard to define, despite the considerable effort that has gone into conceptual work (Oman, 2013).

Spiritual practices are an important part of spirituality, but those who are SBNR are more likely to meditate than to pray. For them, private practices also tend to be more important than public ones. That is probably the opposite of how it is in religion, where churchgoing is often the most notable practice. However, spiritual individuals may, for example, attend something such as a meditation group, so the emphasis is not solely on private practices. There are also practices that focus on the cultivation of religious and spiritual virtues such as forgiveness and gratitude. Healing also plays an important role in nonreligious spirituality as well as in religion (Watts, 2011).

Experience is probably even more important in spirituality than in religion. For at least some religious people, there has recently been an increasing emphasis on the experiential side of things, but spirituality probably goes further in prioritizing experience. There is a correlation between having powerful, spontaneous spiritual experiences and thinking that the spiritual side of life is important (Hay, 1982). It seems likely that such experiences are more common among people who are SBNR than among religious people.

Some imagine that beliefs are less important in spirituality than in religion, but that may not be the case. The beliefs associated with spirituality tend to be softer and more diffuse than those associated with religious doctrines, but it seems that there is an identifiable set of views associated with spirituality. It is a matter that needs more research, but it probably includes thinking that there is something more beyond the everyday, and beyond matter, and a sense of the transcendent (Hay, 2006). It probably also includes belief in the afterlife, which has been increasing while belief in God has been decreasing (Hood et al., 2009). The beliefs associated with spirituality also include viewing the human person as essentially spiritual, and having considerable spiritual potential. Such convictions are often quite strongly held. Experience, practice, and belief are intertwined in both spirituality and religion.

Consciousness and Cognition

Specific issues arise at the intersection of the psychology of religion and the psychology of consciousness. Consciousness and cognition have been part of the agenda for the psychology of religion at least since the original publication of William James's classic, *The Varieties of Religious Experience* (2002), which suggested that religious experience is "pure" and unmediated. It is common to find such claims in the mystical traditions of most religions, especially that religious practices such as meditation play an important role in inducing a pure form of consciousness. It is interesting to see that William James presented such claims as a scientific hypothesis, and similar claims can be found in more recent literature, for example, in the work of Robert Forman (1990).

Nevertheless, claims that religious practices induce a pure form of consciousness are controversial and have been strongly criticized on various grounds (see Katz, 1978; Proudfoot, 1985). To many, it seems completely implausible that there should be any human experience or consciousness at all that is not shaped and influenced by personal background and social context. Indeed, to some such as Steven Katz, claims about "pure" religious consciousness may not reflect actual experience at all, just the repeating of claims that have been learned from religious teachers.

I am sympathetic to these criticisms, but much depends on whether claims about pure consciousness are made in absolute or relative terms. Though it may be implausible to suggest that religious practices can induce states of consciousness that are unaffected by any background factors whatsoever, it may well be the case that background factors play a stronger role in influencing some forms of consciousness than others, and that some religious practices play a role in reducing (if not eliminating) their impact. I suggest that there are no a priori reasons for dismissing out of hand the weaker form of the pure consciousness hypothesis, which merits empirical investigation.

There is a certain *prima facie* plausibility in a two-factor theory of religious consciousness: (a) a component of relatively "pure" experience in which background factors play a less significant role than in most states of consciousness, and (b) a component in which background factors (including the religious tradition in which a person had been steeped) play a more significant role. That would be in some ways analogous to the theory of emotional experience of Schachter and Singer (1962), which postulates (a) a physiological state, which can be manipulated pharmacologically; and (b) interpretations of that state, which can be manipulated, for example, by what films people watch. There is an analogy between emotional and religious experience, and it would not be surprising if similar psychological theories emerged in both contexts.

Both empirical and theoretical considerations support a distinction between the two components of mystical consciousness, one minimally interpretative and one in which interpretative processes play a fuller and more normal role. Such a distinction emerges from a factor analysis of Ralph Hood's mysticism scale (see Hood et al., 2009). The first factor reflects an experience of unity; the second factor incorporates religious claims. This

two-factor questionnaire structure supports a two-factor theory of religious experience. Further, a two-factor theory of mystical experience sits well with cognitive theories that postulate two levels of human cognition. These include the interacting cognitive subsystems cognitive architecture which has been applied to religion and spirituality by Fraser Watts (2017) and John Teasdale (2022).

Religious practitioners are sometimes resistant to the idea that mystical consciousness is shaped by human processes. However, there seems no good theological reason to resist the idea; the belief that there is a transcendent God whose presence is experienced in mystical consciousness is not necessarily linked to the idea that there is a direct relationship between the supernatural mind and the human mind. In most faith traditions, it would be assumed that both the material-created order (including the physical brain) and human society arise from a transcendent creator, and that the experience of that creator is mediated through material and social aspects of the created order.

The Need for Taxonomies

The psychology of religion and spirituality of the last few decades has been marked by a growing awareness of the complexity of the phenomena being investigated. In the first half of the 20th century, there was still much interest in the most general question of all, “Why are people religious?” That question has largely been abandoned. (The main current exception is the neuropsychological hypothesis that people are religious because they are “hardwired” for religion, though that is an idea that makes little connection with the kind of empirical data psychologists of religion are largely concerned with.) Broad, general questions have given way to a concern with taxonomies and moderator variables.

Not all religious people are the same; you cannot generalize about them. In fact, they are so diverse that there is little chance of making headway with any questions in the psychology of religion unless we distinguish different kinds of religious people. Gordon Allport (1950) drew an early and very influential distinction between intrinsic and extrinsic kinds of religious people (intrinsic are people for whom religion is the master motive in their lives; extrinsic are people for whom the attraction of religion lies more in its indirect consequences). The salutary discovery was that these two kinds of religious people differed from nonreligious people in opposite directions. Though the empirical literature is complex and untidy (see Batson & Ventis, 1982), the tendency is for intrinsic religious people to have unusually low levels of social prejudice, and for extrinsic religious people to have unusually high levels. In parallel, intrinsic religious people tend to have unusually good mental health, whereas extrinsic people tend to have poor mental health. With such diversity among religious people, how can psychology possibly generalize about them? Some versions of the intrinsic–extrinsic distinction have also distinguished a “quest” type of spiritual seekers who mostly seem to be young (Batson & Ventis, 1982). In some ways, they seem a precursor of people who might now be called SBNR.

Taxonomies are clearly essential in the psychology of religion. Good taxonomies are enormously helpful, but there are an infinite number of possible taxonomies, and not all are equally helpful. We need to be discriminating about taxonomies, and we need to seek as much consensus as possible about a limited number of them.

I suggest that there are four main criteria for a good taxonomy in the psychology of religion. First, the way people are allocated must be reliable, whatever the methodology used. If it is a questionnaire, we need good test–retest reliability. If people are allocated on the basis of interviews, we need good interrater agreement. Second, the different categories should be as homogeneous as possible; there is little to be gained from subdividing people into types if some of the so-called types are really a ragbag of very different kinds. (That is a point on which the category of “intrinsic” religiousness has not fared too well.) Third, we need the different categories to be associated with differences on a reasonably broad range of measures. It is one of the good features of the intrinsic/extrinsic distinction that it does indeed map on to a broad range of differences. Fourth, we need substantial and significant differences between the categories; there is little to be gained from dividing people if the resulting subgroups are barely distinguishable from one another.

It is not only taxonomies of people that we need; we also need taxonomies of phenomena. There are many religious phenomena that need to be subdivided before we can hope to get good answers to questions about who engages in them and what effects they have. For example, there is no point in asking what kinds of people are likely to have a conversion experience when conversion types are so different from one another. The distinction between sudden and gradual conversion types is over a century old and still useful. Sudden and gradual conversion types differ in a broad range of ways such as age, religious outlook, social attitudes, and so on.

However, there are many other religious phenomena for which we do not have a good taxonomy. For example, there is an extensive body of research on glossolalia, such as what kinds of religious people are likely to engage in it (Malony & Lovekin, 1985). However, research has not made as much headway as it might, and, on many measures, there may be nothing distinctive about glossolalics. Alternatively, it may be the case that there are different kinds of glossolalia, and that the people engaging in them are very different from one another. If so, we will not get clear results until we have a good taxonomy of different kinds of glossolalia. There are some promising distinctions in the literature, such as that between “serious” and “playful” glossolalia, but we do not yet know how best to subdivide people who engage in this particular religious activity. The same is true of many religious phenomena.

Data: Beyond the Questionnaire

In recent decades, the psychology of religion and spirituality has made significant strides in broadening its range of data. However, more needs to be done in this direction. Probably the most used methodological tool in the psychology of religion so far has been

the questionnaire, and we have developed an impressive body of questionnaires measuring many different aspects of religion (Hill & Hood, 1999). Many have good psychometric properties or at least good reliability.

However, there are significant limitations in questionnaire methodology. One key problem is validity. It is often hard to find good external criteria against which questionnaires can be validated. Despite the best efforts of careful researchers, we often do not know exactly what particular questionnaires are measuring (in the sense of knowing what determines variance in responses to the questionnaire). Too often, questionnaires are given labels that reflect what they were intended to measure, or what they appear at face value to be measuring, in the absence of data to demonstrate that that is what they do actually measure. Thus, they are of limited value if, as is often the case, we do not know for sure exactly what they are measuring.

There are also pitfalls in summing responses to different questions to produce an overall score for a scale as a whole. Summation has the advantage of producing scores that are more stable and reliable than responses to individual questions, but there are also disadvantages in the summation method. It is usually the case that a relatively small amount of the variance in responses to each question is determined by variance that is common to all the questions on a scale. Also, common variance may not be what is of most psychological interest; it may sometimes be responses to individual questions that are most illuminating. The reliability that results from summing responses to different questions to form an overall scale has disadvantages as well as advantages.

Questionnaires are usually affected by response sets, such as social desirability bias. If so, how people respond to a questionnaire will be affected by what responses they assume will present them in the best light. If religiousness is thought to be desirable, people will present themselves as more religious than they actually are. Also, for some aspects of religiousness (such as a concept of God), there may be a discrepancy between consciously held concepts and more latent, implicit ones. What people think they believe about God (and say they believe) may be discrepant from their more deeply held, implicit assumptions about God. A distinction between two such levels of cognition has been made in many contexts in recent psychology and has also been applied to the psychology of religion. It is a distinction that can be characterized in nontechnical language as one between “head” knowledge and “heart” knowledge (Watts, 2013). Questionnaires systematically tap into “head” knowledge and give a little indication of what “heart”-level concepts people may have.

I do not want to underestimate the huge contribution that questionnaires have made to the psychology of religion. Of course, their contribution has been massive. They are useful not only as measurement tools; the factorial structure of a questionnaire is often of considerable theoretical interest. For example, as already indicated, the factorial structure of items in Ralph Hood’s mysticism questionnaire sheds light on the fundamental nature of a mystical experience.

However, as valuable as questionnaires have been, I want to suggest that the psychology of religion would benefit in future from being less exclusively dependent on them. There are two directions in which it would be useful to broaden research, and, though they may seem to be opposite, I believe both have a valuable contribution to make. On the one hand, there is a need for more objective, laboratory methods. On the other, there is a place for a broader range of qualitative and self-report measures.

The laboratory approach that is currently arousing the most interest is the use of brain scanning while people are engaged in religious practices. However, there are many problems with such an approach that should make us cautious. Because the research is so expensive, the sample of subjects is often very small. Also, there are often considerable individual differences from one subject to another. The range of religious practices that can be studied in this way is very limited, and the context is highly artificial, with the result that the data may be atypical. However, the main problem relates to the interpretation of the results. It is of little interest to know which area of the brain is associated with particular religious tasks unless we also know the function and significance of the area of brain involved. Too often, in reports of scanning studies, claims are made about the significance of the brain area concerned that rely simply on the authority of the investigator but have no other scientific basis.

An attempt has been made to introduce into the psychology of religion the kind of experimental tasks that have been the mainstay of experimental cognitive psychology for several decades, where the standard way of investigating attention, memory, and so on, has been to give people tasks from which inferences can be made (Jong, 2023). Use of such a methodology in the psychology of religion is still in its infancy. However, there are experimental tasks that provide interesting measures of religiousness (see Barrett & Keil, 1996). What remains to be explored is whether they have any advantages. For example, the fact that they are less subject to social desirability effects might lead them to have better predictive power than self-report methods.

Qualitative Data, First-Person Accounts, and Constructionism

Psychology, generally, has had a difficult relationship with qualitative methods. Opinions have tended to polarize, with some people having a strong ideological commitment to such methods and others disparaging them. I suggest that the psychology of religion and spirituality should avoid both extremes and simply make judicious use of qualitative methods alongside other methodologies. Polarized views about qualitative methods arise, in part, from exaggerating the difference between quantitative and qualitative methods. Summaries of qualitative data often involve statements to the effect that there is more of one thing than another. Wherever such comparisons are made, there is no reason in principle why they should not be made in numerical form.

There is now a range of qualitative methods available, many of which are regularly used in other areas of psychology (e.g., clinical psychology) (Good & Watts, 1996). These

include, for example, discourse analysis, account analysis, and case-study methodology. As with any other research methods, it is always helpful to be clear about exactly what method is being used and why. The main thing that is needed, if qualitative research is to be fruitful, is a rigorous way of analyzing the data. The value of qualitative research has recently been enhanced by growing sophistication in methods of qualitative data analysis, which are now increasingly available in computerized form. Sadly, qualitative research in the psychology of religion is all too often undertaken with little idea of how the data will be analyzed or what conclusions it might lead to.

There has recently been an increasing enthusiasm for “grounded theory” methods among qualitative researchers. It is one of the distinctive features of the grounded theory approach that it avoids formulating hypotheses before analyzing the data. However, it is important to note that not all qualitative methods need to avoid hypotheses. Indeed, it is often difficult to reach significant generalizations on the basis of qualitative research without formulating hypotheses at some stage. There is much to be said for a two-stage methodology in which, in the first stage, data are analyzed without prior hypotheses. However, that analysis can be used to generate hypotheses that are then tested in a phase of hypothesis-driven research. It is obviously possible to have more confidence in conclusions that are confirmed in a hypothesis-testing stage than in conclusions reached without prior hypotheses from a single data set.

One important advantage of qualitative methods is perhaps that they allow a place for a first-person perspective. Psychology has mostly been heavily committed to a third-person, objectivizing perspective. However, it can be illuminating for that perspective to be augmented by a first-person narrative about religious beliefs, experiences, and practices, focusing on the perspective of the person concerned. There are strands within social psychology that have been greatly influenced by postmodern philosophy and have developed a critique of the objectifying style of psychology that often leaves no room for a first-person perspective. The postmodern claim is that people can only know something by engaging with it in a participatory way, and that they mislead themselves if they imagine that they can understand anything by being as detached from it as possible, or even if they imagine that such detachment is actually possible. Here again, I would advise against extremism and suggest that first-person approaches can make a useful contribution to the psychology of religion, but so can more traditional, “objective” methodologies.

This leads to another debate that has often become overpolarized (like the debate between qualitative and quantitative methods). I suggest that there are strengths and weaknesses in both objective and personal-perspective methodologies. There is nothing incompatible between them, and no reason why they should not be used in conjunction with one another. It would be too extreme to suggest that psychology should abandon objectifying methods in favor of first-person narratives, but to use the two approaches in conjunction with each other can be very illuminating.

A related critical perspective comes from social constructionism. Here it is important to distinguish a moderate form of social construction that recognizes that people's concepts about religion (and everything else) are influenced by the social, cultural, and linguistic context in which they occur. That is a limited point but, as far as it goes, it seems obviously correct. It is a very different matter to maintain a strong, reductionist form of constructionism (sometimes called constructivism) that is inclined to suggest that people's concepts are nothing but social constructions and have no other reality.

Applying that distinction to religious beliefs, it is one thing to claim that people's concepts of God are influenced by their social and cultural context. That is hard to dispute. It is quite another matter to claim that people's concepts of God reflect nothing but prevailing social assumptions. That implies that the belief that there is a "real" God must be invalid. That is the kind of conclusion that neither psychology nor social theory is entitled to draw.

The Perspective of Religious and Spiritual Practitioners

It is helpful for the study of religion and spirituality to take a serious interest in the perspectives of practitioners, not just as something to be studied but as something that can shed light on religion and spirituality. That brings it into connection with theology and other areas of religious studies. In my own work, I have tried to hold together contributions to the psychological study of religion (Watts, 2014) with work bringing religious and psychological thought into dialogue with each other (e.g., Watts, 2002, 2010). The link with theology can be seen as a natural extension of concern for the first-person perspective. In studying any phenomenon, it makes sense to take into account some of the perspectives of those engaged in it.

Religious practitioners often make assumptions that go beyond the reach of the scientific study of religion. In particular, religious practitioners usually assume the activity and presence of God; the psychology of religion cannot, in principle, confirm or disconfirm that assumption. It is a subtle matter whether and how empirical data relate to the assumptions of theism. I suggest that there is a helpful analogy between a scientific paradigm and theism (see Barbour, 1974). There are various assumptions about the empirical status of paradigms. However, the most persuasive view is that (a) there is no direct way in which data can prove or disprove paradigmatic assumptions, but that (b) in the long run, data can render paradigmatic assumptions more or less plausible. I suggest that the same is true of theism. In one sense, theism, like a scientific paradigm, is conjectural. However, it is a rationally motivated conjecture, and its possibility is affected by empirical considerations.

So, the psychology of religion and spirituality has provided several lines of data that are consistent with the assumptions of theism, and which render theism more plausible than it might otherwise be, even though they do not provide a logical argument in favor of theism. The frequency of powerful, spontaneous religious experience, the psychological benefits of prayer and religious coping mechanisms, and the propensity of young children

to think in terms of supernatural agents are all what you might expect according to theistic assumptions. However, they don't prove those assumptions correct and can be explained without them. To put it another way, the psychology of religion provides a rich data set on which a "natural theology" can be built, provided it is recognized that the data are merely suggestive and not the basis of a conclusive argument. Natural theology has traditionally been approached philosophically, but it can also be approached from the perspective of cognitive science, as DeCruz and DeSmedt (2015) did, exploring the cognitive mindset that underlies the assumptions of natural theology.

At other points, the empirical data yielded by the psychology of religion suggest refinements to the assumptions of religious practitioners. For example, in studying glossolalia, it makes sense to bring the beliefs and attitudes of those practicing it into a dialogue with the objectifying approaches and methodologies characteristics of the natural sciences. Religious people who speak in tongues usually assume that it reflects the work of the Holy Spirit. Like general theistic assumptions, that is not proved or disproved by the scientific data. The empirical fact that speaking in tongues is associated with psychological benefits is at least consistent with it. However, in my view, scientific research on glossolalia certainly does challenge the assumption that people who speak in tongues are miraculously speaking a genuine language with which they have had no previous acquaintance. For example, it does not have the rhythmic structure of language (Samarin, 1972). Accepting that point does not justify the further conclusion the speaking in tongues is not, in some sense, inspired by the Holy Spirit, and of spiritual benefit and significance. That may still be the case, but it means that speaking in tongues should be seen as some kind of general "ecstatic utterance" rather than a normal language. This illustrates how a constructive dialogue between psychology and religion might lead to a refinement of the assumptions of religious practitioners.

Another very different point of intersection between the psychology of religion and theology arises from the fact that theological reflection can be treated as a data set that can be studied by psychological methods. There is now a substantial body of work (Ellens & Rollins, 2004) studying scriptural texts from a psychological point of view (see Rollins & Kille, 2007), and similar methods can be extended to other historical theological texts. Also, the evolution of theological ideas can be treated as a form of cultural evolution and studied from the perspective of evolutionary psychology. Yet another methodology is to study analogies and correspondence between psychological theories and theological ideas. This has probably been used most extensively in Jungian psychology but is not in principle confined to it. For example, the concept of individuation seems to have parallels in various theological ideas such as sanctification.

It is also potentially fruitful for the psychology of religion to have contact with other aspects of religious studies, especially the sociology of religion. The distinction between psychology and sociology is, to some extent, an artificial one. Religion cannot be studied satisfactorily from either a purely individual perspective or a purely social perspective. In

fact, both disciplines concern themselves with the interaction between individual and society in religion. That is a feature of the social psychology of religion in the discipline of psychology, and part of “social interactionism” within the discipline of sociology. One problem in developing a more fruitful interaction between the psychology and sociology of religion is that sociology is sometimes less empirical than psychology. It will be the more empirical aspects of the sociology of religion that will most fruitfully be brought in to dialogue with the psychology of religion.

Links With General Psychology

The psychology of religion and spirituality is now much less central to the discipline than it was early in the 20th century. It has become a specialized area that a relatively small proportion of psychologists know about. However, if it is not to be a completely isolated part of the discipline, it is important for it to maintain close links with the general body of psychological theory and research. It is an encouraging feature of contemporary psychology of religion that such links are now developing. A notable example is that of Saraglou (2014), who took the standard topics used in the study of personality and social behavior and used them as a framework for the psychology of religion.

The majority of psychologists who do research on religion have other psychological research interests as well. That is partly a consequence of the fact that there are very few specialist posts in the psychology of religion. Most people who work in the field teach psychology more broadly, even if their research is largely focused on the psychology of religion. Some psychologists of religion have posts in religion or theology departments, rather than psychology departments; they risk becoming more isolated from mainstream psychology, but they are probably a minority. Most of those working on the psychology of religion and spirituality have posts in personality and social psychology in departments of psychology.

Another important issue in determining the relation of psychology of religion and spirituality to the discipline as a whole is where research and theory on religion and spirituality is published. There is a growing range of specialized journals, including the *International Journal for the Psychology of Religion*, the *Archive for the Psychology of Religion*, and more recently the APA's *Psychology of Religion and Spirituality*. There are also confessional journals such as the *Journal of Psychology and Theology* and the *Journal of Psychology and Christianity*, and journals devoted to spirituality such as the *Journal for the Study of Spirituality* and *Studies in Spirituality*. Specialized journals help the psychology of religion to develop identity and coherence, and papers published in such journals are likely to be read by a good number of people in the field. The downside is that they will probably only be read by psychologists who specialize in religion; that tends to keep the psychology of religion isolated from the rest of the discipline. From that point of view, it is helpful for at least some papers in the field to be published in mainstream psychology journals, and there is a growing trend in that direction.

I suggest that the psychology of religion and spirituality benefits from having close links with other areas of general psychology, and that two-way links are desirable. Research in the psychology of religion can benefit from close connections with theories and methods in most areas of mainstream psychology. Equally, the psychology of religion provides an interesting and valuable field of applied psychology in which it would be beneficial to test a wide range of theories from mainstream psychology.

Strengthening links between general psychology and the psychology of religion and spirituality is more complex than it might first appear, partly because of the range and diversity of psychology itself. Psychology is partly a biological science and partly a social science, and the assumptions and methods of those two areas of psychology are very different from one another. There have been few attempts to integrate biological and social areas of psychology, and, for the most part, they remain very separate from one another. Biological psychologists know little about social psychology, and vice versa.

Despite that, I would argue that there is a strong case for psychologists trying to hold their discipline together (see Watts, 1992). Humans are both biological and social creatures, and any comprehensive understanding of human nature needs to take biological and social aspects into account. If disciplines such as psychology abandon the attempt to integrate their disparate wings, we would effectively be giving up on the attempt to develop a broad, comprehensive, systematic understanding of human nature. Religion is itself a phenomenon that needs to be understood from different perspectives, including the biological and the social. There is increasing interest in the suggestions that there is an evolutionary predisposition to religiousness (see Kirkpatrick, 2005), that religion is essentially embodied (Watts, 2021), and that the brain is hardwired for religion (see Newberg et al., 2002). Yet it is also undeniable that religious activity takes culturally specific forms and is itself a social activity.

One of the conceptual issues this raises is whether any aspect of religion should be regarded as primary, from a causal point of view. There is always a tendency in biological psychology to assume that biological levels of explanation are foundational to everything else. However, even though biological life is obviously essential to human existence, that need not necessarily be accompanied by biological reductionism. It is a coherent alternative, for example, to espouse some kind of emergentism (Clayton & Davies, 2006) or nonreductive physicalism (Brown et al., 1998), in which nonbiological aspects of religious life are seen as emerging from the biological but are not reducible to it. Once nonbiological aspects of religious life have emerged, they take on their own forms. It is best to think about human nature in systemic terms, such that each aspect of human life is seen as being influenced by, and in turn influencing, all others.

There is a somewhat parallel issue about the relationship between individual and social aspects of religion, and which should be regarded as “primary.” In defining religious experience, William James (2002) focused on the experience of “individual men in their solitude”; it is a long-standing criticism of William James that he ignored the social context out of which religious experience arose, and assumed that the individual

was primary (see Lash, 1990). Some of these criticisms seem overdone and may lead to the other extreme of assuming that society is primary and the individual secondary. Here, too, I would recommend a systemic approach in which the concept of “primacy” is discarded. It seems clear that the religiousness of an individual is influenced by society, and also that the religious culture of a society is influenced by particular individuals within it. Influences in both directions should be recognized, and there is no reason to prioritize one over the other.

It is one of the attractive features of religion as a psychological topic that it integrates different features of general psychology as Saroglou (2014) showed. For example, religious development connects with general developmental and life span psychology; the psychology of religious organizations such as churches connects with general organizational psychology; the study of group processes in religion connects with the general study of group processes; and the study of cultural differences in psychological functioning connects with cultural psychology. The study of individual differences in religion connects with the broader study of personality in various ways: basic personality differences, such as the “Big Five” dimensions, affect how people are religious. The study of relationships with God connects with the general study of relationships, including attachment processes. The study of religious coping mechanisms connects with the general study of coping processes, while the study of emotions in religion (e.g., anger) connects with the general study of emotion (Watts, 2007). The study of the evolution of religion connects with evolutionary psychology, and the study of brain processes in religious practices (such as meditation) connects with neuropsychology. And so on.

Considerable progress has been made in establishing these connections. However, it is also apparent that some connections are stronger than others, and that explicit connections with some particular areas of general psychology largely remain to be developed. At present, the psychology of religion has its closest connections with personality and social psychology. The growing wave of activity in psychology and religion since 1970 has coincided with the growth of cognitive psychology, which has increasingly become the dominant theoretical language of contemporary psychology. It is arguable that the psychology of religion would benefit from closer links with cognitive psychology.

The most conspicuous deficiency in contemporary psychology of religion is a body of good and fruitful theory. It is probably fair to say that a relatively small proportion of research in the psychology of religion is driven by theory, and there is a conspicuous dearth of broadly applicable theories in contemporary psychology of religion. I have argued elsewhere that dual-level theories of cognitive processes have broad application in the psychology of religion (F. Watts, 2013, 2017). At many points, the distinction between experiential and cognitive aspects of religion proves useful. For example, experiential aspects seem to develop earlier in children than cognitive ones. Two-factor theory is also useful in understanding the focus of religion at different stages of human evolution and the role in religion of the two hemispheres of the brain. There is probably no

more pressing need in the psychology of religion and spirituality than the need for better theory. Nothing would do more to strengthen the links between general psychology and the psychology of religion.

Applications

So far, the psychology of religion and spirituality has been largely concerned with basic issues, such as trying to understand what sorts of people engage in particular forms of religion, what conditions particular forms of religion arise in, what effects they have, and so on. Those are the kind of basic questions that any area of psychology needs to address. However, there is potentially a wide range of practical applications of the psychology of religion that also merit attention. They have not yet been as fully developed as they might be, but it is likely that the 21st century will see a growing body of applied work on the psychology of religion and spirituality. Broadening the focus to include spirituality has been helpful, as there is much wider recognition of the relevance of spirituality than of religion to counseling and psychotherapy (Pargament, 2007).

However, many areas of general psychology are relevant to the psychology of religion and spirituality (Watts et al., 2002). For example, a body of work could be developed on the interface of educational psychology and the psychology of religion, concerned with the educational work of churches and faith communities. Also, a richer occupational psychology could be developed of ministers and other religious professionals, concerned with their selection, continuing professional development, personal problems, and so on. There could be a richer organizational psychology concerned with religious institutions and structures and the particular ways in which they function. In each of these areas, there is groundwork to build on, but much more could be developed.

In the applied psychology of religion and spirituality there is an important distinction to be drawn between healthy and unhealthy forms of religion (see Watts et al., 2002). One strand of the applied psychology of religion will be concerned about facilitating the work of healthy religious processes and institutions. Another strand will be concerned about addressing dysfunctionality within religious institutions and, at the extreme, helping to protect people from damaging and intrusive forms of religion. For example, religions are prone to give rise to intense forms of conflict, and that seems likely to reflect the fact that strongly felt issues of principle are involved. Psychology can contribute to conflict resolution in many different settings, including religious institutions. One dangerous form of religion about which there is particular concern at present is the radicalization of young Muslims. It seems likely that there are patterns of thinking that make people vulnerable to such radicalization, and it is possible to develop educational programs targeted at correcting that vulnerability (Savage, 2013).

These are only examples of the broad range of applications of the psychology of religion that have the potential to be developed. As the psychology of religion moves into a more practical, applied phase, it is important that there should continue to be close links

with research. Indeed, in all areas of psychology, some of the most fruitful theoretical developments have arisen from tackling applied problems. So, there is no reason why an applied psychology of religion should not make a substantial and important contribution to the research literature. The basic principles that should guide applied work, here as in other areas of psychology, are that all interventions should arise from a research-based theoretical understanding of the problem that is being addressed and should also be evaluated by research and refined with rigorous evaluation.

Conclusion

The psychology of religion has made considerable strides since it regained momentum in the latter part of the 20th century, including broadening its scope to include the psychology of spirituality. However, it faces a number of challenges. If it is to fulfill its potential, it is recommended that it should

- broaden the range of religious phenomena that are studied, especially developing the study of the practices, experiences, and views of those who are “spiritual but not religious”;
- find better ways of classifying the phenomena it studies;
- expand the range of data it uses;
- take into account the perspective of religious and spiritual practitioners;
- strengthen links with general psychology; and
- develop a stronger tradition of applied research.

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Progress in Physics and Psychological Science Affects the Psychology of Religion and Spirituality

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Abstract

This chapter argues that general culture is strongly influenced by three assumptions that have derived from modern science. These include the following: (1) big numbers in time and space make anything thought to be statistically possible to eventually be thought of as likely; (2) optimism that this will eventuate in progress; and (3) life is all about relationships. The main implication of these assumptions is that the psychology of religion will soon become the psychology of religion and spirituality. Based on a review of quantum mechanics and cosmology (with brief forays into biology and psychology), there are five types of spirituality: (a) religious spirituality, (b) human spirituality, (c) nature or environment spirituality, (d) cosmos spirituality (or transcendent spirituality), and (e) self-spirituality. Each of these is defined in terms of close or intimate connection or relationship with a different object, and each has been formed primarily by the wonder, awe, and lack of determinancy found in different fields of study— theology, psychological science, biological science, and physics, respectively—and life being fundamentally probabilistic at the core. The chapter speculates on the future of the field of psychology of religion and spirituality, identifying four points: there is still room for new researchers, the field is increasingly relational, it is probabilistic, and it will still have room for religion.

Key Words: religion, spirituality, physics, neuroscience, psychology, optimism, consciousness

Introduction

This chapter addresses the following questions. What is spirituality? Why has it replaced (or supplemented) religion as being of interest to some people in many cultures—not the least of which is the subculture of scientists studying the psychology of religion and spirituality? And what is the future of the psychology of religion—does it include a psychology of spirituality?

My answers to those questions are obviously more complex than can be unambiguously addressed in a single chapter. My theme is this: the transformation of the psychology of religion into the psychology of religion and spirituality is directly traceable to the macro-lessons learned from physics and trickle-down effects into psychological science, religion, and culture. A parallel discourse could have dealt with biology in addition to

physics, but I did not focus on it within this chapter although I do mention it briefly. There are four relevant macro-lessons from physics: (1) life is probabilistic at root; (2) big numbers make uncertainties seem likely; (3) optimism about scientific progress generalizes to optimism about life; and (4) physics is about relationships. Understanding those four lessons from physics can help us gain perspective on the recent transformations in and the future of the psychology of religion and spirituality and to see it within a cultural context. However, science–religion dialogues have progressed in the last decade. Here and later in this chapter, I draw on some cogent arguments from Stephen Bahr, a physicist and a philosopher of science and religion. Bahr argues that discoveries from modern physics have undermined a materialistic view of the world and led to more support for a dualistic view. Having written the first draft of this chapter in 2010, I took my conclusions seriously, and articulated an approach to psychology and theology that is rooted in relational spirituality (Worthington, 2010). I later applied it in a book titled *Forgiveness and Spirituality in Psychotherapy: A Relational Approach* (Worthington & Sandage, 2016), which begins to work out some of the implications of the notion of relational spirituality as applied in subdisciplines of psychology. In so doing, I speculate briefly on the development of psychological science in relationship to the level of development of physics. The bottom line in those speculations is that progress in science has typically involved unification of basic ideas into a more comprehensive idea, and psychological science is talking about unification (Miłkowski & Hohol, 2021), but little progress toward unification has yet been experienced. Obviously, this chapter does not focus on reviewing research on psychology (although one section summarizes some major breakthroughs), but it looks instead to physics (and mentions parallels in biology) to attempt to shed some light on the psychology of religion and spirituality.

If you are hesitating to continue reading because you are not a particle or cosmological physicist, rest assured that I will deal with the technicalities of physics only at a general conceptual (and not mathematical) level. Regardless of whether you have technical expertise as a physicist, this chapter can still inform (and I hope stimulate) you.

Interesting Finding

We begin with an amazing finding. In the 2000 census in England, about 390,000 people identified their religion as Jedi (remember the movies in the two *Star Wars* trilogies). In Australia, 79,000 wrote in Jedi as their religion. In New Zealand, 58,000 Jedis forced their way (sheepishly) into the census. In Canada, 20,000 Jedi knights unsheathed their light sabers on the census takers. How did this happen, and what does it represent?

In contemporary culture, science fiction seems to have become intermixed with religion. How? Let us reflect on *Star Wars* as an illustration of how this occurs.

In the first *Star Wars* trilogy, Luke Skywalker and Han Solo struggle to save the Federation from the Emperor and his henchman, Darth Vader. (Importantly, there is a cooperative federation of life from various sources within the multiverse.) In the climactic

third movie, Jedi knight Luke Skywalker battles the Emperor spiritually by engaging in a physical fight with Darth Vader. Vader was Luke's father and previously a Jedi knight, but he was corrupted by the dark side of the Force. Luke wins his father back to the Light Side of the Force through love. Destruction-oriented anger is Luke's enemy. When anger is exercised, the dark side gains ground. Importantly, although the spiritual battle is going on between Luke and the Emperor, Han Solo is fighting a battle of flesh and blood (aided by the unlikely personalized Ewoks) against the anonymous depersonalized storm troopers and machines on the nearby planet, Endor. Thus, the movie is a parable in which there are simultaneously parallel battles being waged in the realms of human flesh and transcendent spirit. Both battles must be won for the light side of the Force to prevail. Spiritual life and physical life are open systems, and the information in each feeds into the other.

Themes in Science Fiction

One unified message of science fiction is this: life out there exists and has evolved to parallel human life. If we can find the beneficial communities and learn from them and not be destroyed by hostile communities, then life all over creation will be better off. Life, then, is seen as an open system that can be enriched through flow from another system.

Second, science fiction experiences are often myths of human connection versus technological depersonalization, good versus evil, justice versus injustice, and human redemption versus sinfulness. These myths are similar to the themes at the center of world religions. Science fiction, of course, is not science and not religion. It is a combination of popular science and cultural narrative that often deals with the same questions that both religion and science deals with. As such, it provides an on ramp into the interaction of science with religion and spirituality—again, two systems that can and do interact. In the general population, which sets the stage for a science of religion and spirituality because these views are commonly held by research participants, there is a sense that, more and more frequently, an assumption deriving from science—which I will call *the optimistic “law” of big numbers*—provides a basis for many people's spirituality. Let's examine this assumption.

Science Fiction and the Optimistic “Law” of Big Numbers

Scientists strive to make assumptions explicit. Sometimes, however, assumptions are so pervasive that scientists take them for granted. That is true as well in other fields.

An Assumed “Law” of Nature

Science fiction regularly assumes that existence derives from evolutionary theory. This assumption has become so widely accepted that it is not usually recognized as an assumption. It is taken as a law of nature based on quantum physics. The “law” is this: *life is all about big numbers and possibilities; if the numbers are big enough, possibilities can be probabilities; if the numbers are even bigger, possibilities can be likelihoods.*

Thus, the reasoning goes, if something has the remotest possibility of ever occurring, with enough trials, it will inevitably occur. Several corollaries follow this “law” of big numbers. The corollaries lead reasoning along a road that can suggest more emphasis on spirituality. This flow of logic is not inevitable, but, I submit, it has frequently been embraced, leading to an enhanced sense of spiritual existence. Let’s examine these corollaries.

Corollary #1: The cosmos is so large and adaptation is such a ubiquitous principle that there is a likelihood of life on other planets.

Life requires chemicals, energy, and water. All that we know suggests that chemicals are widely scattered from exploding burned-out stars, although distributed in local “communities” instead of being evenly distributed. Energy is available from stars, black holes, and dark matter. It is also available from geothermal energy in the core of many planets, making an energy source not strictly dependent on a planet’s surface interaction with its nearest star(s). (Some scientists now believe that life on Earth actually began deep in the ocean near geothermal vents and was not empowered by our sun within surface pools of water.) Water exists in various places even in our little solar system (e.g., at the polar caps on the moon, in the past on Mars [though surface water seems to have evaporated], in a large moon of Jupiter, etc.), so water likely exists in many places throughout the cosmos. Thus, with chemicals, energy, and water available at billions and billions (I couldn’t resist making reference to Carl Sagan’s tag line) of sites, then chances are high that life has formed or can form in other places than on Earth.

Corollary #2: There is a distinct possibility that such life will be intelligent. Steven J. Dick (1996) suggested that planetary systems are common. Life originates where conditions are favorable. Evolution culminates in life, and life evolves toward its culmination in intelligence.

From our point of view as humans, intelligence appears to offer huge adaptive advantage. Life requires the transmission of information (at a minimum, generational genetic information), and intelligence seems to be the most efficient way we can imagine of transmitting information. Hence, we assume life progresses toward intelligence as it unfolds. Thus, we conclude that more highly evolved life is likely to be more intelligent than human life.

Corollary #3: Extraterrestrial life—at least in some localities, given big enough numbers—will both (a) attend to people and (b) care about people.

We may also assume that 100% aggressive and competitive life cannot thrive. According to the logic of evolution, some reconciliative mechanisms must evolve to balance the competitive pressures (Kirkpatrick, 2005; McCullough, 2008). If those affiliative mechanisms exist, the assumption goes, those affiliative mechanisms must result in some places that might be benevolent toward outgroup members. That is, there is a possibility that intelligent life can see benefits in befriending outgroup members. If there is a possibility, then with enough big numbers, such life must inevitably occur.

Corollary #4: Given large enough numbers, extraterrestrials somewhere must want to make contact with Earth, interact peacefully (like benevolent extraterrestrials in *Close Encounters of a Third Kind* or *E.T.*, rather than hostile invading extraterrestrials in *War of the Worlds*), and if contact is made, people will survive, thrive, and be better. This is based on an assumption that benevolent extraterrestrials will want to extend friendship and benevolence to outgroups. The optimistic belief is that different cultures can enrich each other by sharing resources to deal with each other's deficiencies.

Analysis

These are *optimistic* assumptions at almost every point. I am frankly skeptical of the optimism. The assumptions represent modernity with its general assumption of progress and postmodernity with its belief in and value on relationship. (Not importantly, but tellingly, the belief that if it is possible it will eventually occur is a misreading of quantum physics in which some states are imaginable, but they simply are not possible.) The optimistic assumption of progress encourages many people to favor space exploration, hoping for optimistic outcomes. And the relational assumption, that reality is defined relationally, suggests that meetings with extraterrestrials would open new relational possibilities.

At first blush, the "law" that life is all about big numbers might suggest a sense of hope and connection. We might be tempted to conclude that we can find meaning and salvation from our humdrum existence through yielding to the authority of science and trusting to the "law" of big numbers and to the hoped-for benevolence of other cultures.

I am not suggesting that we should care that much about science fiction. (I happen to enjoy it in limited doses, but that is beside the point.) I am suggesting, rather, that the popularity of science fiction in common culture is an indication of the way many people in our culture think: Big numbers and optimism about spiritual encounters will lead to beneficial effects for humanity. (This optimism exists even as many people reject traditional religions and other people are caught up in fervent adherence to traditional religions.)

Let's analyze this mindset. James A. Herrick (2008), professor of communication at Hope College, a historically Christian university, has analyzed the mythologies represented by the Jedi findings in the census of 2000:

For centuries, Christianity has provided the Western world with a coherent narrative . . . [F]or more than three centuries we have been in the process of slowly dismantling and discarding traditional religious narratives . . . In their place we have constructed a new set of myths transforming science into a spiritual project serving a vision of the future, suggesting that questionable benefits will arise from our involvement with unseen intelligences from other planets or dimensions or times, and even rendering the life of the individual person as inconsequential step along the way to something better. (p. 38)

Second, an optimistic outcome of the law of big numbers is not necessarily a foregone conclusion. In fact, in distinction to the reasoning that says that with big enough numbers, we can inevitably expect a benevolent connection with extraterrestrial life, we must face the consequence of being wrong. We might observe that pessimistic assumptions that favor isolationism and separatism are just as likely to be shown veridical, but they are not favored by modernity. Other assumptions—that even among other extraterrestrial cultures, those beings might not want to be in contact with us anyway—are also possible, but they are generally looked down on by postmodernity, which has a largely relational view of existence.

The chances of meeting a benevolent extraterrestrial culture are *at best* 50-50. If we assume that it is possible that hostile-competitive and benevolent extraterrestrial cultures exist in about equal numbers, the chances of meeting each type *first* is at best 50-50. It might be only the first contact that is determinative—especially if the culture is hostile-aggressive—like the *War of the Worlds* marauders. There are no big numbers at work here. Even if all the assumptions of the “law” and the first three corollaries hold (and that is a *big* if), the first extraterrestrial culture we meet will be benevolent, hostile, or mixed. Our chances are at best 50-50. They are *far* less if we figure in the probabilities in supporting the law and all of the corollaries. They are even distantly less when we consider that evolutionary theory probably would predict that most outgroup relations will be more competitive than cooperative (with reconciliative mechanisms usually limited to ingroup relations). Thus, the beginning guess—that it might be a 50-50 probability between first contact of a benevolent compared to a hostile society—is highly unlikely. I am tempted to observe that betting on a benevolent first contact seems to be a bad bet.

Where Did the “Law” of Big Numbers Come From?

Religion is vibrant worldwide, but in many scientific countries, it is being replaced by spirituality. Why? The answers are multifaceted, but I will suggest four. First, the populations of the most developed countries are aging, resulting in more people who are approaching their end of life and looking for transcendent meaning. Second, in the minds of many, religion has fallen short of its promise of a meaningful narrative within this modern culture. Third, science has provided a positive, optimistic narrative. Fourth, technological developments, especially in communication and transportation, have placed people in contact worldwide and provided a sense of interconnectivity, connection, and intimacy—the essence of spirituality. Taken together, these four trends have stimulated many people to look beyond religion for a needed sense of connection to things transcendent.

AGING WORLD POPULATION

Aging elders and their aging caretakers confront the decay of body and mind. Overall, life can look grim as we approach death and deal with bodily degeneration. However, the human spirit needs hope. To meet this existential need, humans search for meaning.

There is a particular need for optimistic causes. People have found these in issues like enthusiasm over saving the planet, early postelection Obamamania, volunteerism, gains in social justice, and the “can do” generation that led to much optimism over economic growth. Even in the COVID-19 pandemic, racial tensions after the violent death of George Floyd, global warming, the war in the Ukraine, and the persistent social phenomena of cancel culture and polarization in US government, most people still have a positive attitude. Roy Baumeister and his colleagues (2001) tell us why. They analyze six areas of life and conclude that bad events—those that portend negative outcomes—are more attention-grabbing than are positive events because bad events threaten survival. However, in each of the six fields under analysis, Baumeister et al. showed that we defeat pessimism by the numerical superiority of positive events. We seek out many positive interactions with romantic partners to undo a single negative. The glow of positive events fades more quickly than the pain of bad events, so we seek more positive events to keep our mood tolerable. We also organize our lives around self-enhancement strategies such as confirmation biases (selectively attending to events or information that support what we already believe) or self-enhancing biases (such as over 90 percent of drivers thinking themselves to be above average). We are generally more pessimistic about human interactions, especially as shown in politics and its uncivil interactions, but still, in most areas, we see life as looking up.

DISAPPOINTMENT IN RELIGION

Religious conflicts undermine a sense that religion can lead to world peace. Rather, religion looks like a source of impassioned differences, and religious conflict can seem inevitable. Communication technology has made it possible for worldwide viewing of violence from interreligious conflict. This is particularly salient for people in the United States, England, and Spain after terrorist attacks within the last decade by religious radical fundamentalists. Prolific 24-hour-per-day news reporting and inherent bias in reporting negative events more than positive have made people worldwide more aware of such conflict than in the past (Mischel & Brooks, 2011). Furthermore, better global interconnectivity in travel and communication brings religions into contact with each other more than in prior centuries. That increases the probability of conflict (and also of beneficial interaction).

Even within religions, certainty has been eroded. As religious information about one’s own religion has become more accessible, divergent viewpoints and intrareligious theologies are encountered more frequently. These introduce more doubt about religion than in the times when people lived and worked in more culturally uniform settings.

PROGRESS IN SCIENCE

Sciences—in particular physics and biology—have provided poster children for people’s sense of progress. The liberal sense of progress in the early 20th century was violently exploded in World Wars I and II. Nuclear bombs set off an age of anxiety. Yet nuclear

physics and quantum mechanics—despite being tarred with fallout from the bomb—combined to develop the Standard Model of Particle Physics, which is the new reductionist and materialist explanation of the physical world. A bit later, in the 1950s, the discovery of DNA and subsequent development of molecular biology, molecular genetics, and the mapping of the human genome have suggested an understanding of the biology that opens new vistas (though raising unresolved ethics questions). Science has fed technology, placing cultures worldwide into contact through electronics, fiber optics, and airplane travel.

Let me break out of my narrative for a moment to share a tangential anecdote. In the 1950s, experimental particle physics was expanding by leaps. New particles were discovered almost daily it seemed, and physicists seemed like they could only corral the particles in a “zoo of particles” (Pollock, 2011). But physicist Murray Gell-Mann (1961), at Cal Tech in Pasadena, California, en route to formulating the quark theory that formed the basis of theoretical particle physics, proposed an intermediate organizing scheme, which he glibly labeled “the eightfold way,” which made an obvious allusion to the Noble Eightfold Path of Buddhism. The details of the theory don’t matter for our purposes. This was at the beginning of the 1960s—in California—and afterward, the public seemed forever after to associate particle physics with spiritual experience.

PROGRESS IN TECHNOLOGY

Robotics has accelerated. Nanoparticles with bottom-up distributed processing programming has led to advances. Some estimates show that as much as half of the labor force could be replaced by robots within a few decades, leading some scientists to advocate for humility. We see this in the book *Humility Is the New Smart: Rethinking Human Excellence in the Smart Machine Age* (Hess & Ludwig, 2017).

Technological connectedness (e.g., the Web, e-mail, blogs, Facebook, Blackberries, and Twitter) makes people think in terms of connectedness. Connectedness is the essence of spirituality. Technology has increasingly directed people’s attention toward the spiritual.

Progress in the Science–Religion Dialogue

Stephen Bahr (2016), in the opening essay of *The Believing Scientist*, describes the perceived conflict between science and religion as more about a real conflict between *materialism* and religion. Materialism is the philosophy that all of existence is completely reducible to material substance—matter in motion.

THE MATERIALIST’S STORY OF SCIENCE

Bahr (2016) describes the materialist’s Story of Science. It has five major themes. The first theme is that science has overturned a religious cosmology—that is, a human-centric cosmology—by showing that earth is a microdot in a vast universe, and other writing suggests that there are many noninteracting universes making up a multiverse. Second,

materialistic science trumpets the triumph of mechanism over teleology (i.e., purposeful creation). Quantum dynamical fluctuations in the state of zero universes are said to bring about the Big Bang, and natural selection and random genetic mutations, the cornerstones of neo-Darwinism, have yielded human evolution. Third, the first two themes blend to dethrone humans. Fourth, reaching back to Newton, science showed that, in a closed system, with physical laws, determinism reigns. Fifth, science yields a mechanistic view of humans.

Bahr (2016) shows that this Story of Science is undermined at all points by modern physics. First, Newtonian physics assumed time was infinite in each direction; modern physics has shown that time was created at the Big Bang just as our space began to expand. Einstein showed mathematically in the General Theory of Relativity that time and space are intricately bound together in four dimensions (time-space), and energy and mass are perturbations in the equations that govern time-space. Thus, the Big Bang was the origin of time, space, matter, and energy. Most ancient philosophies (and Newtonian physics) assumed that time, space, matter, and energy always existed. When Augustine argued for the creation of time when God created space, such a view was scoffed at. But relativity actually supported the Augustinian religious view, not the pagan (and Newtonian) view.

Second, the materialist's Story of Science holds that mechanism did away with purposeful existence. Reality was seen as a mechanistic physics and mechanistic neo-Darwinian biology. The story of physics is that laws of nature have been discovered and quantified in equations. Generally, physics has progressed slowly in what Thomas Kuhn (1970) called normal science. However, the big progressions in physics have been marked by many unification of two seemingly fundamental laws into an elegant unification of a deep law: (1) Newton reduced physics to three laws of motion and a law of gravitational attraction. (2) Maxwell combined electrodynamics and magnetism into electromagnetism and described it in an elegant equation (i.e., Maxwell's equation). (3) Einstein combined mass and energy into $E = mc^2$. (4) Later, Einstein formulated in General Relativity, which combined mass, energy, space, and time. (5) Quantum mechanics combined wave phenomena and particles as interrelated (i.e., Schrödinger's equation, and Heisenberg's matrix computations of quantum mechanics). (6) Later, came Dirac's equation describing quantum field theory, integrating quantum mechanics and General Relativity to account for times when particles were moving close to the speed of light. This is called quantum electrodynamics (QED). (7) Still later, the electroweak theory—a integration of the electromagnetic fields and weak nuclear fields (responsible for nuclear radioactive decay and weakly interacting particles), which is to say weak in the probability of occurring not in strength, computed by quantum chromodynamics (QCD)—again simplified two fields into one. The articulation of that force, by Stephen Weinberg and others, also uncovered a weak current (another previously untheorized force). Only gravitational forces have not been incorporated. Thus, particle physics can be described by elegant mathematical systems, a renormalizable quantum relativistic field theory (and the Standard Model of

Particle Physics, which springs from it) and Einstein's theory of gravitation. (8) String theory and M theory seek to combine those.

Importantly, though, physics has generally accepted the idea that science must have both an explanation for observable data and mathematical elegance (or beauty). Complicated theories that are inelegant simply are resisted by physics. Thus, with modern physics, we have come to reassert that design, order, and beauty (which do not necessitate an acceptance of purpose but leave the door open to it) are essential to science. Thus, the second tenet of the materialist's Story of Science, which holds that materialism has eliminated purposeful existence, has been at least subjected to doubt by the history of physics.

Third, materialist science was touted as dethroning humans in favor of mechanism. But cosmologists have shown that the Anthropic Principle dictates that the universe is incredibly friendly to human existence. That is, the values of the fundamental constants of nature form a narrow range within which carbon-based life could exist, showing that creation—at least of this universe—is friendly to human existence. Of course, one could appeal to the law of big numbers, that with enough universes that are possible, it is virtually inevitable that at least one would have constants that are friendly to human existence. The point is, though, that modern cosmology has again provided an opening for purpose.

Fourth, the materialist conviction has been that determinism governs the universe. That assumption has been undone by the various theories in particle physics (i.e., the quantum electrodynamics field theory, the quantum chromodynamics, and the quantum electroweak theory), which show that existence—not just our universe, but all created universes in a multiverse—is fundamentally nondeterministic and probabilistic.

Fifth, humans were seen as biological machines—computers come self-aware. This assumption has been undermined by several findings. First, quantum field theory can be applied to all systems—that probabilistic theory has made room for free will because systems are not perfectly describable at root. Proof of that has come through quantum field theories, but also through mathematics with Gödel's theorem, which says that machines cannot know they are machines. Thus, if human beings have consciousness and know they do, then how can humans be mere machines?

BAHR'S CONCLUSION

Bahr concludes his essay as follows:

We . . . find ourselves in a universe that seems to have had a beginning. We find it governed by laws that have a grandeur and sublimity that bespeak design. We find many indications in those laws that we were built in from the beginning. We find that physical determinism is wrong. And we find that the deepest discoveries of modern physics and mathematics give hints, if not proof, that the mind of man has something about it that lies beyond the power of either physics or mathematics to describe. (Bahr, 2016, p. 21)

In Bahr's analysis, then, materialism is inadequate for explaining all of nature, including humans. Bahr takes an unwavering dualistic position, with the material world as part, but coexisting is a spiritual world of mind, spirit, and supernatural beings (i.e., God), and its own supernatural laws. He used this analogy in a talk in 2011 at the Atom and Eve Conference, supported by the John Templeton Foundation, at Washington Union (November 12, 2011), which was reprinted in Bahr (2016).

Bahr (2016) has an analogy of why spiritual and material existence do not contradict each other. So, imagine that David Baldacci has written another best-selling novel—which he seems to do every Wednesday. The novel has a beginning (page one) and ending (last page). It has characters, a progression of events in time, and causality. Events happen that seem spontaneous. Characters influence and motivate each other in complex ways. A mystery is revealed page by page, as events occur. The main character tries to figure out the mystery, but there are many false starts, theories that turn out to be incorrect, and rabbit trails leading nowhere. Eventually, though, the main character figures out the mystery and the novel ends with a satisfying conclusion, though the main character does not always survive and always is changed by the experience.

Let's say that on page 100, the protagonist's mother is murdered by a young man seeking to burglarize her home. It is legitimate to ask, Who *caused* the murder? We might find it is immediately caused by a youth burglarizing her home, but on page 150 of our imaginary novel, we might find that the youth was acting on behalf of an adult manipulator seeking to find hidden information crucial to some international conspiracy. So, in a way, the manipulator, or even the co-conspirators are *causes* of the murder, which were mediated by the youth. Furthermore, the youth's parents might have been abusive and taught him burglary and violence as a way of life, so in another way they caused the murder. There are multiple causes of any behavior (on different levels) in any story. But also it was David Baldacci (the author) who caused the events to happen. He started the text at page 1, but, he began the creation of the story in his mind, not in novel-time, but in author-time, but the novel-time begins only with page 1.

It makes no sense to ask who *really* caused the murder of the protagonist's mother because there were many noncontradictory causes. Bahr argues that, in the same way, it makes no sense to oppose scientific explanations of cause with religious explanations that God is the ultimate cause. Both were happening all along. Clearly, though, the story itself is self-contained and doesn't suddenly refer to Baldacci's causal novel-writing habits. Similarly, science as a system is about explaining the natural causes of phenomena from within the natural system (Aristotle's efficient causes). God cannot be invoked as a causal agent, even by a religious scientist, because that is stepping outside the natural system by referring to Aristotle's final causes. The religious scientist might believe in God's final causal activity from a religious point of view but does not invoke it in a scientific paper, which is limited by self-definition of science to efficient causes. Bahr's point, though, is

that a dualistic nature of reality is possible, allowing science to proceed, and posing no conflict with faith.

We see this reasoning in popular culture. Of course, we see this throughout cultures. For example, recall the *Star Wars* plot I recounted earlier. Lucas is positing two realities, a spiritual one and a corporeal one. Both count, and in the movie, the spiritual reality actually seemed to count more than the physical reality.

This dualistic worldview exists within the natural order. Bahr believes that mind, consciousness, and nonmaterialistic events are part of existence. Life is fundamentalistically dualistic. He argued, as I summarized above, that such a conclusion is not just derived from philosophy or theology but is supported from modern physics' indeterminacy, probabilistic nature, and the aesthetic elegance of the physical world's portrayal by physicists.

Resulting Spirituality

Based on these four factors, the dualistic nature of reality, and Bahr's no-final-conflict-in-different-levels-of-causality argument, I suggest that people have an inborn need for a spiritual, as well as physical, understanding of life.

From social observation, I would surmise that people's need for spiritual connection, which historically had been met through individual experiences of religion and of life in religious communities, is increasingly met through other means—which I describe as three secular spiritualities (in addition to religious spirituality). These secular spiritualities are discussed in a later section of this chapter (e.g., Definitions of Spirituality). Before looking at them, however, I will review more specifically how physics contributed to a more secularly spiritual worldview.

What Modern Physics Taught People

Thus far we have considered social trends and pressures that push and pull people toward spirituality and generally away from organized religion. We have considered the assumption flowing from science to general culture (as seen in science fiction entertainment) that life is about big numbers and thus given sufficient numbers of cases, anything that has a finite probability of occurring could become a definite possibility. We now look more closely at where that assumption arose: in quantum and relativistic physics.

Science of Modern Physics

We see that physics has developed such that a sense of absolutism that has traditionally been the foundation of the various religions has been undermined. It has been replaced with probabilistic reasoning.

In 1900, William Thompson (who called himself Lord Kelvin) announced that science seemed to be approaching an authoritative account of nature. He suggested that only two small clouds remained that needed explanation—blackbody radiation and the inability to measure the speed of Earth in absolute space—then science would be virtually

complete (except for the mopping up of some details). Resolving those two “little” problems, of course, transformed physics in the early part of the 20th century. They led to relativistic physics on one hand and quantum physics on the other.

Even prior to Einstein, the stage was set for the deluge descending from those clouds. While many precursors could be identified, we focus on one. In 1887, Albert Michelson and Edward Morley conducted a classic experiment that solved one of the troubling aspects of Newtonian physics. The idea was that some unmeasurable field, luminiferous ether (or just ether), flowed around us. Assume, then, that ether is flowing north and south. If a light wave moved north for distance d (aided by the flow of ether) and then south for distance d (fighting against ether), the light wave should be expected to take a different time to make that round trip than a different light wave moving at the same speed but cutting at 90 degrees to the flow of ether and going distance d east, then returning to the west. Thus, if a light beam were split at the source into two right-angle beams, they should be expected to arrive back at the source out of phase. (This is a consequence of Newtonian laws of motion.) Michelson and Morley experimentally showed that the light did not arrive out of phase but perfectly in phase. The speed of light in a vacuum (labeled c) was in fact invariant, regardless of its orientation within the field of ether. That assumption of an invariant speed of light formed an anchor for Einstein's (1905) theorizing about the relativity of time and space. If c did not change depending on frame of reference, then length and time had to change. Einstein's relativistic theories undermined a sense of absolutes in time and space, leaving only one measure, c , as being absolute. The fallout of relativity theory was a bolstering of the previously articulated worldviews that questioned absolutes—particularly Hegel's. Hegel reasoned, for example, that traditional rationality had depended on an understanding of thesis–antithesis. A statement and its opposite could not both be simultaneously true. Hegel, however, posited that it was process that was absolute—the dialectical process that theses and antitheses were always resolved into syntheses, which became new theses, which had antitheses, which were resolved in syntheses, and so on. Just as Einstein found that c was constant but space and time were interrelated, with the power and authority of science, he reinforced and empowered Hegel's notion that the dialectical process was absolute, and truths were interrelated. (Note that Darwin had followed a similar Hegelian logic in the theory of evolution by reproductive advantage.)

Einstein was not a friend of quantum mechanics. He never could resolve classical relativity theory with quantum mechanics. The Copenhagen interpretation of quantum mechanics suggested that particles could be represented by wave functions (and waves could be represented as particles). According to this interpretation, by measuring a system, the measurement causes the calculated set of probabilities of the system to “collapse” to the value measured. This aspect of the mathematics is called *wave function collapse*. Neils Bohr (1972–2006) and Werner Heisenberg (1958) put forth this theory. Erwin Schrödinger provided an elaboration of the theory. Schrödinger's (1935) hypothetical

cat is a thought-experiment illustration, using reduction ad absurdum, to illustrate wave function collapse. Schrödinger suggested that we imagine a cat in a room; the cat is either dead or alive (we don't know which). Until a measurement is made, Schrödinger's cat is *both* dead and alive (or neither dead nor alive) to those outside the room. This gives rise to quantum "entanglement," in which two particles that have interacted (and are thus entangled) cannot be independently described without describing the other. Say that an electron and its antimatter counterpart, a positron, were created simultaneously in a linear accelerator. Certain properties, such as mass energy, electric charge, and spin angular momentum must be conserved in such accelerator interactions. If, according to the energy involved, we know that one particle is the electron and the other the positron, the entangled particles are not identified until one is measured. Once one is measured, the other particle is determined, even though it has not been measured.

Bell's (1964) theorem suggested that when hidden (e.g., as yet unmeasured) particles are concerned, only a limited number of variables can produce the probabilistic predictions of quantum mechanics. Quantum entanglement, then, suggests, using Bell's theorem that with two entangled particles, either we give up the idea that particles have definite properties or else all particles must be connected by a web of instantaneous communication links. Such instantaneous communication links, of course, have provided more grist for the science fiction industry. Hugh Everett III (1957) argued that every possible outcome of every quantum event takes place in a limitless branching series of parallel universes—of which we can only see one; however, all are intertwined. (This is the premise of the time travel movies like Claude van Damme's *Time Cop* and the trilogy starring Michael J. Fox, *Back to the Future*.)

Returning to Lord Kelvin

Now, we are about 120 years post-Lord Kelvin's slightly optimistic assessment of science as complete—except for those two little clouds. What do we learn from a century-plus of relativistic cosmology and quantum physics? Apparently not too much. Consider the book by John Horgan (1996), *The End of Science*. Horgan argues that we just about have answered all of the really meaningful questions in science. Except for mopping up a few pesky details (aka clouds), of course. But in the less than a quarter of a century since Horgan, developments have occurred. In 2003, Steven Pollock summarized the state of the Standard Model of Particle Physics as being virtually complete, except for a few little problems (aka clouds)—like the fact that the Higgs particle had not been actually physically measured (which it since has been) and the solar neutrino problem (in which neutrinos from the sun seem to indicate that they can actually oscillate among three "flavors" of neutrinos—the electron-flavored neutrino, the muon-flavored neutrino, and the tau-flavored neutrino). This indicates a first "breaking" of the Standard Model because the Standard Model assumed that neutrinos had zero rest-mass, but the oscillation of

neutrinos shows that it has some rest-mass. The “breaking” indicates that, while the “simple” Standard Model is incredibly precise—with some calculations predicting measurements as accurately as twelve significant figures—its incorrect assumption leads to the possibility of additional modifications. A practical implication of the neutrinos having rest-mass is that the gazillions of neutrinos in the various universes add up to a lot of mass, which could require that the universes will not be forever expanding but might implode back on itself in a big crunch. Another recent little cloud is the problem of dark matter, which cannot be detected but might change our view of cosmology. And don’t get physicists started on dark energy.

Big-Scale Physics

Since 1998, we have accumulated evidence for dark energy, which is supposed to arrive from some force that seems to be at work to accelerate the universe’s expansion (Peebles & Ratra, 2003). This energy seems to have been manifest since the universe was estimated to be about seven billion years old. Before that, it was probably masked by gravity. But, like dark matter, we do not really understand the nature of dark energy. It’s just a little cloud. Explaining dark energy might require a fundamental change in the understanding of gravitational theory.

There might be other little clouds around. It seems that galactic clusters may have existed for about three billion years. But according to current theory, it should not have been possible for the cosmos to have that much structure. This suggests another little cloud that might not be fully explained at present.

Perhaps there are more clouds. We might not be reading the microwave background radiation correctly. That is the basis for much of our current understanding of the cosmos.

Mid-Scale Physics

Chaos and complexity theory have continued to develop and be refined mathematically. Chaos theory treats events as random, and yet there is a twist. Not every event in a chaotic system is equally likely. If I balance a drop of water on my knuckle, it has a random chance of rolling off and trickling down my hand. The path it will take depends intimately on the sensitive initial conditions present. A crinkle in the skin at a crucial spot, a slight undetectable breeze, a tremor caused by a nearby artery pulsing, or any of a thousand sensitive small conditions could send the water in different directions. However, not all directions are likely. Some are not possible—which is beginning to sound like a theme—because they are outside the realm of possibilities: the drop of water cannot suddenly float off into space. The paths are governed by strange attractors, which limit the number of paths and show which are more likely. Furthermore, in some systems, complexity can spontaneously arise. Seemingly random events can form organized patterns. Again, physics is probabilistic, but there are limits, including impossibilities.

Small-Scale Physics

Perhaps the crowning glory of physics has been the development of the Standard Model of Particle Physics (Coughlan et al., 2006). The Standard Model unifies the electroweak theory and the strong nuclear force. But the Standard Model has a few little clouds on its horizon also, such as the rest-mass of the neutrino. Second, the Standard Model is a renormalizable model, which means that the fundamental masses must be measured, not derived theoretically. There might even be fundamental particles more basic than the six quarks and six leptons (electrons, muons, taus, and neutrinos flavored as each). The Higgs boson has now been detected since my previous essay in 2012, but its discovery and physical evidence of its existence have not fully answered all the questions theoretically. In late 2011, the world has witnessed both evidence that flies in the face of relativity theory and also some indication of the limitations of the Heisenberg uncertainty principle. Finally, particles have been detected that move faster than the speed of light in a vacuum, which was the asymptote in Einstein's theory of special and theory of general relativity. This was not supposed to be possible. So, there is a little problem still to resolve about relativity and its implications for the gravitational force and field and how it might come to interact with the other forces (electroweak and strong nuclear) and associated fields.

Even the development of string theory, superstring theory, and M-theory have not solved these little problems. Particle physics assumes that the smallest fundamental units in physical existence are point particles. String theory (and superstring theory and M-theory; Greene, 1999) suggests that the most fundamental unit of physical existence is best represented as a loop, not a point. The mathematics of these theories is daunting if not currently impossible, which does not mean it will always be.

Thus, as we look at the very large, medium but chaotic, and very small units of physics, we find enough annoying unexplained clouds to have true concern about rain. It is too early to tell the impact that recent discoveries might have on modern physics, but I think it is safe to say that the physics weather is distinctly cloudier now than even ten years ago. According to current physics models, the physical universe seems probabilistic at the core—which provides philosophical wiggle-room for doctrines like free will—but we have virtually no certainty that we possess the best understanding of the physical world.

Nevertheless, we usually can bet on our best current understanding of reality (relative to simply making up a story about what might occur in the future of physics). From both relativistic and quantum physics, we find the law of big numbers and a sense that given enough time, probabilities will become possibilities, and possibilities will become likelihoods.

The Science of Biology (Briefer)

I have focused on modern physics. I easily could have made the same argument for modern biology.

Small-Scale Biology

In biology, the operation of genetics and processes of intra- and intercellular signaling, regulatory, and monitoring networks that affect cellular metabolism seem much more complex than had been thought. These fundamental processes are ill understood. Also, with genetics, we have come far beyond single-gene determinism. We now believe that all genes exist in all cells. But what is it that makes a cell take on a particular function? How do proteins turn on particular parts of DNA? The complexities are mind wrenching, so we fall back on an appeal to probability. Certainly, this does not deter molecular biologists from trying to uncover all of the biological mechanisms possible. But it erodes certainty that the human will ever be fully understood.

Big-Scale Biology

Although Darwin's (1859/2009) theory of evolution (with classical Mendelian genetics) predated modern physics (and both nodded intellectually to Hegel's earlier articulated dialectical idealism), the theory of evolution as a worldview is a relatively recent phenomenon. Evolutionary theory is the icon for probabilistic thinking. Adaptation is a guiding principle that selects which random events will have an impact on the population. Given enough time, material, and energy and an environmental system that makes something possible, evolutionary thinkers usually conclude that it is—at someplace in the vast multiverse—possible if not likely.

Mystery and Wonder at Root, Observables in Daily Life

Clearly, with physics and biology, there is a sense of mystery and wonder coming from the scientific disciplines. Much of the wonder comes about because the physical reality and biological reality seem to be probabilistic at core, and therefore, deep reality is unpredictable (and often awe inspiring; yet sometimes awful). Furthermore, because science is understood only by highly trained secular “priests” (i.e., scientists) who hold the keys to the kingdom, science speaks authoritatively—especially as far as the layperson is concerned. Of course, I am oversimplifying, but I am trying to make several arguments. (1) Physics and biology have shifted people's fundamental view of the nature of reality away from a sense of certainty to senses (a) of probability; (b) that given enough time and space, the law of big numbers will come about: namely, what is statistically possible will (with enough time) become probable, then likely, then inevitable; and (c) that individual entities are less important than the relationships between and among the entities, coupled with (d) the general sense of optimism from the adoption of a cultural narrative of change, problem solving, and progress, which I described in the previous section. These developments have provided a pro-science backdrop that is optimistic at root.

Notice, importantly, that despite people's general beliefs that sciences have told us that life is indeterminant and uncontrollable, people nonetheless see the physical world. They experience the physical events in their own and others' lives. What is ephemeral

(probabilistic, indeterminant, uncontrollable) at core must be seen and acted on in a concrete way in life. It is in this context of an indeterminant substrate of behavior and an observable life that we must understand psychological science.

Physics, Psychological Science, and the Invisible and Probabilistic Substrate of Consciousness

Many exciting advances in social science research are aimed at neuroscience, psychological science broadly conceived, and multiculturalism. This extends to positive psychology and, as we will see, to a psychology of religion and spirituality.

Physicists and the Study of Consciousness

Probably the area of psychological science that is most highly and directly involved with modern physics is the study of consciousness. Consciousness is a puzzle that has entertained philosophers for centuries. It is apparently nonmaterial, yet it must have physical substrate. Furthermore, definitions are problematic. What is consciousness anyway? We all have it—even children—and yet we are not disturbed that we lose it each night.

So is consciousness material? That is, is consciousness a product of and reducible to brain states? Almost no one except staunch materialists will argue that consciousness is *nothing but* the way our brain processes work—structure and function. Almost no one would argue that if we remember a dream or perceive a particular shade of red if the frequency of light is precisely specified, that we would activate precisely the same arrangements of neurons in the same areas of the brain doing the same functions that would have produced the dream originally or the perception of red originally. That is, it is physically impossible that every unique mental event has a corresponding unique pattern of brain activity. As miraculous and complex as brains are, there simply are not enough neurons to support such a model. How, then, can limited brain apparatus produce the varieties of conscious experience? That is the puzzle.

But intrepid modern physicists have ventured into trying to explain consciousness. Let's reason with the physicist. Bohr's Copenhagen model of the atom has replaced the picture of a large nucleus with electrons revolving around it as if this were a miniature solar system. Instead, the Bohr atom views the atom's arrangement as completely probabilistic. Electrons have multiple probable states of energy and multiple probable positions. However, both energy and position are probabilistic according to the Heisenberg (1958) uncertainty principle. Experimental results actually describe a microcosm in which the particles occupy multiple states and multiple locations at the same time. The very act of measurement—if it occurs—collapses these to a single state.

Physicist Eugene Wigner (1960) speculated on a connection between quantum physics and consciousness. In trying to mediate between Heisenberg and Bohr (who saw reality in terms consistent with logical positivism) and Hugh Everett (with his multiple intertwined realities, 1957), Wigner suggested that the *consciousness* of the observer is

what causes collapse of the wave function, not realist philosophy or splitting of observers. Wigner asserted that consciousness causes collapse. Thus, Wigner's interpretation of quantum mechanics suggests that observation *by a conscious observer* makes the wave function collapse to a single observable state. He claimed that the rules of quantum mechanics are correct; however, only the material world is subject to quantum mechanics. But external observers—who are not subject to quantum mechanics (namely, human minds)—can make measurements on the brain, and when they do, the measurements cause wave function collapse. (By making the mind a separate observer relative to the brain, he seeks to get around Gödel's theorem, which says that a machine like the brain cannot itself know that it is or isn't a machine.)

Later, physicist David Bohm (2002) advanced Wigner's speculations. Bohm applied the theoretical and observational aspects of quantum physics directly to the functions of the brain and to the problem of consciousness. Bohm's student, Yakir Aharonov (Aharonov & Bohm, 1959), showed that an electromagnetic field could have effects in otherwise fully shielded regions of space, which is the Aharonov-Bohm effect. Bohm advanced the thesis that the brain at the quantum level is an informational system such that the mental and material merge. Matter and mind are inseparable aspects of a single whole.

Lessons From Quantum Physics and Consciousness

The very achievements of modern physics have created a cultural mindset. That mindset is composed of several elements. First, certainty has been tossed from the window and replaced by relativity of time, space, matter, and energy. Second, quantum physics showed us that we cannot trust commonsense conceptions. The measurement of entangled particles whose total spin, for example, must be conserved between the two, exists in an indeterminate state. But, if at some time, one is measured, then suddenly the other particle is also defined. Physicists also tell us of the pairing of matter and antimatter items whose states are simply indeterminable. Nor is it possible to say how such entanglement occurs. Is it a materialist process? Or is it a mental, consciousness-based process? Or does it somehow combine the two. By observing (perception—a mental activity), we collapse the wave function, which creates a materialistic presence for the entangled particle. Third, mostly, we believe what we observe. Fourth, so somehow we jump from an understanding of the physical universe (and conscious “universe”) as probabilistic to what we observe, which we take to be the basis for making conscious decisions.

Spirituality Becomes (Often) a Replacement for Religion in Scientific-Imbued Societies

Let us note the similarity to religion here. We live in a material world, yet most religions tell us there is an unseen world that is unpredictable, noumenal, and not controllable. What religions have traditionally done, some people try to make science do. Modern sciences have given people an alternative view of life, and the view is not religious. I have shown earlier, however, that much of modern physics is compatible with a religious

worldview if we follow Bahr's analogy of writer and novel, indicating a dualistic—material and spiritual—worldview.

The importance of religion in educated Western cultures has declined to the point that in some communities, it is irrelevant to life. Though some people have rejected religion, however, they still embrace spirituality. It is simply not satisfactory to call sciences mere physics, mere biology, or mere neuroscience. People long for something that transcends mere materialism. So we capture the essence of this unpredictable, noumenal, uncontrollable world, which nevertheless yields some concrete observations, by calling it *spiritual*.

Psychological Science, and How the Invisible and Probabilistic Substrate of Consciousness Relates to "Observables" in Consciousness

Suppose it actually is the case that only by way of observation and measurement, by way of the introduction of some element or derived product of consciousness, that quantum uncertainties collapse into determinate states. (Note that the distance apart of the two entangled particles is irrelevant.) The influence that consciousness might have is not by way of contact but by way of that dimensionless entity, information. This could suggest such things as one consciousness, entangled with another, could influence it across space and time. This borders on mystical religious theory. However, Bohm did not address the nature of consciousness, the uniqueness of its possessor, or the relationship of consciousness to more specific mental states and functions. There are more things not explained than things that are explained.

How can something so statistical *feel* so nonstatistical? The nature of reality, remember, is seen by most people—not just scientists—as being probabilistic in essence. Yet our experience seems anything but probabilistic. It seems concrete and contingent. How can an essentially probabilistic model of reality produce sharp and concrete images in our minds (and brains)? We have traditionally thought that mental life (i.e., cognition) is about reasoning logically, rationally, or at least concretely. Quantum physics has overturned the classical world of absolute space, time, mass, energy, force, field, and motion through fields. However, psychologically, for most of our lives, the very essence of mental life for most of us, has seemed to be the capacity to reason and arrive at a concrete answer to a life-problem, not a statistical equation or probabilistic wave function. A critic might argue that the correct model of brain function—if it is to be derived from quantum physics—must be thoroughly probabilistic. Yet that goes against much of our experience.

One neuroscientist, Gerald M. Edelman (2004) suggested a way that probabilistic events could produce concrete mental images. He used an analogy of an impressionist painting employing pointillism. In pointillism, thousands of dots of paint are arrayed such that when one stands at a distance from the painting, one sees an integrated picture. Our perception integrates the individual points into a Gestalt. Imagine, too, that the picture were one of the young woman–old woman perceptual Gestalt. When one concentrates, one can see a young woman, but when one focuses on a different context, the

perception of the old woman emerges. One can shift attention back and forth between the two images. In this analogy, Edelman shows how a limited number of neurons can produce an almost infinite number of mental images. There is not a one-to-one correspondence between neuronal patterns and images. Rather, it is more about relationships among patterns of points, chosen randomly within the pattern, than about one-to-one physical correspondence.

The brain produces a flow of consciousness by a complex interaction of neurons stimulated by environment, associations (e.g., prefrontal association cortex), memories of the immediate past and present scenes (e.g., hippocampus), neurons in the inner-brain areas responsible for motion (e.g., basal ganglia, cerebellum, and thalamus), other brain areas, and body. The relationships among brain areas are crucial to thought and memory, not the firing of individual cells or even patterns of cells or the activation of discrete neural circuits. Different neurons and circuits can produce the same concepts, mental images, or memories—just as different dots could produce the same perception of the impressionist painting—because the different neurons and circuits have the same relationships to each other.

Edelman (2004) developed a theory of mind, brain, and consciousness. He calls it a “theory of neuronal group selection (TNGS)” (pp. 39–40) because its principles are based on Darwin’s ideas that survival fitness drives system change. Edelman attempted to explain mind and consciousness depending solely on what is known about the structure and function of the brain and on what is being discovered by new tools of brain science. These new findings include microbiological findings about how neurons work, what neurotransmitters they emit and how those neurotransmitters operate, and how cell biology is influenced by DNA and the genetic code. They also include findings that measure the functioning of areas of the brain.

Relationships

Edelman’s work on consciousness suggests that probabilistic processes describe reality (and consciousness), but there is one additional lesson: Relationships are important. It is not the specific neurons or brain areas that are important. It is their relationships to each other that are important.

Physicists have shown how entangled particles interact, even if separated at great distance, because of their previously established relationship with each other. From a social science point of view, we can now see that relationships are of fundamental importance within the brain. If we can be as bold as some of the theologian physicists, we might suggest the same analogy. Nature is relational at its core.

In this section on consciousness, we have shown, using Edelman’s research and theorizing, how a probabilistic model of brain activity can produce conscious experiences that consist of mental images and processes that are repeatable and seem “real.” In the chapter thus far, I have argued that physics, biology, and now psychological science (looking only

to neuroscience as a representative of psychological science) have converged in laying the groundwork for how a scientifically impregnated society can gestate and then give birth to a replacement of religion: secular spirituality. Secular spirituality is about relationships. It also provides an explanatory scheme, or sense of meaning, that is rooted in the unpredictable, greater-than-thou, ephemeral, and uncontrollable idea of something unseen. Yet it provides a connection with things that are very visible, tangible, and realistic. These serve as the elements of spirituality in modern secular society.

Other Transformations in Science

In physics and biology, there have been transformative shifts that moved toward unification of previously disparate but law-governed subfields to a unified field governed by deeper laws. I asked myself, what “transformations”—I don’t think we have had any unifying transformations on the order of physics, cosmology, or biology, so I put transformations in quote marks—have occurred in psychology that might push it toward unification. Others have speculated about whether unification is possible or not in psychology.

“Transformations” in Psychology

So what are, in my observation, the biggest subfield changing transformations in the subdisciplines of psychology (see table 4.1 for a complete summary; I am selecting only a few to highlight here)? In cognitive psychology, the unification of the field came about in Kahneman and Tversky’s Nobel Prize-worthy insight that most of mental activity is not rational but intuitive, governed by emotion, fraught with heuristics that are often incorrect, and unconscious (Kahneman, 2011). System 1 (nonrational) cognition accounts for perhaps 90% of mental activity. System 2 (effortful, rational) cognition accounts for perhaps 10%, but much of that rationality is aimed at rationalizing nonrational desires. In research design, the replication crisis has seeded doubt about the replicability of some of the great psychological experiments and led to registration of studies and broad replication attempts across many labs. This might, in the end, be a fundamental property of human psychological science. Studies might be sensitive to initial conditions and thus act like chaotic systems. There are limits. There are paths (i.e., strange attractors), but psychological science might be more probabilistic than we want to believe.

Measurement has advanced by the development of brain scanning technologies. Because self-report alone is increasingly distrusted (as a consequence of cognitive psychology System 1 cognition but also due to the rising importance of emotion and motivation), additional sources of measurement are increasingly needed to triangulate with self-report (like chemical or peripheral physiological assessment or brain scanning).

Political psychology has seen a trend toward actuarial prediction rather than self-report polling. In addition, the toxic and divisive political climate seems to make political psychology look more and more like international conflicts and peace psychology.

Table 4.1 A List of Recent Important Innovations in Psychological Science and Practice (with Absolutely No Validity Based on Mere Personal Opinion)

Psychology	Disciplinary Advances
Measurement	Brain scanning; other neuropsychological assessment
Experimental design	Pre-registration of studies; open access; large-scale replication of classic studies
Personality	Big Five becomes big six (HEXACO) with the addition of Humility-Honesty; personality is limited in accounting for variance
Social psychology	Power of the situation; might be responsible for the replicability crisis
Psychopathology	Clinical diagnosis replaced by actuarial diagnosis; erosion of human power
Developmental psychology	Shift in emphasis to aging effectively and to the loss of function as people age; erosion of human power
Cognitive psychology	System 1 (most) and System 2 (small); self-serving biases; erosion of the power of rational logic; we are creatures of limited rationality
Decision-making	Emphasis on intuition; motivation; emotion rather than logical analysis; distrust of self-report and rationality
Political psychology	Polling (asking for direct self-reports) increasingly replaced by actuarial predictions; distrust of self-report; move to the probabilistic
Clinical psychology	Internet and telepsychology; brief “wise” interventions; DIY interventions; psychopharmacology; self-directed interventions; less control by experts
Clinical psychology	Efficacy research shows constant 85% success rate; 10% no change; 5% get worse; however, effectiveness research and dissemination research show less transfer UNLESS lots of monitoring and regulations; psychotherapists want to do their own thing; insurance companies and state regulation boards encourage or require evidence-based practices when demonstrated effective
Psychology of religion and spirituality	Religion is more about a community of like-minded people with practices, values and beliefs (not just beliefs) giving rise to community values like forgiveness and humility; Spirituality is internalized closeness to the divine (mindfulness); split between the communal and the internal; positive psychology is closely allied with psychology of religion and spirituality (see Davis et al., 2022)
Statistics	Stats give big curves but individual performance is not predictable from the big average curves
Neuropsychology	Applied to decision-making, morals, R/S, meaning in life
Political psychology	Persistence of conflict and evil but also the rise of attention to virtue and subjective well-being

In all of these, we see two trends starkly portrayed: (1) we seem to be losing a sense of certainty, and thus losing the sense of human control, because events are fundamentally nonrational—whether cognitive or world events; and (2) relationships are important—whether the relationships among different types of measurements, or the relationships of initial conditions to outcomes of studies, or the relationships among people in conflict.

Psychology of Religion and Spirituality—Now and the Future

The transformation of the field of the psychology of religion into the psychology of religion and spirituality is a fait accompli. This happened quickly.

Definitions of Spirituality

Spirituality is hard to define (Zinnbauer et al., 1997). It seems to involve personal experience, but what kinds of personal experience? Spirituality is a closeness or connection with some object. What kind of object? One reason spirituality might be hard to define is that the object of closeness and connection is not carefully specified. In my presidential address for Division 36 (Society of the Psychology of Religion and Spirituality) in August 2010, I identified four objects and thus four types of spirituality. (There might be others, which would give rise to other types of spirituality.) God (as different religions conceive of God) is the object of closeness and connection in religious spirituality. Each of the three secular spiritualities has an object that its corresponding science says, at its core, is indeterminant, uncontrollable, and awe inspiring and yet yields clear observables.

- Humanistic spirituality
- Environmental or nature spirituality
- Transcendent spirituality (because people might even think beyond the “cosmos,” I also call this transcendent spirituality)

Since then, Davis et al. (2015) has created a measure to assess each of these plus a fifth type, self-spirituality, indicating a closeness with oneself. These are the objects to which people seek closeness, connection, and relationship: God, humankind, nature or environment, the transcendent, and the self. These (now) five spiritualities correspond to five causal and cultural phenomena—religion and four sciences: (a) psychological science, (b) subatomic physics and biology, (c) cosmological physics, and (d) psychological science, respectively.

Our field was originally conceived as the psychology of religion (Starbuck, 1899). Scientists studied the way individuals and religious groups related to the Divine and to each other in community, and much of the interactions were defined by doctrines. However, in recent years, our field has become the psychology of religion *and spirituality*. Witness the American Psychological Association Division 36 journal, the *Psychology of Religion and Spirituality*, and even a change in name of the APA Division 36 during my presidential year (2009–2010) to the Society of the Psychology of Religion and Spirituality occurred as the membership recognized the subdisciplinary shift toward individualized spirituality and away from religion. Religion has not been abandoned, but doctrinal adherence is perhaps less than previously, and religious spirituality is more pronounced

The shift in worldview that came about due to the discoveries in relativistic and quantum physics, biology, and neuroscience—a shift to probabilistic thinking, to relationships,

and to an inability to explain things completely rationally—has led to this shift. No longer is it merely that one's relationship with the Divine is filled with awe, wonder, and uncertainty, and that motivates a search for right doctrine to embrace. Now, the cosmos is full of wonder and awe (i.e., cosmos spirituality). Probabilistic notions define reality, not religious certainties. Relationships among people, religious systems, and religious spirituality and nature are more important than the systems themselves. Nature at the level of particle physics or superstring theory (or M-theory) and both molecular biology and evolution provides a similar sense of wonder, awe, and fundamental indeterminacy (i.e., nature spirituality) as well as relationships among science and life. Psychological science has developed to the extent that people no longer equate psychology with psychotherapy or psychoanalysis. Now, psychological science often is associated with brain images, neuroscience, biological roots of behavior, behavioral genetics, and even cognitive neuroscience. And even laypeople think of human behavior as multiply and simultaneously caused. We don't search for single-gene explanations for behavior but are aware of multiple-gene interactions and of protein synthesis being triggered by behavior or maturation and thus proteins playing a vital role in the expression of genes. Psychology seen mostly as psychotherapy has been replaced by a psychology as a psychological science full of awe, wonder, indeterminacy (i.e., humanistic spirituality), and relationships among variables (and people).

Because of the development and discoveries in the various sciences, spirituality is defined differently. It has gained popular acceptance because it “makes sense” given the multiple ways the modern physics, modern biology, and modern psychological science have revealed probabilistic and relational truth about life.

Why Are We So Optimistic?

We appear to be increasingly evolving into a spiritual culture. This is not merely because we have had a 20th century of scientific progress. Rather, some scientific developments—notably, the nuclear bomb and biological warfare—have ushered in an age of anxiety around the 1950s. But in recent decades, we seem to have ignored the age of anxiety and have once again taken up a narrative of progress.

There is so much evidence of evil in the world that this seems startling. Baumeister et al. (2001) summarized a principle in life: The bad is stronger than the good. People appear to be hardwired by evolution to give special attention to any negative event in life. If we do not attend to a positive event, we merely miss out on a reward, but if we do not attend to a negative event, it very well could kill us. Thus, attending to present events that could be negative or threatening provides an evolutionary selective advantage. In the present, perceiving the negative is rewarded. To overcome one bad event requires five or more good events (Baumeister et al., 2001).

Then, how can people today be so optimistic about the future? Why do people hope for a breakthrough to a more positive humanity? Why do we believe—against a realistic

probability—the likelihood of a beneficent E.T.? Why do we count on the likelihood of progress?

The answer is that just as survival rewards attending to the bad events in the present, it also rewards hope in the future. Without hope, little progress can happen. Without hope, we do not look for progress, so we often cannot take advantage of it when it occurs. This leads us (presumably due to its selective advantage) to look for positive in the future. We ignore the instances of lack of progress or even of moral regress. We focus on the evidence for hope. That focus keeps us moving forward rather than resting on our laurels and not pursuing new horizons.

This suggests that spirituality will be pursued vigorously. Religion, which is more conservative than spirituality, will be maintained by societies and people within the societies who are concerned with risk and lack of stability. Spirituality is defined by Koenig et al. (2001) as having become “unmoored.” Spirituality is more about change than stability—going with the flow rather than being tied to the dock—and more about the future than the past. Spirituality is pursued by the adventuresome. Religious spirituality is an adventurous mindset within the boundaries of religion. But the more speculative secular spiritualities come from the secular and scientific roots of culture: psychological science and multiculturalism, which fuel humanistic spirituality; biology, which fuels environmental and nature spirituality; and relativistic physics, which fuels cosmos spirituality. Popular science and science fiction in the entertainment media fuel the transmission of the secular scientific spiritualities.

Speculations About the Future of the Psychology of Religion and Spirituality

Let me speculate about the shape of the future of the psychology of religion and spirituality on the basis of the reasoning I have developed in this chapter. Importantly, I believe that there is a future. Religion and spirituality are not going to be reduced to physics, biology, neuroscience, or psychological science. We also show no sign of unification into some grand underlying deep reality that unifies disparate subfields into an elegant equation as has characterized physics in the last 100 years. With that in mind, let's tackle four points in conclusion.

THERE IS STILL A FUTURE FOR NEW RESEARCHERS

We are in a time of transition. We are not in a full-fledged scientific revolution, but we might learn from examining such revolutions. As philosopher of science Imre Lakatos (1978) noted, degenerating programs of research were those that were finding their peripheral propositions shown untrue, their midlevel propositions attacked, and their core propositions besieged. Scientists in degenerating programs of research were revising their theories. However, other programs of research were more vibrant. In those, although peripheral propositions might be under attack, the core was secure; normal science could revise the periphery and continue to map out questions. I believe that the psychology

of religion is a vibrant program of research, not a degenerating one. However, no field can remain stagnant. The attention to spirituality will inevitably necessitate the increased study by established researchers of religious spirituality.

THE FUTURE OF THE PSYCHOLOGY OF RELIGION WILL BE INCREASINGLY RELATIONAL

Besides focusing more attention on the study of the psychology of religious spirituality (which is fundamentally about seeking a close relationship with what one holds to be sacred), I believe that the psychology of religion will also be more relational. The interconnectivity of particles in multiple simultaneous states as well as the multiple-gene and timed-protein-synthesis gene-expression viewpoint in biology both suggest that life is relational. That is clearly true in studying the life of humans in relationship with the Sacred. More relational models will be articulated in a similar mode as Shults and Sandage's (2006) relational spirituality and as our model of relational spirituality and forgiveness (Davis et al., 2008).

In addition, the relationships between and among religions will become increasingly important. Like quantum particles, multiple religions coexist in multiple geographical regions, political entities, and socioeconomic strata. They are interrelated, if not entangled. When we attend to the religious conflicts, the measurement (i.e., observation) of the event collapses our attention on the conflict and in essence gives it substance. We are interconnected more each day around the world. *The World Is Flat*, claimed columnist Thomas L. Friedman (2005). It has been leveled by technology in the form of communication and information technology, transportation, and economic system. Individualism and collectivism (Oyserman et al., 2002) affect religious and spiritual experiences, and they are being brought together with increasing frequency in the flat world.

Development of psychological measurement is always crucial to the transformation of science (Galison, 2003). Development of new technologies for measurement—beyond brain scans and chemical and genetic assessments—might open even more revelatory findings.

The existence of multiple simultaneous states suggests that theology and psychological scientists might be describing the same phenomena on occasion, but by discussing the phenomenon in one language—that of theology or of psychological science—the issues become crystallized around that discipline. The psychology of religion needs to develop a methodology for discussing topics of mutual interest in ways that allow the mutual flow of information across boundaries—from theology to psychology and vice versa.

Mystery and awe drive the field. Sometimes today, the sense I have picked up, especially from some recent graduates, is that the territory of the psychology of religion has been mapped. (Dare I say, except for just a *few* troublesome clouds), and the only exploration left is in the psychology of spirituality. Yet if we have learned anything from the study of physics, we have learned that there is always a transformative discovery just around the corner.

THE FUTURE OF THE PSYCHOLOGY OF RELIGION AND SPIRITUALITY IS PROBABILISTIC, NOT CERTAIN

Certainties have been undermined. Even drawing on psychology, our confidence in rationality has been undermined. The replication crisis has undermined our faith in scientific methodology (i.e., we must register studies) and findings (we need multiple replications before asserting something as scientific fact). Probability and uncertainty push us still more firmly in the direction of spirituality and pushes aside a focus on religion.

The focus on spirituality has grown even in the nine years since I drafted the first version of this chapter. But—and I admit to a bias here—a good thing to come from this (and there are many I could have selected) is that we have become interested in virtue. We are recapturing this sense of virtue from Aristotle and the Book of James in the Christian Scriptures, to the Muslim use of the concept of virtue during the “Dark Ages” and “Middle Ages” to Thomas’s recovery and Christian interpretation of virtue to today’s positive psychology. With the sense of virtue and its formation, renewed interest has been kindled in Christian formation, character formation, and spiritual formation. And I think that’s a very good thing after psychology’s focus on pathology, its roots, and its alleviation that marked its recent history since the end of World War II.

THE FUTURE OF THE PSYCHOLOGY OF RELIGION AND SPIRITUALITY STILL HAS ROOM FOR RELIGION

In speculating about the future of research in the psychology of religion and spirituality, we must remain cognizant of Berger et al.’s finding that most people are more involved in religion than in spirituality (see Berger et al., 1999). Namely, religion is alive and well worldwide and permeates countries, socioeconomic groups, and political systems. He describes interest in spirituality, however, as being largely localized to the academy, intellectual, and professional classes, and geographically concentrated in Western Europe and places influenced by Western European intellectual tradition—such as liberalism in the United States. Berger et al. argue that writers, artists, researchers, and university professors often believe that religion has heard its own death knell because those intellectuals travel to other countries and interact with people largely in the same profession as they—professors with professors, businesspeople with businesspeople. But at the 2000 census, the population in England was about 49 million. About 42 million claimed Christianity; 9 million, none; 1.5 million, Muslim; 0.5 million, Hindu; 0.39 million, Jedi Knight; 0.33 million, Sikh; 0.26 million, Jewish; 0.15 million, Buddhist; and 0.3 million, Spiritualist (<http://www.vexen.co.uk/UK/religion.html>). Clearly, even in England, in which few people actively participate in their religion, the major religions do not seem to be replaced by spiritualist religions. However, the numbers of spiritual-but-not-religious people are growing and are currently not insubstantial. Because we live in a technologically, interpersonally, and culturally interrelated flat world, it is likely that religionists, secularists, and spiritualists will interact and will influence each other across all boundaries. Boundaries

will be mutually penetrated. Ideologies will spread out. It is likely that humanistic, naturalistic, and cosmological (or transcendental) spiritualities will be increasingly embraced, but religious spirituality will also thrive as the systems interpenetrate.

We need a psychology of religion and spirituality, not just a psychology of religion or a psychology of spirituality or a secular psychology that is gutted of religious and spiritual attention. Readers of this chapter are in the academy, which Berger et al. (1999) name as one of those bastions of secularism and of spirituality. We should not delude ourselves into believing that religion is passé. Instead, we should turn our attention to it with renewed vigor, even as we turn our attention to the four different types of spirituality with enthusiasm.

Overview

In this chapter, I argued that general culture—witness the science fiction entertainment industry and results of the 2000 census for examples—is strongly influenced by the assumptions that have derived from modern science. Subatomic and relativistic physics and psychological science and neuroscience have fueled these four general cultural beliefs: (1) big numbers in time and space make anything probabilistic become likely; (2) we can be optimistic that this will eventuate in progress; (3) life is uncertain at root; and (4) life is all about relationships.

Concerning (1) and (2), I questioned the inherent optimism on the basis of realism. Big numbers do not always lead to positive outcomes, and we could imagine negative outcomes just as easily as positive outcomes and assume they would be inevitable. However, on the side of optimism, I noted that evolution selects for hope, which motivates inquiry and intentional adaptation. We do live in an open system, and by exploring and seeking to optimize communication across system boundaries, we provide more discovery opportunities.

The third proposition, that life is uncertain at the core, has unmoored spirituality from religion. However, it also has made room for humility, which in humans is, I think, a good thing.

Not only does the fourth proposition, that life is all about relationships, accord with postmodern philosophy (and thus finds resonance with many in our world that straddles modernity and postmodern living), but also the relationality of life might yield solutions to traditional puzzles like the nature of consciousness and provide an impetus toward relational spirituality—whether religious, nature, humanistic, transcendent, or self spirituality. Furthermore, and of focal interest to the present chapter and *Handbook*, relationality coupled with humility provides the key to developing new studies into spirituality. We must not only attend to religious spirituality but also to the five forms of spirituality that have derived (I argue) from the modern sciences. Each of these is defined in terms of close or intimate connection or relationship with a different object, and each has been formed primarily by the wonder, awe, and lack of determinacy found in different fields

of study—theology, psychological science, biological science, and physics, respectively. Thus, the future of our field, which has been traditionally the psychology of religion, has made its shift. The field is now, and increasingly will, develop as the psychology of religion and spirituality.

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Spiritual Development During Childhood and Adolescence

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Abstract

This chapter reviews psychological research on spiritual and religious development, with an emphasis on work published since the first edition of this handbook. This research area continues to blossom, with recent refinements in definitions and increased attention to sociocultural factors. A social–ecology model of spiritual development is emphasized here, with a focus on the family and parent–child communication. The contexts of culture and nature are highlighted as potent influences on spiritual development, though the latter has been largely neglected. There is value in studying the interaction of multiple dimensions of religiosity and spirituality on children’s outcomes. The role of religion on adolescent well-being has received extensive attention, with recent surge in interest about spiritual exemplars, adolescents who are viewed by people who know them as extraordinarily spiritual. The conclusion offers a critique of our field’s current paradigm, with calls for more research featuring culturally diverse (rather than largely U.S.) samples, qualitative (rather than quantitative) methods, and longitudinal (rather than correlational) design. The conclusion also calls for a person-centered, intersectional approach that respects the children and youth who are developing as spiritual and religious beings (rather than a variable-centered approach that prioritizes statistical and conceptual relations between variables and often treats participants’ demographic factors as “noise” to be controlled for in analyses). Additionally, our field should recognize other disciplines (namely, cultural anthropology and child theology/religious education) as having value for psychological understanding of religious and spiritual development.

Key Words: children, adolescents, spirituality, religion, family, social ecology, sociocultural, definition, exemplars, methodology

Introduction

Not long ago, religious and spiritual development were rather neglected domains of development, comprising a conspicuously tiny fraction of research on child and adolescent development (Benson et al., 2003; Boyatzis, 2003). Fortunately, spiritual development is now a significant domain in its own right. We see clear evidence of this at both ends of the scholarly pipeline, if you will—in dissertations and in major handbooks and special issues in the field, especially regarding spirituality. Recent reviews of the PsycINFO database reveal that the vast majority of dissertations and of peer-reviewed journal articles—almost

9 of 10—ever done on children *and spirituality* have been completed since 2000. As for *religion* and child development, the clear majority of dissertations and peer-reviewed journal articles ever produced have also come in the past 20 years, though with less dramatic growth than spirituality.

Spiritual and religious development have received increased attention in major handbooks as well, demonstrating the tremendous progress that the study of religion and spirituality in childhood has made into mainstream psychology like never before. Since the last edition of this handbook and this particular chapter (Boyatzis, 2012), several major publications have appeared. Perhaps the most significant is a lengthy chapter by King and Boyatzis (2015) in the most recent edition of the prestigious *Handbook of Child Psychology*, long recognized as the “bible” in developmental psychology, whose first edition was published in 1946. The King and Boyatzis chapter was the first to emphasize research and theory and to be included in one of the *Handbook’s* research volumes. Additional proof for this growth comes in another handbook chapter, this by Mahoney and Boyatzis (2019), which was the first chapter on religion and parenting to be included in the *Handbook of Parenting*, now in its third edition. Within the psychology of religion and spirituality, a chapter on religion in childhood (Boyatzis, 2013) appeared in the landmark two-volume *APA Handbooks of Psychology, Religion, and Spirituality*. Several special issues have appeared since the last edition of this handbook (Miller, 2012), including an issue in *The British Journal of Developmental Psychology* on culture and religion in childhood and adolescence (Richert et al., 2017) and an issue of *Journal of Research on Adolescence* (Hardy & King, 2019a). There is thus unequivocal, booming progress in the psychological study of religion and spirituality in childhood and adolescence.

Challenges and Progress in Defining Spiritual Development

Attempting to define spirituality, especially as distinct from religion, continues to challenge us. In the last version of this chapter (Boyatzis, 2012) I often used “spiritual/spirituality” and “religious/religion” interchangeably, as restricting the discussion to only spirituality research would be to systematically ignore a wealth of relevant information from research that had used “religion” and that used the terms interchangeably. In this chapter, I continue this interchangeable use to some degree, because the distinction is not yet solid. In addition, most work to circumscribe spirituality has been done with adults and adolescents, raising the question of whether such definitions are appropriate for children. For example, many scholars (see King et al., 2014) define spirituality as involving a search for the sacred, either God or some aspects of life with divine essence and significance. Some definitions emphasize a pursuit of ultimate meaning and belongingness. Are young children capable of such a search? Are they cognitively ready, neurologically mature enough to weigh such weighty matters? Although there is obvious appeal of articulating a single definition of “spirituality” that applies to all people and all ages, such attempts may

be misguided. Since Piaget we have appreciated that “intelligence” in children is qualitatively different from intelligence in adults—and even adolescents—requiring different definitions, operationalizations, and measurements. Spirituality may be analogous, the definition and measurement of which may require qualitatively different approaches for spirituality in children than adolescents (and adults).

If there is one component of spirituality on which scholars converge, it is that a core of spirituality is a person’s relational consciousness and sense of connectedness to the transcendent, or what is beyond the self. To my way of thinking, this is the quintessence of spirituality that applies to all ages, from infants to the aged. Of course, the specific nature of that transcendent entity or entities will change over time and with development, but that connectedness to what is beyond the self is a spiritual constant. As for defining “spiritual development,” there are challenges. One metatheoretical constraint comes from cultural assumptions about spirituality and spiritual development, and the very nature of children. Whereas a Western assumption is that spiritual maturity requires passage of time (Mattis et al., 2006), many traditions and communities, whether indigenous peoples or some Eastern religions, attribute spiritual capacities to children even before birth. To understand spiritual development, then, involves answering “When does selfhood/beingness, and therefore spiritual life, begin?” (p. 283). Academic, and hence secular, social science has not wrestled with this fundamental ontological question, though scholars in comparative religion and children’s theology have (e.g., Bunge, 2008). Nevertheless, within a Western social–scientific worldview there has been progress toward definitions.

An early and helpful definition of spiritual development asserted that spiritual development is qualitative growth in “the intrinsic capacity for self-transcendence, in which the self is embedded in something greater than the self, including the sacred” (Benson et al., 2003, p. 205). Other scholars have added that this capacity for self-transcendence “propels the search for connectedness, meaning, purpose, and ethical responsibility” (Yust et al., 2006, p. 8). These definitions have been largely endorsed in recent empirical research using quantitative and qualitative methods on youth in many different countries with different dominant religions, such as: religiously and culturally diverse adolescents in the United States (King & Boyatzis, 2015) to secular adolescents in the Czech Republic (Kráčmarová et al., 2019) to Roman Catholic adolescents in Italy (Ianello et al., 2019) to Protestant adolescents in New Zealand (Donaldson et al., 2019) to Catholic and Protestant adolescents in Mexico and El Salvador (King et al., 2019). Given the evidence, we can embrace transcendence and connectedness as the core of spirituality. It is understood that spiritual development can arise in and be shaped by many social and physical contexts—and organized religion is only one. Others views spiritual development as entailing the child’s hungry search for, in William James’s words, the “something more” (Johnson & Boyatzis, 2006), a transcendent seeking inherent in children.

The nature of that seeking, however, probably has different effects on children of different ages. For example, the literature on adolescent spirituality emphasizes that spiritual

transcendence gives meaning to youth but also serves to inspire adolescents to contribute to the greater good through prosocial, moral action (King et al., 2014; Lerner et al., 2008). Is this particular component of spiritual transcendence an age-appropriate criterion for young children? It is unclear when in childhood (prior to adolescence) such an effect toward social contribution begins. I return to this topic later in the section on adolescents who are Spiritual Exemplars (King et al., 2014).

Across various subdisciplines of psychology, there is consensus for the “biological argument” for innate spirituality (Hay et al., 2006), the notion that spirituality is a natural human propensity, consistent with the assertion by Miller (2015, p. 18) that “spirituality is in our nature,” and should be viewed as a core dimension of human development. Thus viewed, spirituality is a dynamic quality of the child cultivated and shaped by multiple socializing agents and personal experiences, potentially within but also outside organized religion. A crucial tenet here is that children’s relational spiritual consciousness emerges *prior* to any religious socialization: Children are spiritual beings first, possessing “innate and foundational spiritual knowing” (Miller, 2015, p. 39) and then are acculturated in a multitude of ecological contexts of family, religious tradition, school, peer group, and culture, all operating within a particular moment in historical time. For many of the world’s children, this acculturation shapes a child into particular beliefs, rituals, and faith in accord with local religion. Thus, children’s spiritual essence can be cultivated (or quashed) by countless socializing factors.

It seems that across all ages, *the core of the spiritual is a sense of connectedness and relationality to what is beyond the self; a transcendental connectedness and awareness* that has been termed “relational consciousness” (Hay & Nye, 1998). Spirituality, then, precedes and transcends religious doctrine; God or some other supernatural divinity is not a priori the only transcendent entity with which a child could experience connectedness. Of course, a relational consciousness extends not only to others outside the self—it can also refer to an awareness of one’s own, deepest self. This increase of self-awareness is a critical element of spiritual ontogenesis, making for something of a developmental paradox: It is by going outward in our relational consciousness that we also go more deeply inward. Given the myriad influences on children’s spirituality, a social ecology model illuminates a complex, extended web of factors.

Recent Attempts to Measure Children’s Spirituality

Scarce is the study that offers an actual measurement of children’s spirituality that meets standard criteria. Research on children’s spirituality remains “at an early stage . . . with no established body of research to develop reliable and valid quantitative measures” (Houskamp et al., as cited in Fisher, 2009, p. 275). There are rather few investigations of children’s spirituality from a quantitative perspective. One literature review (Fisher, 2009), obtained research that assessed dimensions of spirituality in children and/or youth or teachers. Fisher found three dozen pertinent articles, but closer examination of these

sources revealed that most of the studies examined adolescents, college students, and/or teachers and half a dozen specifically studied children. Even then, most assessments of “spirituality” actually measured subjective well-being or quality of life, and few addressed transcendent connectedness.

Prior to his literature review project, Fisher (2004) conducted a quantitative study of a large sample of Australian children ages 5 to 13 by creating surveys with 40 items to learn how children feel about certain relational experiences or beliefs beyond the self and how often children actually engage in those experiences. A factor analysis revealed four factors comprising a “feeling good” construct: family, God, environment, and self-concern. All four factors were significantly and positively correlated, suggesting a broad cluster of affective connectedness between self, family, God, and the natural environment. The same set of factors emerged when analyzing children’s experiences. This Fisher study suggests that, at least in Australian children, they had a coherent perception and felt experience with their family, with a God, with nature, and with themselves. Future research could continue to build on this approach to learn how these constructs—all grounded in relationships—constitute and shape children’s spirituality.

A team of developmental scientists in Canada has conducted studies that resulted in a new quantitative measurement and clearer picture of the components of children’s spirituality. In their first study, Moore et al. (2012) conducted open-ended qualitative interviews with 60 schoolchildren of diverse religious and ethnic backgrounds to learn about children’s personal perceptions, in their own words, of spiritual concepts. Their coding resulted in many different themes but six were most common across children. Five themes focused on God (though children used different terms such as Jesus, Allah, Hindu gods, and so on, and they discussed with the researchers the essential similarity across their different terms). The first theme focused on positive feelings when praying or talking to God (mentioned by 78% of children), God as a helper (83%), God as a listener (67%), God as comforting (48%), and the location of God (88%; e.g., in a child’s heart, or heaven). The sixth theme was in reference to a soul or spirit (80%). (The themes of God as helper, listener, or comforter may pose a distinction without a difference.) These findings suggest that relationship with God or some supernatural divinity is central in school children’s spirituality. Unfortunately, the article provided sparse information on the questions children were asked; we are told only that there were “several thematic clusters” of questions, and the only example regarded prayer. The focus on God and God’s qualities in children’s responses may have been shaped by the questions, leading to an incomplete depiction of children’s spirituality as comprised only of their feelings and thoughts about God and not, say, views of or relationships with other entities (e.g., humanity and nature).

In their subsequent study, Moore et al. (2016) used children’s open-ended responses from their prior study (Moore et al., 2012) to create a set of 64 Likert-scale survey items on various aspects of spiritual and religious issues. They administered the surveys to a large diverse sample of schoolchildren (7 to 11 years of age from diverse religious and cultural

backgrounds). An exploratory factor analysis eliminated 33 items and resulted in 12 factors. The authors did not report all 12 in their publication but presented the three factors with the strongest loadings and which made the most theoretical sense to the researchers. The first factor was labeled God's comfort, reflected in items such as "I pray to God or talk to God when I feel sad" and "God can make people feel better." The second factor was God's omnipresence, reflected in items such as "God always knows how I feel, even without talking" and "I think God listens to everyone." The third factor was duality, reflected in the item "every person has a body and something inside them, like a soul or spirit." The priority of children's relationship with God emerged clearly in this study, as in their prior qualitative one (not surprising given that the former study was inspired by the latter). Again, this study did not report on whether a relational consciousness with any other entity was included in the measures, nor on more emotional or mystical experiential aspects such as awe or wonder.

Another study may provide some antidote. Sifers et al. (2012) surveyed a sample of 175 school-aged students, average age 11 years, from relatively low-income families in the Midwestern United States. The authors designed a Youth Spirituality Scale, creating 20 Likert-scale questions that were influenced by classic qualitative works that revealed the rich depths of children's spiritual and philosophical natures. (The two influential classic works deserve mention: Sofia Cavaletti [1992], *The Religious Potential of the Child*, and Robert Coles [1990], *The Spiritual Life of the Child*. Both are marvelous examples of the critical role that qualitative methods—interviewing children, collecting their artwork, observing their play—holds in understanding children's spirituality.) A factor analysis of responses revealed two major factors. One was relationship with God (e.g., "how sure are you that God, Higher Power, or Ultimate Reality is part of your life?") and the other was relationships with others (e.g., "How often do you treat people like you really care about them?"). This study clarified through quantitative means that a relational consciousness is at the core of children's spirituality as well as distinguished children's spiritual relationships with a divine supernatural figure from their spiritual relationships with earthly figures such as family and friends.

Factor-Analytic Approach to Understand Spirituality and Religiosity With American Adolescents

Dowling et al. (2004) factor-analyzed data from 1,000 adolescents and distinct latent constructs of spirituality and religiosity emerged. Religiosity consisted of four variables: beliefs about the impact of religion on one's behavior, one's religious views (e.g., about God), feelings about God's restrictions and rules for people, and being involved in a faith institution. The spirituality factor comprised helpfulness toward others and lower preoccupation with the self. These results are intriguing because the items about a "vertical" relationship with a supernatural and divine entity loaded on the religiosity factor that was comprised of other aspects of organized institutional religion (which involve, of course,

numerous interpersonal relationships). In contrast, the adolescents' spirituality reflected their sense of more "horizontal" and nonreligious relationships—with others and with the self. This distinction may illuminate important difference between religion and spirituality. And from a developmental perspective, the prior findings on children's spirituality from both qualitative and quantitative methods (Moore et al., 2016; Moore et al., 2012) revealed the centrality of God, or the vertical relationship.

In factor-analytic studies of adults (Piedmont, 2005), spirituality comprised three central factors: connectedness, or the sense of personal connection and care for others; prayer fulfillment, or the joy and contentment from praying; and universality, or the belief in the unity and purpose of life. Based on the information presented in this section, we have mounting empirical evidence that the component of adult spirituality that emphasizes connection to and care for others likely builds on the prior ontogenetic growth of children's and adolescents' spiritual component of relationality with others.

The Value of Assessing Multiple Contexts: A Social–Ecology Approach

Given that children develop in a complex social ecology of contexts and relationships (Bronfenbrenner, 1979), we need to examine how multiple contexts influence children's spirituality. These contexts range from the most proximal "microsystems," such as family, school, the peer group, or the religious community, to more distal ones, such as macrosystem dominant cultural values and ideologies. This model helps us examine the role of different contexts on religious and spiritual development. Most research (and hence this section) will focus on the family. Much of the literature pertains to religious development, so in this section any boundaries between religion and spirituality become blurred.

Spiritual development can be understood through a sociocultural model that emphasizes the influence of knowledgeable adults who use guided participation in culturally meaningful practices to help the child move to higher competence (Vygotsky, 1978). Hence, parents, relatives, clergy, religious educators, youth ministers, and other adults can act as mentors who guide apprentices—children and teens—to more advanced levels of understanding and competent engagement in practices, creeds, and modes of expression. Some of these may be explicitly religious; others may be outside any formal tradition.

The Family as a Context of Spiritual and Religious Development

Although social–ecology models posit that it takes a village to raise a child, the family is "the first village" of religious and spiritual development (Boyatzis et al., 2006). As Miller (2015) stated, parents are children's "spiritual ambassadors" who can support children's inchoate spirituality with ongoing spiritual dialogue. Indeed, the studies described above (e.g., Moore et al., 2016) found that children who scored higher on all three spirituality factors—God's comfort, God's omnipresence, and Duality—had parents who reported higher religiosity compared to children whose parents reported lower levels of religiosity.

A transactional model that posits that a bidirectional dynamic between children and parents (Kuczynski, 2003) captures much of what transpires in family discussion about religion and spirituality. This characterization of reciprocal, recursive interaction contrasts sharply with traditional views that presume parents (and other adults) influence children in a unilateral P→C fashion. That “transmission” model dominated socialization research for decades, but many scholars now endorse a more dynamic conceptualization of adult–child interactions as having bidirectional and often multidirectional flows of influence.

Of course, whatever input children receive from their parents must be processed through the child’s inherent cognitive structures (see Boyatzis, 2005) but may also be mediated through external factors such as sibling relationships. In this view, children’s beliefs may undergo initial revision due to parent testimony (Harris & Koenig, 2006) but also may show ongoing revisions due to “secondary adjustments” through “third-party discussions” (Kuczynski, 2003, p. 10) that could include siblings and recursive discussions between multiple family members; these dynamics are common in family life. Our field knows little about these multidirectional dynamics in which parents and children influence *each other’s* spiritual growth (Mahoney & Boyatzis, 2019). Most families likely have a “parent-as-mentor, child-as-apprentice” structure, but in other families there may be more fluidity between these roles. Some parents—especially African American, Caribbean, and African—speak of young children as “old souls” or as having “come here to teach me something” (Mattis et al., 2006). Many cultural groups view children as spiritual beings at birth, “spiritual emissaries” from the “other side” of an ancestral spirit realm (e.g., Gottlieb, 2006). The culturally influenced discourse styles and parental attributions of children as spiritual beings should be studied more.

Within these dynamics, it is likely that parents influence their children as in other realms, through induction of beliefs (from subtle persuasion to dogmatic insistence), to participation in religious rituals (e.g., Legare & Nielsen, 2015), disciplinary tactics, rewards and punishments, and behavioral modeling (Francis & Brown, 1990; Silberman, 2003). Ample evidence points to the positive link between parental warmth and closeness with their children and any successful sharing and transmission of religious belief (e.g., Bengston et al., 2013). Although progress has been made to understand such processes, there is much more to learn. Perhaps the best extant resource on parenting, religion, and spirituality is a chapter by Mahoney and Boyatzis (2019), the first chapter on the topic in the long-running *Handbook of Parenting*.

Proximal Processes in the Family: Parent–Child Conversation

Ongoing conversation about religion is an important mechanism through which parents and children co-construct religious and spiritual meaning. Studies have examined parent–child communication in the home. In one mixed-methods study of Christian families (Boyatzis & Janicki, 2003) with children, parents completed a religious-conversation diary for two weeks as well as a survey on the topics, frequency, setting, and processes

in such conversations. Diary entries and parents' survey data converged on frequency of three discussions per week about religion and spirituality. Content analyses of diaries revealed that children were active participants in these conversations—they initiated and terminated about half of conversations, spoke as much as parents did, and frequently asked questions and offered their own views. These data suggest that children are active participants rather than passive recipients of religious ideas “transmitted” by parents, and that in many families a “bidirectional reciprocal” style is more prominent than a unilateral parent-to-child dynamic. This bidirectional style was identified in another study (Flor & Knapp, 2001) of Christian families in the rural South. Regression analyses revealed that frequent bidirectional communication about religion predicted children's importance of religion. Children's religious behavior and belief was predicted by higher bidirectional faith discussion with parents, patterns especially apparent in same-sex dyads (mother–daughter, father–son).

A third study assessed more qualitative aspects of family communication about religion. Dollahite and Thatcher (2008) surveyed and interviewed parents and adolescents in highly religious Jewish, Christian, and Muslim families, who described various techniques through which parents tried to shape youths' religiosity (e.g., family devotions, church attendance, and praying with children). However, in interviews, parents and adolescents both cited conversations more frequently (more than 75% of each group) than any other method; the adolescents rated conversations as the most important means through which parents shared their faith. The families revealed two discourse styles: “youth-centered” conversations that focused on the adolescents' spiritual needs and issues and “parent-centered” conversations that emphasized parents talking (rather than listening) to children and not prioritizing the adolescents' views or concerns. In this sample, youth-centered talks were described by adolescents and parents as more positive experiences and were also the more common style, a model akin to the bidirectional parent←→child dynamic (Boyatzis & Janicki, 2003; Flor & Knapp, 2001). More recent research has characterized family communication as emphasizing religious firmness or religious flexibility based on parental prioritization of loyalty to their religious beliefs and practices or a willingness to accommodate and adapt to changes in family needs and circumstances (Dollahite et al., 2019). These qualities were explored in Christian, Jewish, and Muslim families, and the authors suggested that an integration of these two qualities may be particularly effective in religious socialization, with a firm commitment to sacred practices and beliefs but with room to change or adapt as needed.

Parents occasionally discuss death with their children, a topic rife with spiritual meaning. Most parents in the United States seem uncomfortable with such discussions and often view it as a taboo topic for which their children are not ready emotionally or cognitively. In some U.S. samples, 75% of parents protect children from the topic (Rosengren et al., 2014), though in a wide range of other countries parents are more comfortable discussing death (e.g., in Denmark, Boyatzis, 2019; in Canada, Renaud et al.,

2014; in Maori culture in New Zealand, Jacob et al., 2012). Explanations about death and the afterlife that involve religious images and themes rather than purely biological accounts are more likely to be shared by parents who are highly religious (Renaud et al., 2013), which may explain why children from highly religious families are more likely to use religious themes in their own explanations of death and the afterlife (Rosengren et al., 2014). In a recent qualitative study of parents whose families suffered a fairly recent death (Zajac & Boyatzis, 2021), almost 75% of mothers said that their spiritual and religious views shaped their conversations about death with their children, and 62% claimed that their children's spiritual and religious views, specifically about God and the afterlife, had changed due to such conversations.

Taken together, these studies indicate that many families use an open, bidirectional communication style. These studies also provide data that such conversations have positive impact on youths' religiosity. Many questions remain for future research on parent-child communication, such as, How do parent and child personality variables affect faith-communication styles? Does spiritual disclosure in families reflect, or cause, healthy parent-child intimacy in general? Does religious communication uniquely contribute to children's well-being, beyond other parenting variables? How do families of different religious affiliations differ in religious communication style, and to what effect?

The Spirituality in the Child Is Around the Child

Children's spirituality is shaped, for better or worse, in many different social and structural contexts, such as the home, school, places of worship, media and the internet, the peer group, and so on. Though space limits preclude treatment of all these contexts, one recent example of research that examined multiple influences on youth measured religious and spiritual support reported by adolescents at private Christian schools in the Los Angeles area (Bjorck et al., 2019). The adolescents confirmed a complex social ecology of their own spirituality, identifying significant support from their parents, God, peers, and spiritual leaders (e.g., youth pastors) as crucial in their life satisfaction and sense of hopefulness. Each of these other supports uniquely predicted healthy outcomes, suggesting that they are distinctive and vital influences on youth spirituality in their own right.

The Context of Culture: All Religion Is Local

To say that all religion is local, a paraphrase of the famous "all politics is local" axiom, reflects one of the strongest and yet, paradoxically, most overlooked influences on children's religious and spiritual growth: where children are born and grow up. A child born into an Amish community in rural Pennsylvania will not grow up Muslim or Hindu—or Roman Catholic. A baby born in Jakarta, Indonesia, will unlikely become Jewish or Methodist. Culture is a vital context in a social-ecology model, and our field needs more study of cultural diversity internationally as well as diversity more locally within North American borders. That our field has excessively focused on people who are WEIRD

(Western, educated, industrialized, rich, democratic) is inarguable; the majority of published findings are based on just 11% of the world's population (Thalmayer et al., 2020).

When scholars think of cultural diversity, it is easy to picture crossing national borders to study non-English-speaking, non-WEIRD (or at least less WEIRD) populations. But there is cultural diversity within our own U.S. borders, and it can be troubling to see how easily scholars can speak about their findings as if they generalize to other cultures and subcultures. So great is the diversity in United States, and not just on obvious markers such as social class and race and gender but on age and religion and geography, too, that my impression is that we are still far behind where we should be in appreciating the truism that all religion is local.

As a child growing up in a heavily Roman Catholic suburb of Boston (in the 1960s—, the most Catholic major city in the country), I witnessed how even in my smallish town there were two Roman Catholic communities—the Italian one and the Irish one. Thus, to say that religion is local is to evoke another axiom: context determines meaning. Here, I refer to religious meaning. Local culture is intertwined deeply with religion, whether we are studying Roman Catholics in Boston—or in border towns in Texas—or Latter-Day Saints in Salt Lake City—or Hawaii. The beliefs and practices and traditions of local culture, including any indigenous religious and spiritual belief and practice systems, shape the nature and expression of young people's religion and spirituality and their personal meaning and function of those beliefs and practices (Abo-Zena & Midgette, 2019).

As a fascinating special issue of *Religions* (Abo-Zena & Rana, 2019) makes clear, there is a universal interaction of religion and local context and culture. We see it in the different roles religion plays for rural versus urban youth in West Virginia (Olson & Metzger, 2019) or in northern Thailand where urban adolescents' exposure to globalization was linked to a more individualistic view of their religion and faith whereas rural adolescents with much less exposure were more centered on family and community (McKenzie et al., 2018). We see the interaction of culture and local religion in the spiritual growth of Fulani children growing up in seminomadic tribes in West Central Africa, as their traditional indigenous spirituality is becoming syncretized with incipient Muslim traditions (Johnson, 2000). A study of American Muslim adolescents, most from immigrant families, were asked if their religious practices changed as they got older (Cain et al., 2017). The majority said they had, and primarily in response to exposure to new people and religious knowledge and new social settings. The youth who claimed to have changed in religious practice, compared to those who did not, also were higher in exploration of their ethnic identity and believed they suffered more discrimination. For adolescents in Italy, a nation overwhelmingly Roman Catholic in religion, cultural variations make the country “a context where religious differences are few but cultural differences are many” (Ianello et al., p. 35). Another fascinating context to study spirituality and religion is in nations where religious faith is conspicuously lacking. One such country is Denmark, one of the most secular, “exceptionally nonreligious” (Arnett & Jensen, 2015) nations in the world, with

very low rates of worship attendance and belief in God (Zuckerman, 2008). Nevertheless, religion permeates many areas of civic life, as citizens are born into the state (Lutheran) church, about 75% (the other 25% opt out) of the population pays a nominal tax to the state church, and many young adolescents go through a confirmation process primarily as a cultural rite of passage. Denmark poses something of a paradox, then, for children's religious and spiritual growth. Some qualitative work has examined how Danish mothers discuss religion and spirituality with their children (Boyatzis, 2019), and a recurring theme from mothers was the extensive autonomy they grant their children in matters of personal belief and practice. Parents emphasize to their children the importance of religion in Danish culture and history, including the "old Nordic gods and myths," but rarely in terms of a personal faith. For most Danes, religion is something to know about, not live. Even when discussing issues such as death, the afterlife, and morality, Danish parents stress children's need to form their own opinions and beliefs, including whether to participate in common religious tradition of baptisms and confirmation. (The choice to attend church is usually a moot point, as most Danish parents do not attend.) Other qualitative research from Denmark is consistent with these findings, as emerging adults are not religious in a typical sense yet went through the confirmation process as young adolescents (Arnett & Jensen, 2015). Denmark is a complex cultural milieu where parents' prioritizing children's freedom operates within a broader macrosystem of secular absence of religious "faith."

Psychologists need to move beyond WEIRD populations, though within them there are complexities and subcultures that ought to be studied and compared to learn of how spiritual and religious constructs interact differently (or similarly) across them. Within cultures we should examine the interplay of children's inchoate spirituality with local organized religious culture(s) that are within local ambient culture(s) to understand how and why spirituality grows or not.

Children and Nature

An area ripe for examining children's spiritual experience is outside, in nature. Richard Louv, whose book launched a back-to-nature movement for children, has written that "all spiritual life begins with a sense of wonder, and one of the first windows to wonder is the natural world" (Louv, 2005, p. 356). In nature children (and adults) experience insights and feelings that we might consider intuitive and ineffable, beyond reason and words. Being in nature thus allows children to exercise their intuitive mode of consciousness, an experiential, nonverbal one that entails feelings and insights often not used in a rational, logical, verbal mode. We might agree with a theologian that "the development and integration of both modes of consciousness is essential to the spiritual life" (Westerhoff, 2000, p. 70).

Children may feel a sense of kindred connection with living things that leads them to feel connection and even nurture. Such moments in nature may provoke a sense of

sacred significance, which may be most evident when children witness natural demise. I once observed a group of children holding a “funeral” ceremony for a beloved tree as a beloved meeting place in their neighborhood that had been recently cut down. In reverent tones and gestures, these children gathered around the last vestige—a lowly stump—of their physical and psychological home base, with flowers to lay on the stump and simple prayers of thanksgiving. I know of boys who held funerals for frogs they had found dead near a stream, building a makeshift cross they placed at the shallow grave they solemnly dug. A preschool teacher reported how children in her class created a ceremony to cope with the death of the class goldfish, and then buried it outside along with notes they had written (with teacher’s help) with the goldfish (Schein, 2014). These connections to nature may be vital to their sense of spiritual connectedness to what is beyond (and profoundly different from) the self. This is a deserving area of further empirical study.

Being in nature often evokes and cultivates in children a sense of awe, of wonder, of joy, of inner peace (Schein, 2014). The very abstractness of these experiences for children may be one reason why they have been studied so little by psychologists. This is unfortunate, as moments of deep, ineffable significance probably happen for many children in natural settings, and those experiences enhance a sense of connectedness to what is beyond the self. Natural settings evoke curiosity and wonder about the world, qualities crucial to a fuller engagement with life and others. Nature can be an optimal setting for spiritual moments that are “direct, personal, and often have the effect, if only for a moment, of waking us up and expanding our understanding of who we are and what our place is in the universe” (Hart, 2006, p. 164.). However challenging, our field should attempt to capture and understand these moments.

In one study of children’s well-being, Fisher (2004) discovered a distinct factor for the environment in children’s positive affect, with experiences such as being in the garden, watching a sunset, going for a walk in the park, and looking at the stars being associated with children saying these experiences made them feel good. It is interesting that children’s scores on the environment factor correlated positively with their scores on the God factor (i.e., how much they reported that talking with God or thinking about God made them feel good) as well as their scores on feeling good from thinking about their family (e.g., knowing they are in a family, knowing their family loves them). Collectively, these findings suggest that children experience a constellation of interrelated feelings from being connected—to nature, to God, to family—and that children’s relationship with nature should be considered in our efforts to understand, define, and measure children’s spirituality.

The Value of Measuring Multiple Variables and Their Interactions

Given the multifaceted nature of religiosity and, of course, the complexity of parenting, we can assume that when researchers measure different religiosity variables they will better

capture the role of religion in parenting and family life. Here I describe a few studies that confirm the value of examining the interactions between multiple dimensions of religiosity in the family.

Murray-Swank et al. (2006) measured several indices of religious belief in mothers including their theological conservatism and sanctification of their roles as parents, or how much the mothers imbued their role with sacred and holy qualities and saw themselves as doing “God’s work.” Neither conservatism nor sanctification were related independently to the mothers’ use of spanking. However, in regressions, mothers’ use of spanking was predicted by the interaction between mothers’ conservatism and sanctification scores. Specifically, mothers who were theologically conservative were more likely than other conservative mothers to spank their children if they also viewed their parent role as sacred and holy; in contrast, mothers who were theologically liberal were less likely than other liberal mothers to spank their children if they also viewed their role as sacred and holy. Thus, “the link between sanctifying one’s role as a parent and using corporal punishment . . . was moderated by how conservative or liberal a mother was in her interpretation of the Bible” (p. 283).

Another study examined sanctification of the parental role in relation to children’s moral conduct. Volling et al. (2009) examined parental disciplinary strategies and beliefs about the sanctification of parenting (i.e., endowing it with sacred and divine significance). Mothers’ and fathers’ sanctification of parenting was positively related to their use of positive socialization techniques (e.g., approving good behavior and recognition when child was nice) and use of induction (e.g., focusing on consequences of the children’s wrongdoing). A key finding was that children’s conscience development was strongly predicted when parents’ use of positive socialization was combined with their sanctification of parenting. A similar interaction obtained for children’s affective discomfort; that is, after acting badly, children’s guilt, apologizing, and concern for others was highest when fathers and mothers used positive socialization techniques *and* were high in sanctification of parenting.

A third study (Dumas & Nissley-Tsiopinis, 2006) analyzed a diverse sample of families with preschoolers. Parents reported on their sanctification of the parenting role and on their style of religious coping in response to children’s oppositional behavior. Sanctification did not predict children’s behavior. Interestingly, children’s oppositional behavior increased when parents’ overall religiousness was low and when mothers engaged in frequent negative religious coping (expressing anger at God, feeling God has abandoned them). This problematic behavior in children was most apparent only at the intersection of different expressions of religiosity.

Collectively, these studies demonstrate the power of measuring multiple variables of interest and analyzing their interactions to more clearly understand how religion is associated with development. A study by Desrosiers and Miller (2008) demonstrated the value of assessing multiple constructs and testing their links to adolescent well-being

in a large mixed-ethnicity sample to tease apart effects of congregational religious factors from more personal spiritual ones. The measures were derived from subscales of the Brief Multidimensional Measure of Religiousness/Spirituality. Youths' higher alcohol use was predicted by lower scores on what the authors referred to as "personal spirituality" variables—forgiveness, daily spiritual experience, and positive religious coping—and by lower scores on public religion variables, such as perceived support from one's congregation. When youth perceived more rejection from their congregation (measured on items such as "how often are the people in your congregation critical of you and the things you do?"), they scored higher in anxiety. Desrosiers and Miller suggested that a more personal spirituality—an "internalized, dyadic relationship" with God—protects against an intrapersonal spiritual void that alcohol may fill. Protective functions are also provided by the religious community that reduces anxiety in adolescents, perhaps due to the social support given in a congregation. But when adolescents feel that their congregation is unsupportive, they suffer more anxiety. The causal arrows between these variables are uncertain, as the authors recognize, but their multiple measures helped demonstrate how different religious and spiritual dimensions were related differentially to psychological outcomes.

Spirituality and Adolescence

In the not-too-distant past, ample evidence suggested that religion had an important place in the lives of American adolescents. One national study (Smith, 2005) informed us that 51% of adolescents said that religion was "very" or "extremely" important in their daily lives, and in another (Smith et al., 2003) nearly one-third of youth said religion was "very" or "pretty" important. However, the American religious landscape has changed dramatically in recent years, showing that those earlier publications are outdated. In more recent national surveys (Pew Research Center, 2020) only 24% of American adolescents claim that religion is "very" important to them, and about 4 in 10 American adolescents say that religion is "not very" or "not at all" important to them.

These recent cohort changes underscore the need for researchers to continue to examine how religion and spirituality matter in contemporary youth who are living in a different social ecology of religion. Specifically, what does the marked decline in youths' affiliation with organized religion in the United States mean for their spiritual lives? There has been widespread secularization throughout European countries; to what effect for youth? For youths who are still adherents and followers of their (parents'?) religious tradition, how are they affected by broader chronosystem changes in the national scene? Since the last edition of this handbook, two exigencies have swept the United States and much of the planet—concern about social justice and about the health of the planet. One wonders how youth in the United States are affected by the recent rise in White Christian Nationalism and religiously inspired hate groups and hate crimes. Might these sociocultural events lead some children or teens to push away from religion? The international energy in the Black Lives Matter movement is another recent development

with intense youth involvement. How is young people's sense of spiritual connectedness to others, either their own or different racial and ethnic groups, affected by all these contemporary changes? The majority of American adolescents are afraid and worried about climate change (Kaplan & Guskin, 2019), and some adolescents, such as Greta Thunberg, have taken leadership roles themselves in an international climate movement (Bandura & Cherry, 2020). A constant of culture is change. How have recent changes in religious, political, and ideological landscapes of young people's lives affected their spirituality?

While we await such inquiries, the past two decades have made abundantly, empirically clear that religion and spirituality are assets in adolescents' lives, with salutary links to mental health, coping, self-control, and lower drug use, among other outcomes (for reviews, see King & Boyatzis, 2015; Pearce et al., 2019). This generalization comes with two caveats. First, religion has no monolithic main effect on outcomes but often works in synergy with other constructs. Second, most past studies have not confirmed specific mechanisms, though a recent special issue (Hardy & King, 2019a) enumerates many possibilities.

Religion and spirituality are complex constructs in adolescent psychology, as they have ambiguous, often overlapping conceptual meanings and blurred boundaries. As some recent scholars have noted, "examination of religious behavior and spirituality as one construct does not fully capture their unique relations to positive youth outcomes. Rather . . . behavioral and psychological aspects of religiosity and spirituality operate differentially and interactively" (Olson & Metzger, 2019, p. 6). Now I turn to an area of inquiry in adolescent spirituality that has blossomed since the last edition of this handbook.

Spiritual Exemplars

Are there some youth who are remarkably spiritual, who embody the essential characteristics of spirituality to an extraordinary degree? These are spiritual exemplars, and they have been a focus of study by an international team, led by Pamela King, that has employed exemplar methodology to study such youth. Exemplar methodology relies on community members to nominate individuals who, in a given domain, "embody a psychological construct in a highly developed manner" (King et al., 2014, p. 191). This method, then, is a form of purposive or intensity sampling to create samples of youth who are studied in depth.

The labor-intensive identification of these exemplars deserves description. With the goal of identifying exemplars from different cultural and religious and spiritual traditions, King et al. (2014) first used the social science literature to cull many concepts related to spiritual development. They then generated nomination criteria that underwent four rounds of iterative review by a large team of advisers (a mix of scholars and practitioners) from around the world and different religious traditions who refined the criteria using their own understandings, shaped by their culture and religion. King then contacted more

than 80 persons to help with nominating spiritually exemplary youth from their communities. Eventually, a large sample of youth from six different countries were selected and were then judged by their nominators on 15 criteria related to spirituality, such as their beliefs, passions, virtues, service, influence on others, and more; nominators also wrote an essay on why the youth should be considered an exemplar.

From that extensive process, King and colleagues chose a final sample of 30 youth, from 12 to 21 years of age, balanced by gender, from many different religious backgrounds, countries, and continents. These youth were interviewed about their spiritual understanding and experiences. Analyses revealed that a major theme was a strong sense of *transcendent awareness* of something beyond themselves and the ordinariness of daily life. An acute sense of connection to and relationships with others were dominant. For most exemplars, a connection to the divine was central, though several who did not believe in God expressed connection to absolute truth and meaning. Connection to family was common, and then connections to humanity or nature. A second major theme was *fidelity*, or commitment to their beliefs and values. A large majority of exemplars had specific, strong values and moral convictions and felt compelled to live in accord with them but expressed openness in questioning their convictions and considering different views. The third major theme was behavior that intentionally expressed the exemplars' values and transcendent feelings, often through acts of leadership and service. The findings also demonstrated that the exemplary adolescent spiritual journey is not done alone. Exemplars described myriad influences on their spirituality, with the sharing of rituals and spiritual experiences with families and friends often mentioned.

This recent work on adolescent spiritual exemplars is ongoing, with many questions to explore. One open question is whether there are the equivalent of spiritual exemplars in *childhood*. It seems that the youngest child studied in the spiritual exemplar research was 12 years old (P. E. King, personal communication, April 15, 2021). Researchers could solicit nominations from parents, teachers, clergy, and religious educators, among others, to identify which children strike them as distinctive in their self-awareness, their precocious existential questioning and musing, their sense of wonder and awe, their sense of connectedness to what is beyond them. The components of spirituality in child exemplars might be quite different from those of adolescent exemplars. While acute connections or moments of transcendence would likely be salient to such extraordinary children, one wonders if young children also have a sense of contributing to the greater good, as adolescent exemplars do. Would running a lemonade stand to raise funds for a nearby dog shelter count? As for the component of fidelity, this may be less common, even age-inappropriate for child exemplars. Fidelity to an ideology is a process inherent in identity formation in adolescence, not before. Nevertheless, spiritual exemplarity in childhood is worthy of investigation to learn of the sociocultural settings and social ecology of influences that may cultivate it. Longitudinal study of such childhood exemplars would also reveal what fruits grow from their distinctiveness.

Conclusion and Future Directions

Since the last edition of this handbook, we know much more about the spirituality of children and youth. That said, we have much to learn. In this closing section, I offer various critiques of our field and directions to improve. To start, there is some but not dramatic progress in distinguishing, conceptually or methodologically, spirituality from religion in children and adolescents. Countless studies still use both terms interchangeably, often with their own definitions. This may be an intractable problem we have to live with, but I wonder if some researchers just resign themselves to this difficulty, thinking that elements of spirituality are too elusive to study and thus rely on basic, traditional questions about God or worship attendance—and in so doing unwittingly impede actual progress in understanding spirituality.

There is a recent trend toward using sociocultural frameworks (e.g., Abo-Zena & Midgette, 2019) and examination of children's cultural context (e.g., Richert et al., 2017). Religion is local, and authentic assessment of spirituality in children and adolescents must account for the cultural contexts in which they live and grow. It is possible if not likely that the emphasis in past socialization research on the family as the key locus of religious and spiritual development may have detracted inquiry from children's spiritual growth in other contexts in their complex social ecology outside the family. In the past study of children's thoughts and views on religion, research has been shaped by the hegemony of structural cognitive-developmentalism on narrow domains of religious concepts in children's thinking such as concepts about God, prayer, the afterlife, and so on (Boyatzis, 2005). That focus has come at the expense of trying to understand children's own meaning-making and their views of how spirituality and religion functions in their lives. A sociocultural approach with qualitative inquiry could break free of these constraints. That approach could highlight children as active agents in bidirectional synergy with myriad individuals in numerous social and physical settings in which the child is embedded. Doing so would help us learn how children make meaning from the plethora of religious and spiritual practices, images, rituals, language, and institutions that surround them. Our field has enormous room to grow in these regards. It is one thing to learn, say, that children's or adolescents' church attendance is significantly related to their parents' church attendance; it is another to learn what value and meaning children draw from that attendance in that particular place.

Of course, the vast majority of published research uses a variable-centered approach that prioritizes correlations and betas, main effects, group averages, and between-group differences. A variable-centered approach asks how worship attendance (to stick with that example) is related to other variables of interest (e.g., adolescents' self-control or academic performance). Our variable-centered model is paradigmatic and will surely continue apace, but our understanding of religious and spiritual development will be richer if we complement that with a person-centered approach that uses individuals and their differences as priorities to determine "types" of religious/spiritual children and youth (Pearce et

al., 2019). For example, with a person-centered approach of Appalachian adolescents, a latent profile analysis identified three subgroups based on multiple dimensions of religiosity and spirituality (Longo et al., 2017). A key finding was that adolescents characterized by low private religious practices but high on other religious dimensions were at greatest risk for internalizing disorders, a finding that would have eluded traditional analysis. In another example, a study of multiple dimensions of Canadian adolescents' religiosity and spirituality resulted in five clusters of adolescents: meditators, aspiritual/irreligious, disconnected wonderers, high institutional and personal, and primarily personal (Good et al., 2011). A person-centered study (Taggart et al., 2019) of Black adolescents in the United States found four clusters based on adolescents' religiosity and racial identity, with the most common (35% of sample) being "highly intersected," or high on both variables. A key purpose of the study was to identify the cluster least likely in mid-adolescence to have become sexually active. The highly religious cluster was that group, with its members having high scores on religiosity variables, above-average scores on private racial regard ("I feel good about Black people"), and below-average scores on public racial regard ("Society respects Black people") and Black centrality ("Being Black is a major part of my identity"). We need more research with a person-centered approach that moves beyond testing relationships between variables to examining types of people.

In addition to overreliance on quantitative, variable-centered, nomothetic approaches, researchers commonly treat demographic variables as individual noise to be statistically controlled in analyses, presumably to get "cleaner" or "pure" effects of the religious variables in question. In doing so, religiosity has been decontextualized from real life. Those demographic variables that are "controlled for" of course represent people—children, adolescents—whose lives are walking interaction effects. Our traditional approaches are missing something vital, and our field needs more work that is intentionally intersectional and examines the interplay of multiple social identities and categories (Wilde, 2017). This may be especially true for racial or ethnic groups whose religiosity is linked inextricably to their race and ethnicity. Black adolescents' religiosity and racial identity are "mutually constitutive" (Taggart et al., 2019, p. 408), and thus disaggregating them (to identify main effects) is problematic.

Although this chapter did not foreground statistical analyses, most studies remain correlational or cross-sectional. Fortunately, analytic models have moved beyond bivariate approaches to multiple regression and structural equation modeling and increasing use of mediation models to clarify the "why" in links between religion and spirituality and other aspects of child and youth development (see Hardy & King, 2019b). Additional studies with moderation analyses are identifying which groups of youth reveal certain relationships between religiosity and spirituality and different outcomes.

A deeper understanding of how children and youth develop spiritually requires longitudinal designs that assess people in childhood and follow them over time. To date, only a few such longitudinal studies have examined family links over time (e.g., Copen &

Silverstein, 2007; Spilman et al., 2012), showing that early parental religiosity is positively linked to adolescents' religiosity which is positively linked to their religiosity when emerging adults. Copen and Silverstein (2007) studied three generations of family religiosity, testing what they called family religious orientation. Mothers' religious beliefs were the primary predictors of children's religious beliefs, but grandmothers' religious beliefs had unique predictive power on grandchildren's beliefs, and this impact was enhanced when both grandmother and mother held strong religious beliefs. Another longitudinal study, a three-decade span of more than 3,000 participants, found that a warm, close parent-child relationship was crucial for children's continuation in the parents' faith (Bengston et al., 2013). Thus far, longitudinal studies have focused on "intergenerational transmission" of religion but have not examined precisely why youth change over time and what those changes mean to them. Although temporal sequence is necessary for demonstrating causality, it is not sufficient—in longitudinal designs there are surely countless variables that go unmeasured. It is possible that changes over time in spirituality or religiosity cause changes in some measured outcome. However, that outcome change may be driving the change in religiosity or spirituality, or there may be (likely) bidirectional circular influence. Cross-lagged designs would clarify these directional and causal uncertainties (Hardy & King, 2019b).

Regardless of design, our understanding of spiritual development will go deeper if researchers complement the reigning quantitative approach with a more meaning-centered qualitative analysis. Some studies cited in this chapter used qualitative methods, and most were published recently. In-depth ethnographic studies, common to anthropology but not psychology, would further humanize our subjects and bring fuller appreciation of the nuances in youths' lived experience of religion and spirituality. A recent stellar example of such a work is a three-year ethnography of teenage Muslim boys in and around an urban mosque (O'Brien, 2017).

Our understanding of religious and spiritual development would be enriched if researchers broadened their apertures to be more inclusive of other disciplinary epistemologies. For one, utilizing lessons from cultural anthropology's ethnographic studies of non-Western cultures (e.g., Gottlieb, 2006) will help social scientists recognize their own implicit culture-bound ideologies (see Mattis et al., 2006), and garnering insights from cultural anthropology may help remedy the "WEIRD problem" that limits our samples and thus our understanding. In addition, attention to the lessons from the fields of children's theology and religious education would enhance our understanding (e.g., Bunge, 2008; Cavaletti, 1992)—vibrant fields with qualitative analyses of children's engagement with religious organizations and rituals. We know that organized religions prioritize their rituals and rites of passage for children (First Communion, Bar/Bat Mitzvah, etc.), but do *children* feel transformed by them? To learn more about this type of work, psychologists should examine the superb qualitative and ethnographic account by Bales (2005) of Roman Catholic children's First Communion.

Another constraint is that much of our knowledge comes from samples of highly religious families. For some topics, it makes sense to use purposive sampling that “involves the intentional selection of individuals, groups, or entities that exemplify the construct of interest in a particularly intense or highly developed manner” (Bronk et al., 2013, p. 2). The obvious risk is that our depiction of religious and spiritual development is incomplete, even distorted by an overemphasis on higher magnitudes of religiosity and faith. A more valid reckoning of children’s and adolescent’s spirituality would arise from studying a broad spectrum of children and families, including a nonreligious, atheist, and secular one, as well as children growing up in nontraditional families, as most research has been conducted on traditional family structures (Mahoney & Boyatzis, 2019).

I hope this chapter inspires scholars to see the need for and value in being eclectic with sampling, designs, methods and measures, data analysis techniques, and frameworks that shape our inquiries. Using sociocultural and intersectional approaches with more qualitative, meaning-centered tools will create a fuller picture of the complexity of children’s religious and spiritual development. Perhaps the next chapter a decade from now will have such progress to describe.

To close, let us recognize the value in trusting the agency and voice of children and youth themselves as they inform and teach us about their religious and spiritual selves (Boyatzis, 2011); using their own words—or drawings, or play, or other expressive modalities—will sharpen our vision into their spirituality. As Moore et al. (2016) asserted, “Children’s answers on a Likert scale will not capture the complexities and intricacies of spirituality” (p. 6), and Hardy and King (2019b, p. 249) warn “it is difficult if not impossible to adequately capture religion and spirituality by reducing it to numbers.” The limits of quantitative approaches were captured eloquently by comparative-religion scholar Wilfred Cantwell Smith (1991, p. 7): “Such scholars might uncharitably be compared to flies crawling on the outside of a goldfish bowl, making accurate and complete observations on the fish inside, measuring their scales meticulously, and indeed contributing much to a knowledge of the subject, but never asking themselves, and never finding out, how it feels to be a goldfish.”

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Questions Left Unaddressed by Religious Familism: Are Religiousness and Spirituality Relevant to Nontraditional Families?

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Abstract

Given the growing pluralism in family structures, this chapter highlights the role of religiousness and spirituality in the formation and maintenance of diverse families. We outline commonalities and differences that exist among major world religions about forming and maintaining family relationships. Consistent with the predominant conceptual model called religious familism, most research on faith and family life focuses on traditional families (i.e., married heterosexual couples with children). We highlight key findings about these families and then turn our attention to emerging studies on religion and spirituality within nontraditional families. Specifically, we address the role of faith for families headed by single mothers, same-sex couples, and cohabitating couples. Overall, evidence suggests that greater religiousness and spirituality can be helpful to parents and partners in traditional as well as nontraditional families, despite their relatively lower participation in organized religious groups.

Key Words: cohabitation, couples, family, marriage, parenting, religion, same-sex couples, spirituality

The idealized vision of *family* in the mid-20th century in America consisted of an employed father married to a stay-at-home mother caring for the couple's biological children (described by Smith, 1993, as the Standard North American Family). Demographically, the prevalence of this *traditional* family formation peaked in the United States in the 1950s at 43% of all households (Edgell, 2006), since which time there has been growing pluralism in family structures. For example, approximately 91% of American minors lived with married, biological parents in the 1950–60s (Edgell, 2006), and this rate dropped by 2009 to around 58%, with 23% of minors living with single mothers, 7% with parent and step-parent, 7% with cohabiting couples or nonparental caregivers, and 3% with single fathers (Kreider & Ellis, 2011). Further, between 2000 and 2010, about two-thirds of American women cohabited with a partner prior to their first marriage (Manning, 2013). In addition, about 40% of all births in 2010 were to unmarried women (up from 18% in 1980) and

about 50% of children are expected to spend part of their childhood living with an unmarried couple (Kennedy & Bumpass, 2008). Obviously, a traditional family life cycle of heterosexuals getting married prior to cohabitation and first-time pregnancy, with the union ending by death has markedly declined in the United States over the past few decades.

The traditional family formation emerged in America partly under the influence of Christianity (Edgell, 2006; Ruether, 2000). Sociological discussion about religion and family often focuses on ways these two institutions have been interdependent using a conceptual lens called *religious familism* which refers that the ideology that the family is the central unit of social order and should be governed by certain imperatives (Edgell, 2006; Edgell & Docka, 2007; Wilcox, 2004). In particular, religious familism in the United States has valued certain family structures above others, emphasizing stable heterosexual marriages that produce children and prohibiting nonmarital sex (i.e., traditional nuclear families; Edgell & Docka, 2007). Perhaps as a result, relatively little research has examined the role of religiousness and spirituality within nontraditional families, leaving many unanswered questions about what influence, if any, faith plays within these families. Yet, according to 2011–2013 U.S. surveys, 79% of married mothers, 77% of single mothers, and 68% of cohabiting American mothers view religion as “somewhat” or “very important” to their daily lives (Mahoney et al., 2015), suggesting that diverse types of partners and parents may turn to faith to facilitate their family life.

In this chapter, we spotlight a central paradox regarding religious (R) and spiritual (S) perspectives about family life that Mahoney’s (2010) *relational spirituality framework* underscores. Namely, considerable theological dissension exists within and across religious subcultures about optimal moral norms pertaining to family structure, whereas consensus tends to converge across religious groups about how family members should act to maintain family relationships after they are formed. In unpacking this theme in this chapter, we summarize commonalities and differences in major world religions about forming and maintaining traditional and nontraditional family relationships. We then discuss key findings on R/S perspectives about traditional families and refer readers to Ellison and Xi (2014), Mahoney (2010), Mahoney et al. (2024), and Mahoney and Boyatzis (2019) for more comprehensive coverage of this rapidly expanding literature. Next, we feature empirical evidence that partners and parents in nontraditional families may also benefit from R/S resources, despite their lower participation in organized religious groups than traditional families. Specifically, we showcase the role of faith among the three types of nontraditional families that have received the most empirical attention: single mothers, same-sex couples, and cohabitating heterosexual couples.

Conceptual Issues in Scientific Study of Interface of Family and Religion–Spirituality

The traditional family model in Western societies has been promoted through a wide range of institutional, legal, and economic arrangements, not the least of which has been its legitimization by religious authority (Edgell & Docka, 2007). Nevertheless, diversity

has existed historically and globally (Stacey, 1997) in conceptualizing the domains of familial and R/S functioning and their intersection.

Conceptualizing Family

As Abma and Martinez (2006) pointed out, until recently those who lived outside the normative rules to create family systems did so because of external circumstances, such as a ban on marriage for those without property. However, in many modern industrialized societies, it is increasingly unclear what is the exception and what is the rule regarding the boundaries that define a family. The normative parameters have become complex as individuals functionally take on marital or parental roles for brief or indefinite periods in absence of legal or biological ties. One could ask whether family includes only biological or legally related people or extends to cohabiting (same or different-gendered) partners, their (biological or otherwise) children, additional caretakers of the children, and so forth.

Martin (1998) posed several premises for expanding the standard family model, including that family not be defined on the basis of the biological relationship between members, the number of households, the number of parents, the gender of the parents, or the sexual orientation of the parents and children. Rather, she proposed an alternative model where family would be defined based of the functionality and psychology of the family unit. As an example, parents in this model are defined as those who are committed to raising a child, regardless of their biological relationship to the child, their legal rights and responsibilities, the number of parents present, and whether or not the parents have sexual relationships with one another. In this chapter, we examine how R/S factors function within family structures that fall within such an expanded model of family.

Conceptualizing Religious and Spiritual Functioning

Conceptual ambiguities surrounding the boundaries of *family* are akin to those that surround the concept of being *religious* and/or being *spiritual* in the research literature. In general, the domain of being R has been portrayed within the psychology of religion and spirituality literature as public engagement in a given organized sociocultural–historical religious tradition; adherence to theologically orthodox beliefs, dogmas, or rituals; and external pressure to conform to social norms promoted by a religious group, whereas being S has tended to be framed in social science literature as personal belief in supernatural entities or phenomena; a private quest for enlightenment or virtues; and internal motivation to seek out a sense of purpose and transcendence within or outside organized religion groups (Pargament et al., 2013). Yet, empirically in 2014, most Americans reported being a spiritual person (89%), being a religious person (80%), and believing in God (78%; Twenge et al., 2016). Furthermore, 74% reported attending religious services, which represents a primary pathway that exposes people to R/S teachings about virtually every aspect of family life across the life span. Thus, in studying the role of faith in family functioning, researchers are challenged to develop conceptual models and constructs that recognize the growing

deinstitutionalization of being S while recognizing that participation in organized religion is a major pathway most people use to foster their R and S functioning.

Pragmatically, when it comes to empirical findings on family life, theoretical debates over the definitions of being R versus being S are essentially moot because researchers have relied so heavily on single items to tap these overlapping domains. For example, the majority of peer-reviewed, published studies assess whether a given family member endorses affiliates with a particular religious tradition, attends religious services, or says that religion or spirituality is personally important (Ellison & Xi, 2014; Mahoney, 2010; Mahoney et al., (2013), Mahoney & Boyatzis, 2019). In short, most controlled research assesses a given family member's overall engagement in public (e.g., affiliation and attendance rates) or private (e.g., frequency of prayer) forms of being R/S, with a subset of studies beginning to identify specific R/S processes that appear to be helpful or harmful.

Relational Spirituality Framework: Focus on Formation and Maintenance of Diverse Family Relationships

Mahoney (2010) developed a conceptual framework called the *relational spirituality framework* (RSF) to synthesize empirical literature on global markers of R/S functioning and specific R/S processes that could facilitate or undermine relationship functioning (Mahoney, 2010). Analogous to Pargament and Mahoney's (2017) conception of spirituality as the discovery, conservation, and transformation of the sacred, Mahoney (2010, 2013) heuristically sorted the domains of R/S and familial research literature in the RSF into three recursive, overlapping stages: (a) formation—creating and structuring a particular relationship, (b) maintenance—preserving and protecting an established relationship, and (c) transformation—reforming or exiting a distressed relationship. In addition, Mahoney proposed that R/S resources or struggles could be embedded in (a) peoples' relationships with supernatural figures (e.g., deity and immortal ancestor), (b) other individuals (e.g., a spouse and child), and (c) religious community, which could impact personal well-being. This chapter elaborates the portion of the RSF that addresses the paradox that widespread theological disputes exist within and across faith communities over what type of family is theologically legitimate and optimal (e.g., heterosexual marriage with biological children vs. other types of families) whereas most religious groups promote similar virtues for how family members should act to sustain healthy family relationships as signs of relationship success (e.g., commitment, sacrifice, and love).

Theological Perspectives on the Formation and Maintenance of Family Relationships

To set the stage for reviewing empirical findings, in this section, we highlight divergent and overlapping theological positions on the formation and maintenance, respectively, of traditional and nontraditional families. It is, of course, beyond the scope of this chapter to delineate all the many beliefs and practices pertaining to family life within major world religions (see Browning & Clairmont, 2007; Dollahite & Marks, 2018; Onedera, 2008).

Furthermore, we recognize that doctrinal and ritual variations exist within religious traditions that stem from differences in regional and sectarian religious traditions, sociocultural influences, interpretation of sacred texts, and personal preferences. Nonetheless, to help inform social scientists' work on faith and family life, we highlight here general traditional and progressive theological stances advocated within various world religions about (a) what kinds of family relationships should be formed, and (b) how family members should treat each other to maintain their relationships.

Formation of Family Relationships

We now offer a thumbnail sketch of socially conservative and progressive positions that world religions tend to take about the morality of the types of family relationships people should form.

PREDOMINANT THEOLOGICAL VIEW INFLUENCING SOCIAL SCIENCE RESEARCH

Most empirical research on faith and family life has involved national or community samples from the United States (Mahoney, 2010; Mahoney et al., 2001), and thus participants who are predominately affiliated with a Christian denomination. For example, approximately 81% of parents in United States describe themselves as evangelical Protestant (30%), Catholic (25%), and mainline Protestant (18%), with about 12% endorsing unaffiliated (Nelson & Uecker, 2017). It is therefore understandable that much of the interpretation about empirical links between global markers of religious involvement and family functioning within social science literature relies on religious familism as a conceptual framework since Christianity has been a dominating historical influence on discourse about family life in American culture (Ruether, 2000). To reiterate, religious familism refers to the ideology that the family should be governed by certain religious positions on family life, particularly conservative branches of American Protestantism (Edgell, 2003, 2006; Wilcox, 2004). For example, in conservative Christianity, marriage is considered to be an explicit expression for the commitment of a man and woman to one another that provides the necessary structure for heterosexual sexual intercourse and childbearing, resulting in nonmarital sex, same-sex marriage, cohabitation, single parenthood, and stepfamilies being morally undesirable (Zink, 2008). In sum, religious familism reflects doctrines rooted in traditional Christianity that idealize and reinforce mid-20th-century, middle-class views of "the good family," consisting of married heterosexuals with biological children (Edgell, 2003, 2006; Edgell & Docka, 2007).

The conceptual lens of religious familism is consistent with predominant theological positions in Islam and Judaism that uphold and defend the biological nuclear family as the R/S ideal for a family structure. For example, within conservative and orthodox Judaism, marriage followed by procreation mirrors the very nature of God (Onedera, 2008; Wertheimer, 2007). In Islam, marriage is also considered to be inherently religious (Al-Jibaly, 2000) and a religious obligation to complete one's faith (Altareb, 2008).

Because marriage is considered the only legitimate way for men and women to be alone together, alternative family formations, such as cohabitation and same-sex unions, are ruled out as viable options within Islam (Altareb, 2008). Thus, most monotheistic traditions traditionally argue that a family headed by a married heterosexual pair is the ideal context to bear and raise human beings (Dorff, 2008).

ALTERNATIVE MONOTHEISTIC THEOLOGICAL VIEWS

Parallel to the increased acceptance of diverse family structures during the 20th century in American society generally (Jensen, 2006; Stacey, 1997), theological justifications emerged within progressive segments of Christianity that rejected “natural law” rooted in biological ties as the guiding principle to demarcate the boundaries of family and instead defended nontraditional family forms, such as same-sex marriages, childfree marriages, and single or adoptive parenthood (Ruether, 2000). For example, many liberal Protestants affirm same-sex relationships and honor same-sex covenants as vehicles of God’s creation and grace in a similar fashion as different-sex marriage (Cook, 2008). Ruether (2000) provides an insightful description of shifts in ideologies about the family in progressive segments of the Christian community within her cogent analysis of the ever changing history of diverse Christian perspectives on family life since 1st-century Christianity.

Similar shifts can be observed in some Jewish groups within the United States. For example, changing social patterns within the Jewish community in America have prompted a reconsideration of fundamental assumptions concerning the composition of the Jewish family with marriage as the ideal (Wertheimer, 2007). The Jewish community currently includes many singles, single parents, blended families, and same-sex families resulting in contemporary Jews stretching Jewish norms to apply to these new circumstances (Dorff, 2008). This is made clear in the statement on human sexuality by the Central Conference of American Rabbis (1998):

In our age, the traditional notion of family as being two parents and children (and perhaps older generations) living in the same household is in the process of being redefined. Men and women of various ages living together, singles, gay and lesbian couples, single-parent households, etc., may be understood as families in the wider, if not traditional sense. “Family” also has multiple meanings in an age of increasingly complex biotechnology and choice.

This reveals some theologians moving away from biological parameters to define the structure of family but not the value of creating families. The statement emphasizes that “[t]he importance of family, whether biologically or relationally based, remains the foundation of meaningful human existence.” Reform Judaism continues to emphasize the family as the primary unit of intimacy grounded in relational processes of respect, trust, and love.

OTHER THEOLOGICAL VIEWS

There are other theological models outside of monotheism that have had almost no influence on social science research on faith and family life. In Confucianism, for example, family is defined not as a nuclear unit but as an extended biological unit that often involves four generations living together (Meyer, 2007). Similarly, a traditional Hindu family consists of multiple biological generations living in the same household with a common kitchen and jointly owning property (Meyer, 2007; Williams, 2007). Both Hinduism and Confucianism value family identity above self-identity and individual needs (Meyer, 2007; Williams, 2007). In fact, the Hindu concepts of self and family are integral rather than separate concepts. Williams (2007) has pointed out that immigrants with other religions have begun to raise anew the question of defining “the family” in American society.

In sum, the conceptual lens of religious familism implies that the primary, if not exclusive, purpose of R/S functioning for families is to shore up the formation of nuclear family structures. Yet reliance on this theological lens to guide scientific research ignores many questions about faith for other families. Do R/S beliefs impact the formation of nontraditional families for those involved in religious groups who theologically affirm such family units? What, if any, private R/S beliefs or practices motivate poor or working-class men and women to disproportionately form nontraditional families (Wilcox & Wolfinger, 2016) despite being most likely to feel excluded or judged by ethnically similar religious congregations (Edgell, 2006; Sullivan, 2011)? Are R/S identities relevant to the formation of the rising number of families headed by single, cohabiting, step, adoptive, foster, LBGTQ, and/or multigenerational parents? With these questions in mind, we turn to theological rationales about sustaining family relationships.

Maintenance of Family Relationships

In contrast to the marked disagreements within and across religious traditions on the formation of family relationships, we have been struck by the degree of consensus regarding theological views on what people should do to sustain the family relationships that they do form. Because of this, we focus our discussion in this section on broad theological consensuses on ideal ways for partners and parents to treat their loved ones.

MARRIAGE-COUPLES RELATIONSHIPS

Religious wedding ceremonies not only signify the formation of a marriage, but also offer windows into the virtues that couples promise to live out to fulfill the sacred nature of their bond. Thematically, the following virtues are widely heralded as the means that couples should use to sustain their union across the conservative to progressive spectrum within Christianity, Judaism, Islam, Hinduism, and Confucianism traditions: compassionate love, self-sacrifice, commitment, respect, honesty, forgiveness, and gratitude (Onedera, 2008). It is important to note that although some highly fundamentalist religious subgroups may imply that husbands have scripturally based rights to physically

or sexually dominate their wives, the majority of theological voices across major world religions do not endorse domestic violence or sexual aggression within marriage (Johnson, 2015; Nason-Clark et al., 2018). On the other hand, theological consensus places a high premium on sexual monogamy within marriage as well as committed same-sex relationships. Readers are referred elsewhere for discussion on theologically conservative positions on the gendered roles that men and women should fulfill as spouses or parents (Nason-Clark et al., 2018; Perry & Whitehead, 2016).

PARENT–CHILD RELATIONSHIPS

Many world religions have religious rituals and prayers to signify the importance of bringing a child into the world. These religious practices signal the significance of being a parent in the family and community, and highlight the responsibilities of parents to place their highest priority on facilitating their children's spiritual, moral, psychological, and physical development. Thematically, the following virtues are emphasized for parents across the conservative to progressive spectrum within Christianity, Judaism, Islam, Hinduism, and Confucianism to sustain parent–child relationships: model and dispense love, self-sacrifice, commitment, protectiveness, and an investment of resources to ensure the child's well-being (Onedera, 2008). It is important to realize that although some religious subgroups, such as conservative Christians, emphasize that parents should instill a sense of obedience in children and condone spanking as a discipline method, leaders of major world religions within Western, industrialized countries do not advocate child physical abuse (Browning & Clairmont, 2007). Further, Christian subcultures that support spanking also emphasize that parents balance this strategy with high levels of involvement, affection, positive parenting techniques, and other effective disciplinary strategies (Bartkowski & Xu, 2000; Ellison & Xu, 2014). Finally, U.S. parents' top five parenting goals do not differ due to religious (or political) affiliation with the following being endorsed as “especially important”: teaching children to be responsible (94%), hardworking (92%), helpful (86%), well-mannered (86%), and independent (79%; Pew, 2014).

Being R/S and Families of Heterosexual Couples: Key Empirical Findings

In this section, we highlight relevant findings from the literature about how being R/S impacts the formation and maintenance of the constellation of relationships within traditional families.

Forming a Heterosexual Marital Relationship

People across the globe rank religious similarity as an important factor when searching for an opposite-sex spouse, and little has changed over time in how much Americans desire a mate with a similar religious (non)affiliation (Mahoney, 2010). For instance, McClendon (2016) tracked contemporary, young U.S. adults across 15 years and those in favorable markets for religious assortative mating were more likely to get married and marry a partner

with a similar denominational affiliation whereas those in less favorable markets delayed marriage rather than marry a partner with a different affiliation. Couples also decide early in their courtship whether (non)religious compatibility matters. That is, the percentage of couples who have the same affiliation does not change across the stages of dating, being sexually intimate, cohabiting, or marrying (Blackwell & Lichter, 2004). Thus, similarity in affiliation remains an attractive trait in a mate, with people perhaps gravitating toward prospective mates who share their values and cultural identity when dating online or in person. The subjective belief that religion shapes one's life decisions is robustly tied to whether and whom to marry (e.g., Sigalow et al., 2012), and religious attendance encourages marriage following a nonmarital birth (e.g., Wilcox & Wolfinger, 2007). Finally, members of conservative Protestant or Latter-Day-Saint families (particularly women), and anyone who views religion as highly important, more frequently enter marriage by age 23 (Mahoney, 2010).

Maintaining a Heterosexual Marital Relationship

Over the past several decades, higher levels of the general R/S involvement of married heterosexuals have been linked to greater marital quality (e.g., Clements et al., 2004; Mahoney, 2010; Mahoney et al., 2001; Perry, 2016) and lower risk of sexual infidelity (e.g., Tuttle & Davis, 2015), physical aggression (e.g., Ellison & Anderson, 2001), and divorce (e.g., Gurrentz, 2017; Li et al., 2018). Such linkages, however, have tended to be small in size, with mixed or null results often emerging within or across studies. Perhaps as a result, growing attention is being paid to dissimilarity between spouses on R/S variables (e.g. affiliation, attendance, and salience) as the key issue tied to greater marital dissatisfaction (Schafer & Kwon, 2019), conflict (e.g., Curtis & Ellison, 2002), and dissolution (e.g., Hwang et al., 2019). For further elaboration of findings on global R/S indices and marital functioning, see Ellison and Xu (2014), Mahoney et al. (2001), Mahoney (2010), and Mahoney et al. (2024).

Forming a Parent–Child Relationship Within Marriage

For centuries, world religions have encouraged women to conceive and bear children within heterosexual marriage. Consistent with such religious teachings, based on U.S. surveys from 1997 to 2013, 34% of women who had attended religious services at least twice a month at age 17–18 had a marital birth by age 27–28 compared to 26% for those with less attendance (Petts, 2018). The link between religious attendance and giving birth is especially likely for women who are married or over the age 24, and disappears in subsamples of younger women (Mahoney, 2010). In addition, women who say religion is unimportant are more likely to have nonmarital births especially during adolescence (Hayford & Morgan, 2008) or to remain childfree into middle age (Abma & Martinez, 2006).

Women's future intentions to have children are also tied to greater importance of religion in their lives, regardless of how often they attend services or their faith tradition. This link holds for women who do or do not hold socially conservative attitudes toward feminism or family life (Hayford & Morgan, 2008). Greater perceived importance of

motherhood also fully mediates the connection between religious service attendance and American women's higher intentions to birth a child (McQuillan et al., 2015). Even in more secularized Europe, greater religiousness is indirectly tied to higher rates of first births by facilitating women's favorable evaluations of children (Becker & Lois, 2017). Overall, the more women value being R/S, the more they desire and have children.

Virtually no peer-reviewed research appears to be available on R/S factors and men's desire to be married fathers or their rates of parentage. Researchers, however, have sought to examine whether married fathers involved in conservative Protestant churches spend more time than other fathers with their children after they are born, rather than being distant or absent; numerous studies have not found this to be the case (see Mahoney, 2010, for details). On the other hand, across religious denominations, married fathers who attend religious services more often are more likely to spend time with their children (Mahoney, 2010). These findings imply that men who are more intensively involved in the faith tradition of their choice spend a greater quantity, albeit not necessarily quality, of time in creating a father-child bond within marriage.

Maintaining Married Parenthood

Numerous studies on being a parent focus on households headed by married heterosexual parents, with some samples including a minority of cohabiting partners. These studies show that higher levels of religious activity by parents and adolescents predicts better parent-youth relationship quality (e.g., Bartkowski & Xu, 2000), greater parental affection (e.g., Wilcox, 1998), more positive discipline practices (e.g., Volling et al., 2009), and lower risk of child physical abuse (e.g., Brown et al., 1998). Longitudinal evidence reinforces that greater R/S involvement on the part of married parents predicts better parenting and child outcomes (e.g., Li, 2013; Spilman et al., 2013. See Mahoney and Boyatzis (2019) for an in-depth reviews of these and related findings.

Going Deeper: Being R/S for Better and Worse for Traditional Families

As the illustrative findings above indicate, higher general R/S functioning based on global indices (e.g., religious attendance and general salience of religion) has been tied to greater stability and quality of relationships within families headed by married heterosexuals. Yet, such findings fail to tell the whole story because global indicators of being R/S often yield small or null results, perhaps because global R/S indices such as attendance, salience, and affiliation confound positive and negative manifestations of faith for families. By contrast, constructs that focus on specific R/S cognitions can help disentangle helpful or harmful R/S processes. On the bright side, for example, heterosexual couples who view their marriage as sacred and connected to God report greater marital satisfaction (e.g., Ellison et al., 2010; Mahoney et al., 1999; Stafford, 2016), with these effects mediated by supportive spousal behavior (e.g., Rusu et al., 2015). In addition, greater sanctification of marital sexuality has been cross-sectionally (e.g., Dew et al., 2020) and longitudinally tied to greater sexual satisfaction and frequency

(Hernandez-Kane & Mahoney, 2018). In addition, petitionary prayer for a partner's well-being has been linked in survey and experimental research to greater relational adjustment, forgiveness, and sexual fidelity (Fincham & Beach, 2013; Fincham et al., 2010). On the dark side, however, the more heterosexual adults perceive a divorce to be a sacred loss or desecration, the more they report emotional distress and conflict with their ex-spouse over time (e.g., Krumrei et al., 2011). College students also report more emotional distress if they view their parents' divorce as a sacred loss or desecration (Warner et al., 2009). Thus, some specific R/S involvement cognitions tied to higher general R/S involvement can facilitate relational well-being whereas others can intensify internal and interpersonal distress.

The impact of family interactions centered on R/S engagement also appears to cut both ways. On one hand, shared R/S activities between family members is commonplace and tied to better quality of relationships. For example, similarity in religious attendance between spouses has been more strongly linked to marital satisfaction and stability in national surveys than just one spouse's attendance (Myers, 2006). Likewise, shared religious activities amongst married parents and children (e.g., Wilmoth & Riaz 2019) as well as within step-families (e.g., King et al., 2019) has been tied to better relationship functioning. In addition, the more college students and their parents candidly discuss about their views on R/S topics, the more they report collaboratively managing their conflicts, even after controlling their comfort in discussing other sensitive topics like sex or drugs (Brelsford & Mahoney, 2008). Similarly, the more married couples report they mutually disclose and listen empathetically to each other (dis)beliefs, views, and struggles about being R/S (i.e., spiritual intimacy), the more positive communication skills they display during direct observation of conflictual (Kusner et al., 2014) or emotionally focused interactions (Padgett et al., 2019).

Yet evidence that R/S dialogues and activities can bond family members together are balanced by studies focused on discord between family members about R/S issues. Although rare, marked divergence in R/S beliefs has been linked to more arguing about money and the division of household labor (Curtis & Ellison, 2002), higher divorce rates (Vaaler et al., 2009), and greater physical aggression by husbands (Ellison et al., 1999). Parallel findings have been found among parent-child relationships. Namely, a large dissimilarity between parents and adolescents in religious attendance is unusual but has been tied to more relational discord and distance when it does occur (Stokes & Regnerus, 2009). In addition, family members can dialogue about R/S issues in ways that escalate rather than reduce interpersonal problems. For example, the more couples as well as parents and college students report triangulating God and R/S topics into the middle of their conflicts in destructive ways, the more they report or exhibit relational distress (Brelsford & Mahoney, 2009; Mahoney et al., 2021). Overall, the multifaceted and complex arena of R/S functioning encompasses both potential protective or risk factors for families of married couples, with far more replicated studies needed to disentangle and verify the specific R/S beliefs or behavior tied to desired and undesired outcomes; for greater elaboration, see Mahoney (2010, 2013, 2024).

Being R/S and Nontraditional Families

Relatively little research has focused on the role of R/S factors for nontraditional families, perhaps because they attend religious services less often than other families. For example, according to 2011–2013 U.S. surveys, 49% married mothers, 39% single mothers, and 32% of cohabiting mothers attended religious services at least two to three times per month (Mahoney et al., 2015). Nevertheless we highlight here growing evidence that the parents and partners in nontraditional families who report higher levels of being R/S experience faith as a resource.

Formation of Nontraditional Families

In this section, we highlight relevant findings from the literature about how being R/S impacts the formation of the constellation of relationships within nontraditional families.

SINGLE-MOTHER FAMILIES

The intersection of R/S functioning and becoming a single parent defies easy sound bites. On the one hand, based on 2006–2010 U.S. surveys, unmarried American adults who attend religious services several times a month often endorse attitudes and behaviors contrary to theological prohibitions against parenthood outside marriage (Wilcox & Wolfinger, 2016). For example, many reported engaging in sex outside marriage (65–69% non-Whites; 48–49% Whites) and believing a single mother could rear a child as well as two parents (approximately 60% men and 80% women). On the other hand, women who frequently attended services were less likely than infrequent attenders to become an unmarried mother (Wilcox & Wolfinger, 2016). To illustrate using national surveys from 1997 to 2013, 29% for those who attended services at least twice a month had a nonmarital birth by age 27–28 compared to 41% of women who reported no or low religious attendance at age 17–18 (Petts, 2018). Yet 29% is noticeably higher than zero, or reserving motherhood only for marriage, and 77% of single mothers view religion as “somewhat” or “very important” to their daily lives (e.g., Mahoney et al., 2015).

Only three peer-reviewed studies appear to have focused on R/S involvement for women (all teens) who were unmarried and directly faced the dilemma of whether to end an unplanned pregnancy (Adamczyk, 2008, 2009; Adamczyk & Felson, 2008). Adamczyk’s findings indicate that U.S. adolescents who were more highly involved in religious groups in the 1980s more often became single mothers rather than terminate the pregnancy. In another study of unmarried U.S. teen mothers, those who prenatally attended religious services more often experienced greater pre- and postnatal depression, perhaps due to internalizing or experiencing more religious guilt or rejection for becoming a single parent (Sorenson et al., 1995). Updating findings on abortion rates based on 2006–2010 U.S. surveys, Wilcox and Wolfinger (2016) estimated that 20% of unmarried European American, 19% of African American, and 13% of Latina American women who attended religious services several times per month ended a pregnancy, with these figures being markedly higher than zero but still lower than rates reported by women who did not attend frequently (32%, 31%, 22%,

respectively). In summary, although higher religious attendance decreases the odds of abortion and becoming a single mother, a sizable portion of women who participate in religious groups become unmarried mothers as well as terminate pregnancies.

SAME-SEX MARRIAGE AND FAMILIES

Not surprisingly, LGB individuals' participation in public religious groups (e.g., affiliation and weekly worship attendance) is lower than American heterosexuals (Pew, 2019), presumably due to the discrimination they often face from religious groups. Nevertheless, according to 2014 national US survey, 77% of LGB adults say that they believe in God, 54% feel a deep sense of spiritual peace and well-being on a weekly basis, and 34% report religion is very important in their lives (Pew, 2019). Yet we know little about how R/S factors may influence the formation of same-sex unions or marriages. In terms of partner selection, one study based on a recent internet survey ($N = 218,195$) found that same-sex participants assigned less importance to religious similarity when seeking a partner than heterosexual participants (Lippa, 2007). Another study, however, suggests that higher being R/S may motivate same-sex couples to engage in symbolic and legal actions to form a partnership that would be difficult to dissolve. Namely, Oswald et al. (2008) examined 150 lesbians and gay men in same-sex relationships and found that greater importance of religion in their daily life substantially increased the odds that they had engaged in a formal commitment ceremony with their partner, even after controlling gender and relationship duration. Individuals were also more likely to have established legal ties with their partner, such as owning joint property, establishing a will or power of attorney, registering as domestic partners, or entering into civil marriage, if they were involved in a supportive faith community.

Case studies and qualitative interviews also suggest that some same-sex couples draw on R/S beliefs in their understanding of what it means to marry or be partners (McQueeney, 2003), rely on R/S factors to find meaning in their relationship commitment (Lewin, 1998), and imbue their relationships with sacred significance (Rostosky, Riggle, et al., 2008; Suter et al., 2006). These studies raise the possibility that some same-sex couples desire marriage because they want their union to be recognized as having the same degree of R/S legitimacy and symbolic meaning as heterosexual unions consecrated via weddings held in a religious context. Notably, alternative options to such ceremonies are multiplying in modern societies to structure adult partnerships. An unanswered question is whether the implicit and explicit R/S meaning that wedding rituals may bestow upon a union, usually witnessed by friends and family with similar R/S values (liberal or conservative), contributes over time to the quality and stability of adult partnerships compared to unions only cemented via private promises of commitment and/or legal or economic contracts.

COHABITING UNIONS

Cohabitation is becoming a normative route to marriage, raising questions as to what, if any, R/S factors may shape men or women's selection of cohabiting partners or likelihood of

transitioning to marriage. Speaking to the latter point, Henderson et al. (2018) recruited a national sample of adults in a cohabiting or steady dating relationship (oversampled African American and Latinos) and found that the more respondents shared core R/S values with their partners, believed “God was at the center of my relationship,” and attended religious services with the partner, the more they expected to marry their partner. Further, each of these links uniquely persisted in models where all R/S variables were entered, along with acts of kindness, consideration, and criticism between partners. In contrast, solo weekly religious attendance by the respondent or their partner did not predict expectations to marry net of controls. In another study of nonmarried and noncohabiting college students, engaging in sexual intercourse was associated more strongly tied to approving of cohabitation for those who endorsed higher levels of R/S involvement compared to those with lower R/S levels (Willoughby & Carroll, 2010). This moderator effect suggests that highly R/S young adults may reconcile the dissonance between theological prohibitions against nonmarital sexual activity and their behavior by becoming more accepting of cohabitation.

Clearly, further research is needed on whether some individuals may justify cohabitation if they view their partners as a “soul mate” or believes God intends for the couple to marry, or for relationships they perceive as being part of a larger R/S plan. Such research seems important given that a substantial percentage of young adults cohabit despite being highly engaged in religious groups earlier in their lives. For example, in a longitudinal study of American emerging adults, Eggebeen and Dew (2009) found that although conservative Protestants cohabited less often as teens than nonaffiliated youth, their cohabitation rates during adulthood were equal to mainline Protestants or non-Catholic groups, and greater than Catholics. In addition, although teens who were high in attendance and importance of religion cohabited less in the future than those who were low in both factors, one-third of highly devout young adults did cohabit. Mainline and conservative Protestants were most likely to marry their cohabiting partners, whereas Catholics converted their unions into marriage no more often than nonaffiliated youth.

REMARIED, ADOPTIVE, AND OTHER TYPES OF NONTRADITIONAL FAMILIES

Scarce findings are available on links between R/S factors and intentionally becoming part of a nontraditional family. For this chapter, we located two studies using nationally representative U.S. samples showing that higher religious attendance substantially increases the odds of divorced adults getting remarried, with conservative Christian Protestants seeming especially motivated to find a new spouse at an accelerated rate relative to Catholics (Brown & Porter, 2013; Xu & Bartkowski, 2017). Another study with U.S. female nurses, however, found no such links (Li et al., 2018). In a study focused on adoption, greater importance of religion emerged as a strong factor tied to adoption by European American women of a host of other motivations and fertility issues (Hollingsworth, 2000). Otherwise, little appears to be known empirically about how R/S factors may shape the formation of families headed by divorced and remarried heterosexuals, grandparents or foster parents, couples who have chosen not to

be parents or encountered obstacles to becoming parents due to fertility difficulties, partnered or single heterosexual or LGBTQ parents who have used assisted reproductive technology to facilitate conception and childbirth or surrogates to bear children, and couples engaged in polygamy and polyamory. Although involvement in religious groups is lower among those who form nontraditional families, higher R/S engagement may still motivate many to strive to be partnered, be repartnered, or become a parent or co-parent across diverse families.

Maintaining Nontraditional Families

We move now to key empirical findings about how being R/S impacts the maintenance of the constellation of relationships within nontraditional families.

SINGLE-MOTHER FAMILIES

Several studies on low-income and disproportionately minority mothers suggest that R/S factors can facilitate good parenting practices in the absence of a biological father and under adverse economic and social conditions. Among single mothers, greater religious attendance and personal salience of God or spirituality has been repeatedly tied to more maternal satisfaction, efficacy, authoritativeness, and consistency as well as less parental distress and risk of child maltreatment (Cain, 2007; Carothers et al., 2005; Hill et al., 2008; Sparks et al., 2005). For instance, Carothers et al. (2005) gauged adolescent mothers' involvement with religious communities prenatally and when their children were three, five, and eight years old. Although only half of these mothers participated in a religious community, higher embeddedness was tied to lower subsequent maternal depression and risk of child abuse, and to better child adjustment. In another two-year, longitudinal study, Hill et al. (2008) found that mothers living in low-income urban environments who frequently attended religious services later reported greater satisfaction with parenting and viewed the role as less stressful or irritating than women who attended less frequently, even after controlling for social support, self-esteem, and depression. Qualitative interviews with impoverished single mothers (Sullivan, 2008, 2011) further revealed that many engage in private R/S activities (e.g., prayer and scripture reading) and turn to God as a source of strength and comfort to cope with adversity and facilitate positive parenting practices. Many also want find a faith community that would help their children develop a faith life to draw upon as a resource (Sullivan, 2008; 2011).

SAME-SEX UNIONS

In a groundbreaking study, Phillips et al. (2017) extended findings on sanctification to same-sex unions. Specifically, controlling for demographic variables and global R/S factors, greater perceived sacred qualities of a same-sex romantic relationship was associated with greater investment in the partnership, emotional intimacy toward one's partner, and relationship satisfaction. Greater nontheistic sanctification of same-sex sexual behavior was also tied to more frequent sex and more positive emotions toward sex net of demographic variables and global R/S factors. Ideally, future studies will replicate and extend these

findings to theistic sanctification and other specific R/S beliefs that may help or harm same-sex marriages and partnerships.

In terms of (dis)similarity in being R/S between same-sex partners, Rostosky, Otis, et al. (2008) administered various single-item measures regarding religious affiliation and frequency of public and private religious activities and an index of intrinsic religiosity to 90 same-sex couples. They found that 53% of the pairs were similar in their religious affiliation (or nonaffiliation); 65% percent in frequency of religious attendance (whether this was low, moderate, or high); 54% in frequency of private R/S activities; and 47% in intrinsic religiosity index score. Yet, unlike findings with heterosexual married couples, similarity in religious attendance or activities was not linked to the same-sex couples' relationship satisfaction. On the other hand, being more similar in intrinsic religiosity (i.e., depth and salience of internal religiousness) was correlated with greater relationship satisfaction. Thus, sharing personal R/S commitment covaries with same-sex couples' relationship satisfaction.

Rostosky, Otis, et al. (2008) also conducted interviews with 40 of the 90 couples. Although the interview prompts did not ask about R/S functioning, 45% of the couples spontaneously brought up the topic as pertaining to their relationships. Relevant themes included how R/S issues were either a challenge or source of support in their relationship, how they negotiated retaining versus abandoning public religious involvement, and how they created meaningful expressions of their R/S identities. Rostosky, Riggle, et al. (2008) also conducted qualitative interviews with 14 same-sex couples that revealed that the couples used shared values rooted in their R/S identities to understand and undergird their relationships.

One study of adolescents suggests that R/S factors can be protective against partner physical aggression among same-sex couples (Halpern et al., 2004). Specifically, according to U.S. national survey data, among 117 males and females ages 12 to 21 years who reported exclusively same-sex romantic or sexual relationships in the previous 18 months, participants who said that religion was important to them were at lower risk for violence in the relationship than those who did not view religion as important.

In a novel study focused on parenting, Rostosky et al. (2017) asked 75 LGBTQ parents to describe how being R/S had influenced their parenting via an online qualitative survey. Three primary themes emerged from analyses of their written responses. LGBTQ parents relied on their R/S identities to (a) teach their children beliefs and values, (b) facilitate spiritual dialogue and critical thinking so that their children could make informed decisions about being R/S, and (c) provide a sense of belonging to a community and connections to others and/or a higher power. These findings suggest that, similar to heterosexual parents, LGBTQ parents draw on R/S resources to facilitate their children's R/S development.

Of course, as is the case with heterosexual couples, R/S differences between same-sex couples could potentially strain their relationship. Kaufman and Raphael (1996) offer illustrative depictions of ways that individuals within a same-sex couple are likely to differ with regard to their needs to express the R/S dimensions of life; for example, they may come from different religious traditions and have different levels of engagement in

religious groups and depth of subjective faith. Kaufman and Raphael (1996) also usefully describe how some same-sex partners may respond to R/S differences by imposing their views on their partner or by disparaging the partner's preferences which, in turn, can intensify conflict. In addition, same-sex couples may experience faith-based conflicts with family members about their union. For instance, Etengoff and Daiute (2014) interviewed 23 men who identified as Orthodox Jewish or devout Christian about the reactions of their family members after they came out as gay. About two-thirds reported that some family members attempted to triangulate God and faith into their relationship in destructive ways, with two-thirds of respondents also sharing that other family members drew upon R/S beliefs to help the respondents navigate post-coming-out issues.

Overall, initial studies on being R/S focused on LGBTQ couples and families suggest that faith may often function as an important resource and occasionally a unique source of strain for couples and families headed by sexual minorities. Moving forward, both researchers and practitioners will hopefully avoid stereotypes that presume that R/S factors are irrelevant in these families and uncover ways that R/S and LGBTQ identities synergistically may enhance each other, offering sources of strength as well as creating tensions that may need resolution.

COHABITING UNIONS

At least three studies imply that R/S factors could facilitate the quality of the relationships between cohabiting couples and unmarried co-parents. First, Henderson et al. (2018) found that the more cohabiting individuals reported they shared core R/S values with their partners and believed God was at the center of their bond, the more satisfied they were with their relationship. Furthermore, these links persisted after controlling for acts of kindness, consideration, and criticism between partners and demographic characteristics. By contrast, attending services together or solo did not predict satisfaction net of controls. Second, among unmarried couples from low-income, urban centers who recently had a baby, higher rates of religious attendance by a father was tied to his higher relationship satisfaction and greater emotional support from the mother. These findings duplicated results with married fathers in this sample (Wolfinger & Wilcox, 2008). In contrast, mothers' individual religious attendance was not linked to relationship quality for either married or unmarried women. Third, in another study using the above sample of predominantly ethnic unmarried minorities, higher religious attendance by both partners was tied to both parents reporting higher relationship satisfaction and emotional support toward each other and less conflict over his sexual fidelity (Wilcox & Wolfinger, 2007).

Taken together, these initial studies suggest that some R/S factors may offer unmarried couples resources to sustain positive relationship dynamics, even though the structure of their union falls outside marriage, in the context that religious traditions advocate as optimal for a sexual relationship. More research is needed to identify specific R/S mechanisms that may account for these findings. Hypothetically, for example, individuals who are able to draw on a felt relationship with God to be appropriately assertive and forgiving

in a cohabiting relationship may be better equipped to navigate conflicts and sustain mutual love and good communication. Alternatively, feelings of guilt in the eyes of God and conflicts with a religious community about cohabitation could increase the risk that individuals become excessively dependent on their partners for emotional or financial support, and thus are less able to set limits or exit the relationship if it becomes dysfunctional (Nason-Clark et al., 2018). These, and other fascinating questions, await investigation given the seeming dominance of the religious familism lens.

REMARRIED, ADOPTIVE, AND OTHER TYPES OF NONTRADITIONAL FAMILIES

Studies are just emerging on links between R/S factors and the quality of family relationships in remarried families. In what appears to be a unique study, Schramm et al. (2012) examined the quality of first marriages and remarriages separately among 2,823 newlywed couples in a western U.S. state. In both types of unions, husbands and wives each reported higher marital adjustment when both spouses rated themselves as “fairly” or “very religious” on a single item compared to couples where neither spouse or only the wife endorsed higher R/S ratings. Among married couples, each spouse’s individual R/S ratings and shared denominational affiliation also were tied to greater marital adjustment, but this was not the case for remarried couples. In another impressive and innovative study, King et al. (2019) used U.S. nationally representative data and examined adolescents’ reports of frequently attending religious services or church-related events with both their mother and stepfather, with one parent only, or with neither parent. Shared participation in R/S activities was tied to more positive stepfamily functioning as indicated by the closeness of the stepfather–stepchild bond, the closeness of the mother–child bond, the quality of the mother–stepfather relationship, the adolescent’s perception of family belonging, and the stability of the mother–stepfather marriage beyond the positive association of family members’ engagement in other types of shared activities, such as family dinners. In summary, these findings highlight the potential value of studies that delve into the roles religion and spirituality may play, for better or worse, for families headed by remarried spouses as well as other types of nontraditional families, such as those headed by custodial grandparents, foster parents, and adoptive parents.

Conclusions

Our chapter highlights emerging evidence that people’s R/S functioning is relevant to diverse types of families despite variation in rates of participation in religious groups. For example, it is clear that married heterosexuals, on average, attend religious services more often than family units headed by nontraditional partners or parents. Such group differences based on family structure are very likely to persist into the future. Nevertheless, scientists and practitioners need to recognize that sizable numbers of nontraditional partners and parents report that being R/S is important in their daily lives, and higher levels of global R/S factors are tied to better relational functioning within and across diverse families. For example, higher religious attendance has been tied to more marital satisfaction by married and remarried couples, and to more positive parenting by married parents and single mothers. More studies are needed

to replicate and extend such findings with large samples of family units with varying economic, ethnic, national, and religious backgrounds to better understand how greater levels of global R/S engagement may be tied to the formation of nontraditional families.

Researchers and practitioners also need to delve more deeply into how R/S functioning may help all types of families sustain healthy relationships with their loved ones. To do this, specific R/S beliefs and behaviors need to be identified and disentangled that are helpful or harmful for those whose faith journeys take place predominantly both in and outside the context of religious groups. To illustrate, in studies of couples in different and same-sex unions, viewing one's marital or cohabiting union as having sacred significance has been tied to better relationship dynamics. Similarly, the more married and single parents view parenting as a sacred endeavor, the more satisfied they are in the role. Yet marked dissimilarity in R/S involvement between couples and parents and offspring has been tied to greater relationship distance or tension, and some specific beliefs or dialogues focused on faith could intensify painful relationship dynamics. In sum, more studies need to delve into the role of religion and spirituality for better and worse, for the close relationships and personal well-being of members of traditional and nontraditional families.

Directions for Research on Religion/Spirituality and the Family

As we have illustrated in this chapter, exciting research is emerging on the possible influences of R/S factors in forming and sustaining diverse families. Further expansion of this body of work can aid in decreasing simplistic stereotypes and facilitate dialogue among groups of divergent theological persuasions. Additional in-depth findings about nontraditional families could also inform religious leaders who face challenges reconciling the growing gap between religious and societal norms about acceptable family structures.

To achieve the goal of gathering more information about the multiple R/S mechanisms relevant to family relationships, conceptual models are needed that articulate and disentangle specifically what it is about being R/S that matters for better or worse. Fine-grained models of the role of R/S beliefs and behaviors in family life are needed to explore how R/S processes can function as unique protective and risk factors, distinctive from other psychosocial processes. For example, in research on religious participation and cohabitation and same-sex unions, participation in religious groups is often interpreted as a proxy for psychosocial constructs that are not specific to R/S functioning. The argument that R/S constructs may be important in their own right, and not merely endogenous to couple relationships, will be more persuasive when studies address specific R/S mechanisms (Mahoney, 2010; Mahoney, 2024).

Greater richness in the conceptualizing and measurement of R/S factors in family life could produce research findings that are more persuasive to theorists, practitioners, or policymakers regarding unique benefits or risks that R/S functioning offers for family relationships. This could help policymakers communicate clearly in the public square, family practitioners relate effectively to clients, and religious organizations clarify messages about family life. When data are available about specific R/S beliefs or behaviors that increase favorable family outcomes such as stability, better communication patterns,

and relationship satisfaction, and decrease unfavorable family outcomes such as divorce, relational distress, and violence, these can be used to educate people about the R/S constructs tied to family success. Finally, findings about traditional and nontraditional families that offer more nuance could facilitate constructive dialogues about the various roles being R/S plays within and across families and communities of believers and nonbelievers alike. Ultimately, as scientific evidence about the risks and rewards of intertwining the domains of faith and family becomes more visible, this will enhance compassion and communication between families of all kinds.

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Models of Spiritual and Transpersonal Development

Harris Friedman, Stanley Krippner, Linda Riebel, and Chad Johnson

Abstract

This chapter focuses on exploring various models of spiritual and transpersonal development. It first addresses philosophical dilemmas underpinning the concept of spiritual development by questioning whether these can be addressed without metaphysical assumptions embedded in religious worldviews and thus understood in any consensual way across different historical and cultural contexts. Traditional models of spiritual development are then reviewed, drawing from indigenous, Eastern, and Western cultures. Integrative-philosophical and scientific models, including those from the psychology of religion, transpersonal psychology, and neurobiology, are then presented. The chapter concludes by noting the complexities involved in understanding spiritual development accompanied by suggestions on future directions for these models by highlighting their commonalities and differences, and by providing some evaluative perspectives for thinking critically about them.

Key Words: spiritual, transpersonal, developmental, cultural, metaphysical

Introduction

In the Biblical book of *Genesis*, Jacob, one of the patriarchs of Judaism, dreamed that he saw a Ladder that reached from earth to heaven on which angels were ascending and descending. Such vertical models, which imply ascending to a higher or descending to a lower realm, have been frequently used to describe spiritual development. Implicit in all vertical models is a hierarchical belief that some stages of development, or rungs on the Ladder, are higher or lower than others. Other models of spiritual development avoid such value-laden imagery. For example, spiritual development can be conceptualized as going in many directions, which makes comparing and ranking various states unnecessary (Ferrer, 2009). Spiritual development can also be seen as expanding in a horizontal, rather than vertical, direction, such that there is no higher or lower but only different patterns of expansiveness (Friedman, 1983). In this chapter, we attempt to describe these and several other models of spiritual development.

It is beyond the scope of a chapter to set forth and compare all the many approaches to spiritual development stemming from the myriad religious traditions, each of which

may contain more than one model of spiritual development. Instead, we sample a few models we consider representative from indigenous, Eastern, and Western cultures. Then we discuss philosophical models of, and end with discussing scientific approaches to, spiritual development. We hope to provoke thought about these models by highlighting their commonalities and differences, as well as by providing some evaluative perspectives for thinking critically about them. In light of the many variant uses of the four key terms in our title, *spirituality*, *model*, *development*, and *transpersonal*, they are defined in some detail.

Spirituality

As a concept, spirituality has been increasingly differentiated from religiosity (Bartoli, 2007). Religiosity is now frequently seen as pertaining to an organized system of beliefs about the sacred, along with rituals, rules, and other requirements of a belief system endorsed by a group (Fuller, 2001; Pargament, 1997). Such connotations have implicit social and cultural meanings, referring to something external to the individual (although these may be internalized).

Religious institutions, while supporting positive values such as community and life-structuring rituals, tend to be flawed in one major way: Certainty about the truths of one's own religion sometimes leads people to become intolerant. Taken to extremes, this leads to dire consequences, such as genocides (Harris, 2004). Superstition, sexism, dogmatism, and fanaticism appear in many religions, including indigenous, Eastern, and Western, and crusades, genocides, jihads, and holy wars have led many in the West to reject formal religion, propelling books voicing antireligious sentiments to best-seller status (e.g., Dawkins, 2006; Dennett, 2006).

By contrast, spirituality is increasingly seen as an inner process of connectedness with what a person considers sacred, a psychological process internal to the individual (Gallup & Jones, 2000; Sperry & Shafranske, 2005). Of course, there is significant overlap between the two terms, as spirituality historically has been experienced through religion. But a person engaged in a religious group may or may not have had spiritual experiences per se, and a person who has had spiritual experiences may or may not be part of a religious group (Friedman & Pappas, 2007). This distinction between spirituality and religion apparently is growing more salient in modern industrial cultures (Miller & Thoresen, 2003), but its utility has also been questioned. For example, Marshal and Olson (2018) found that the categories of spirituality and religiosity were closely aligned on a common factor that contrasted with the category of neither-spiritual-nor-religious, which formed a separate factor in their study.

Spirituality, even when distinguished from religiosity, has been variously defined:

that which “infuses human beings with inspiration (from in-‘spirit’), creativity, and connection with others” (Fukuyama & Sevig, 1999, p. 4) involves a “presence or absence of an individual’s focus on higher, broader, and deeper life meanings that transcend ordinary

existence” (Krippner & Welch, 1992, p. 122), and the “human quest for personal meaning and mutually fulfilling relationships among people, the nonhuman environment, and for some, God” (Canda, 1988, p. 243), to name just a few. Spirituality has been viewed in many ways: as cognitive or affective, related to transcendence or to everyday life, to enhanced ego development or regression to infantile states, and to devotion to diverse transformational paths (Porter, 1995).

Clearly, spirituality is a diffuse and multifaceted construct. MacDonald (2000) analyzed a number of spirituality measures based on varying underlying concepts of spirituality, and found five factors: cognitive, experiential/phenomenological, existential well-being, paranormal beliefs, and religiousness.

Lately, spirituality has been somewhat commodified based on its presumed tangible benefits, such as higher levels of mental and physical health (Elmer et al., 2003; Gartner, 1996). However, spirituality can also be related to harmful occurrences, such as psychopathology (Johnson & Friedman, 2008), poor health (Magyar-Russell & Pargament, 2006), vulnerability to the seduction of cults, neglect of practical concerns, and exploitation of followers (Kornfield, 1993). Climbing Jacob’s ladder of spiritual development can lead to many outcomes, both ascending and descending—and some may not be pleasant destinations.

One example of difficulties associated with spiritual development is conversion, the adoption of new religious beliefs that differ significantly from previous beliefs, which plays a crucial role in some people’s spiritual development. This poses a serious conundrum regarding spiritual development. An adherent of the new faith may view converts as advancing in development by discovering the “true” faith, while a member of the previous faith may see them as guilty of one of the worst sins, apostasy. A convert takes on not only a new religious identity but also a new set of values and behaviors. Insofar as conversion is often part of spiritual development, it illustrates the relativism that seems inherent in any model of spiritual development.

The difficulties in assessing spiritual development are illustrated by the case of Mother Mary Theresa of Calcutta who, in 1946, claimed that Jesus Christ had spoken to her on a train trip to Darjeeling, urging her to leave her teaching position in order to work with the disadvantaged. How do we reconcile this with the discovery that she later lived for decades feeling abandoned by her God? Less than three months before receiving the Nobel prize, she had written to a spiritual confidant, “The . . . emptiness is so great—that I look and do not see—listen and do not hear” (van Biema, 2007, p. 35). Her published letters revealed that, except for one brief interlude, she had not felt the presence of God for the last five decades of her life (Kolodiejchuk, 2007). This loss of contact apparently started when she began tending the poor in Calcutta and eventually became so severe that she began to doubt the existence of heaven and even of God. This loss of contact was, to her, a painful and unwanted descent for which she never found an explanation, yet she continued her service and never publicly disavowed her faith. How would we evaluate

these contradictory accounts? Did her loss of faith represent a descent (with many years of tireless devotion to the poor simply a compensation) or an ascent (demonstrated by her capacity to persevere in many good works even in the absence of inspiration)?

Models

We look at the various conjectures about spirituality as *models*, which we define as follows: “a model matches the reality that it describes in some important ways” and “a model is simpler than that reality” (Rodgers, 2010, p. 5). There are many ways to examine models of spiritual development. For example, one could compare models from different cultural vantages, such as breaking them down into broad categories such as indigenous, Eastern, or Western (although cultural diffusion has cross-fertilized these in numerous ways, so they are no longer “pure” categories). Or one could compare the basis on which truth claims are made: faith-based (religious), logical or other systematic approaches to inquiry not based on empiricism (philosophical), and empirical approaches (scientific).

In addition, spiritual development models vary considerably in form. Some are described verbally as in myths or theories, mathematically as in numerological or modern dynamic systems approaches, or graphically as in maps or cartographies. Representations may be relatively straightforward and logical (in the sense of following defined rules for relating symbols) or appear quite “alogical” or even paradoxical (apparently not following any form of logic or even intending to defy logical grasp, as in Zen Buddhist koans and the parables of Jesus that attempt to point beyond the limitations of logic). Some models rely heavily on metaphor and we note that not only have metaphors held value in the study of spiritual matters (Metzner, 1998) but also have been widely used in science throughout its history (Leary, 1990). In this chapter, we are guided by the metaphor of Jacob’s ladder.

Some approaches to spiritual development do more than merely describe: they attempt to explain how spirituality might evolve within an individual. They may employ conventional mechanisms (such as biological, social, psychological, and cultural factors), or supernatural mechanisms (such as *karma* and *grace*). Those that link variables together in an attempt to explain how a process unfolds over time can be properly referred to as “theories.” Those theories amenable to empirical scrutiny (e.g., falsification, that is, capable of being tested) may be seen as scientific, whereas those that adhere to criteria of logic (e.g., being internally consistent) without demanding empirical support might be deemed philosophical.

We do not claim that any model (or type of model) is necessarily better for understanding or facilitating spiritual development. As Western psychologists operating within the scientific tradition, we acknowledge that some readers might find our approach to spiritual development woefully lacking in light of their own traditions, but we hope we are not disrespectful in our attempt to understand and classify them.

Development

Development usually implies a process of growth across time. It is often assumed that such growth is desirable (as in the idea of maturation), and a failure to develop at a proper rate or to an expected destination (as in developmental delay) is undesirable. As we shall see, even a process that is generally deemed favorable may include real or apparent reverses. Discontinuity between stages of development is often assumed, but some thinkers advocate viewing spiritual development more as a continual process (Hood et al., 1996), rather than a process of moving from one discrete stage to another.

Spiritual development, in some models, allows for influences that transcend the physical, such as contact with a divine entity or a sense of profound interconnectedness with the universe. Until recently, Western psychology has generally adhered to the prevailing materialistic paradigm of most sciences, but this situation may be changing (Brydon-Miller & Tolman, 1997; Polkinghorne, 1983).

Spiritual development can be seen primarily as intrapersonal (as changes residing within the individual) or interpersonal (residing among individuals in relationship to community). For example, one divide among Buddhists is between the Theravadan and Mahayan lineages, the former focusing more on the enlightenment of individuals, while the latter more emphasizing collective enlightenment. Development can also be transpersonal, in the sense of pointing to something beyond the individual as an isolated being and that interconnects the individual to the sacred or cosmos in which, inextricably, one is always embedded (Friedman & Hartelius, 2013).

Some traditions posit a teleology or defined end purpose, such as ending *dukkha* (suffering, or attachment to the impermanent, within Buddhism) or attaining salvation (the attainment of blessed eternal life, within Christianity). In other models, there is no defined terminus and one's spiritual development may be seen as continually unfolding, becoming richer and more profound until death, and, according to some traditions, even continuing after death across multiple lifetimes that may or may not have an ultimate ending.

In some models, spiritual development may be conceptualized as unexpectedly sudden, as in a rapid conversion (e.g., that of the Christian apostle, Paul) or enlightenment (the immediacy of some Zen Buddhist attainments of *samadhi*) or grace, which is given without regard to merit. For instance, Bucke (1901/1969) asserted that cosmic consciousness comes suddenly and unbidden. In other systems, change is seen as gradual, requiring painstaking effort (years of deprivation and suffering), whereas in others it may be seen as unattainable by any effort (contingent on passively receiving *grace* or subject to *karma* from previous incarnations). In some models, spiritual development is seen as unidirectionally progressive (always upward toward a defined goal), whereas in others it is seen as consisting of both ascents and descents, intermixed in various ways. Spiritual development has also been viewed as both widely variant across individuals and invariant in which everyone progresses through the same stages at roughly the same rate. The very notion

of spiritual development over time is not universal. At least one thinker (Tolle, 1999) disputed the importance of time itself, stating that dwelling on it is actually a spiritual obstacle.

There have been many attempts to organize spiritual beliefs. One typology was proposed by Rawlinson (1997), who characterized them on two dimensions: hot versus cool and structured versus unstructured. Hot traditions emphasize relationship to a personal spiritual being, while cool traditions emphasize inner growth. Structured traditions emphasize the need to follow specific methods, while unstructured traditions emphasize no specific path. Given the sheer number of approaches and their possible permutations for understanding spiritual development, any summary, including ours, is necessarily limited.

Philosophical Questions

These numerous models of spiritual development vary in basic philosophical ways, which require examination. For example, does spiritual development necessarily imply some underlying reality apart from the material plane? Are people's beliefs (notwithstanding whether or not they relate to anything substantial in any veridical manner) worthy of study in and of themselves? As psychologists, we write from the latter perspective without taking a position on the metaphysical assumption in the former. Spiritual development may be conceptualized as aimed toward a hypothetical endpoint (or range of endpoints) seen as more "real" than the ordinary world. Those traditions that see ordinary reality as illusory (e.g., as a veil of illusion or *maya*) may be quite different from those that would use empirical tests (e.g., the scientific tradition) to understand spiritual development. For instance, many forms of meditative practice, which generally involve the self-regulation of attention and concentration, use a model of development to describe the process of deepening the meditative experience itself, rather than necessarily conceptualizing it as a pathway to any sort of spiritual terminus. In these models, such endpoints may be welcome as a positive side effect of meditation but may not necessarily be fundamental to the regimen itself. In other models, a metaphysical terminus, such as eternal salvation or enlightenment, may be the only desired endpoint and all salutary benefits at the more mundane level on the way to achieving this spiritual outcome may be seen as secondary, or even superfluous, or even dangerous. In many models, there are explicit warnings against the seductive appeal of alleged supernormal powers that might accompany higher-spiritual development, such as against witchcraft in Judeo-Christian, and against siddhis in Hindu, traditions.

Regardless, any model of spiritual development implies that change can be recognized. Some traditions use specific tests, such as "passing" Zen *koans* by receiving a teacher's approval of one's answer, to demonstrate progressive spiritual attainment, whereas others are less clear in defining progress. These considerations illustrate some of the perplexing epistemological questions involved in this inquiry.

Traditional Models of Spiritual Development

There are many traditional models of spiritual development. We, of course, do not attempt to provide an overview of all but, instead, provide a few representative examples. We use the broad categories of indigenous, Eastern, and Western to organize this presentation, noting that the order of their presentation is unrelated to any judgment of the primacy or superiority of any of the traditions discussed.

Indigenous Models of Spiritual Development

There are many indigenous models of spiritual development. Eliade (1951/2004) subsumed many of these under the term “shamanism,” which he believed typically focused on reinstating a sacred balance that had been disrupted. He proposed that experiences of death and resurrection (which occur during rituals such as fasting, torture, or use of psychedelic substances) form a universal core element of spiritual development in shamans (a status not shared by members of their communities). The spiritual development of the shaman requires repeated visits to the spirit worlds (often requiring multiple deaths and rebirths) and reaps progressively increasing powers; the shaman can eventually at will ascend to higher realms or descend to lower realms, often described metaphorically as through climbing a tree (a metaphor comparable to Jacob’s Ladder).

Aspirants for the title of *sangoma*, a spiritual practitioner and healer among the Zulu tribe in southern Africa, for example, undergo trials congruent with this model (Watson, 1982). Other shamanic traditions around the world have well-developed sequences of tasks or skills that aspirants must successfully complete or acquire. Typically, they involve services to their community and clients, such as guarding against sorcery, treating pain and disease, interpreting dreams, resolving family and clan disputes, finding lost objects, locating game during hunting seasons, and arranging ceremonies for such transitions as childbirth, adolescence, marriage, menopause, and death (Krippner, 2002; Walsh, 2007).

Thus, the shamanic path to spiritual development is not primarily one of individual self-improvement or enlightenment but rather a path of community service. As the shaman’s skills and knowledge increase, their success in helping the community is the gauge of their spiritual development.

Western Models of Spiritual Development

Spirituality in Western culture has been dominated by the Abrahamic (Judeo-Christian-Islamic) tradition for over two millennia. However, it should be noted that many other rich traditions were suppressed or totally eliminated, such as the mystery schools of the ancient Mediterranean (Burkert, 1987) and the Celtic priesthood (Anderson, 1998), although there are residual traces even today of many of these formerly vibrant traditions, such as in contemporary holidays that have coopted ancient rituals.

Within Judaism, spiritual development has long been judged through being well versed in the Bible and its associated books, as depth of knowledge in these sacred texts

was the mark of understanding the will of God. Learning was not restricted to simple ritualistic recitation of the laws but to the capacity to apply them in daily life and live according to God's ostensible plan. Spiritually developed individuals demonstrate wisdom and compassion through righteously applying the laws, as well as balancing justice and forgiveness within their community. Esoteric mystical traditions within Judaism included the act of blessings with the literal process of the breath (as in the Jewish patriarchs breathing upon their successors in bestowing their blessings).

In Hassidism, one variant of mystical Judaism, the very person of a righteous one is seen as the embodiment of wisdom and compassion, while in Kabbalistic Judaism, spiritual development grows in levels from focus on the individual to focus on others, and eventually to focus on God (Berke & Schneider, 2006). According to these authors, the first level focuses on obeying rituals, such as the dietary laws, without a deeper appreciation of their meaning; this stage is seen as that of the animal soul. The next level involves emergence of complex interpersonal understandings, dealing with concepts such as justice; this is seen as the wind soul. The subsequent level develops into a relationship with God, which involves the further actualization of righteousness (putting the will of God into practice); this is seen as the breath soul. The next levels involve experiencing spirituality as disconnected from the body and, eventually, a unitive experience may be attained.

Mystical schools within the Muslim tradition also focus on realizing their relationship to Allah, using methods such as contemplation, movements, and storytelling. Whirling dervishes, members of one Muslim Sufi order, twirl in circles to alter consciousness in order to grow closer to Allah. Members of another Muslim-related sect, the Druze, hold that spiritual development occurs over several lifetimes; this concept of reincarnation, which is otherwise little known in contemporary Western traditions, was part of early Christianity; reincarnation beliefs are also found in some strands of mystical Judaism, as well as in Hindu, Buddhist, and many Eastern traditions (Chari, 1967). According to Rafea et al. (2005), Islamic spiritual development is judged through matching worldly affairs with the will of Allah, aligning the secular with the sacred in accord with Allah's laws. This involves a sequence of steps: conviction (through a combination of faith and will) that Allah alone is supreme; submission to Allah; ability to distinguish between what Allah does and does not will; and, finally, completely identifying with Allah's will, harmonizing not just with the sacred but with the entire world.

In the Christian tradition, the Biblical New Testament (John 2:12–14) provides a dichotomous model of spiritual development by emphasizing three stages of growth paralleling physical maturation: childhood, young adulthood, and mature adulthood, each with its spiritual characteristics. There is also a long tradition of celebrated Christian saints, such as Thomas Aquinas and Saint John of the Cross, who were recognized for their profound spiritual development based on their attainments. Aquinas proposed stages of spirituality, such as dividing charity into three parts, starting with “beginners” who need encouragement, the “proficient” who need to strengthen their capacity to love, and the

“perfect,” who are at union with God (Torrell, 2003). Saint John of the Cross (2003) described the soul’s ten-step journey climbing a Ladder of love (like Jacob’s ladder), progressing from body concerns to union with God and, most famously, passing through the “dark night of the soul.” The rungs (stages) are as follows: languishing with love for God and the loss of desire for all things other than God; ceaseless preoccupation with finding God; perseverance in the face of obstacles, accompanied by a sense of worthlessness in comparison to magnitude of the task; gratitude for all that God has already granted and acceptance that no more can be asked; impatience and longing to unite with God; increased charity and purity, as well as repeated contact with God; vehemence in asking for God’s love; holding tightly onto God; perfection sensed as sweetness; and, finally, being totally merged with God. Noteworthy, this tenth stage was not expected to be achieved within a human’s lifetime.

Some modern Protestant communities, although not offering an explicit developmental path, honor certain signs of spiritual development. For example, in some Pentecostal churches, handling venomous snakes with impunity and engaging in glossolalia (speaking in tongues) are considered to be evidence of high-spiritual development. Another widespread and influential spiritual movement in the contemporary United States, which is anchored in Christianity, is the twelve-step approach in which spiritual goals and practices are promoted as tools for mastering behavioral problems and substance addictions (Krippner, 2005). Twelve-step programs are emphatically stage-based, and skipping a stage is seen as possibly leading to relapse (Alcoholics Anonymous, 2001).

Eastern Religious Models of Spiritual Development

There are many Eastern religious models of spiritual development, including but not limited to Hinduism (Vedanta), Taoism, Buddhism, Confucianism, Jainism, Sikhism, and Shintoism. If any generalizations can be made validly across their great diversity, they seem, in contrast to the Western traditions, to more explicitly contain self-experiments and encourage critical and reflective thinking on the part of the seeker to appraise their spiritual development. These include millennia-old systematic change processes that require cognitive control, disciplined effort, and self-reflective awareness that could take decades to master, such as formal meditation practices.

In the West, religion has been viewed as primarily theocentric, emphasizing a relationship to a personal-divine figure; by contrast, the Eastern traditions (e.g., Buddhism and Taoism) often emphasize nonduality and an impersonal divine (Corrington, 1997). However, some Eastern traditions are theocentric, including Shintoism, which boasts a pantheon of divinities. Eastern religions have been sometimes presumed to be “more spiritual” than those religions from the West by Westerners under the sway of romanticism (Friedman, 2005), but Eastern traditions also have their outer trappings and inner constraints. For example, although Buddhism is often characterized as not being a religion (and sometimes is characterized as a philosophy or even a psychology), Buddhist beliefs

include faith assumptions, such as Buddha's alleged "enlightenment" in which supposedly he became free of karma, a concept inextricably linked to a doctrine of reincarnation. Furthermore, the basic appeal of this religion is the faith that, since Buddha obtained liberation from karma, others who might follow in His path can also obtain the same result. This and many other tenets of Buddhism (and most religions) are empirically untestable and thus nonscientific, although there have been many attempts to classify Buddhism as a psychological science rather than as a religion, something that at least one of us has considered an error (Friedman, 2009).

One sophisticated Eastern model for spiritual development is found in the *Yogasutras*, attributed to the scholar Patanjali in the 2nd century BCE; its eight "limbs" or steps laid the basis for Ashtanga Yoga, one of many disciplines purported to "quiet the mind," transcend one's usual identity, and "know God" (Yati, 2009). This yoga system proposes many tools for spiritual development: meditation and mindfulness; postures and breathing practices; moderation in lifestyle; and positive virtues such as honesty and not injuring others. Spiritual development is seen as related to the attainment of these qualities. The outer forms of yoga (physical strength and flexibility in *bhatha* yoga), which are often mistaken in the West for the entirety of yoga, are easier to evaluate than the more subtle aspects of this path.

The Buddha's "eightfold path" includes aspiring toward right (or complete) perspective, right intention, right speech, right action, right livelihood, right effort, right awareness, and right concentration. The first two are said to produce wisdom, the next four to change conduct, and the final two to improve meditation. These eight aspects of the path are not necessarily sequential, like the rungs of Jacob's ladder, but are to be developed simultaneously, each supporting the others (Sangharakshita, 2007; Snelling, 1991).

One symbolic representation of spiritual development from the Zen Buddhist tradition is the Ten Ox-Herding Pictures (Suzuki, 1960), which depict stages in finding and taming a lost bull, an allegory for the search for enlightenment. It starts with searching for the lost bull (realizing there is something more to life), followed by discovery of its footprints (recognizing a spiritual path). Then the bull is glimpsed (the goal of enlightenment is perceived), followed by catching it in a struggle (disciplined effort). The bull is finally tamed (practice becomes more natural), and is ridden home, accompanied by joy. Then the bull is forgotten (transcended); finally, self and bull are both forgotten (all is experienced as emptiness). The source of oneness is reached and the seeker returns to the community to share the fruits of spiritual development with others. One's place on this allegory indicates one's level of spiritual maturity, according to this Buddhist model.

Another approach within Hindu and Buddhist traditions is based on *chakras*, Sanskrit for "turning wheels," purported focal points in one's "etheric body" (or "subtle energy body"). Although some traditions speak of five, six, eight, or even twelve *chakras*, the best-known versions define seven: the root, sacral, solar plexus, heart, throat, brow, and crown chakras. The chakra levels where one's supposed energy mostly resides, as well as

the relative balance among chakra energy, can be used to assess spiritual development. For example, one whose energy is primarily in the base chakra, related to survival, would be seen as less developed than one whose heart chakra predominates. In this sense, the human body and its hypothesized energy systems are like Jacob's Ladder, with each chakra being like a rung. The level of one's overall chakra energy indicates one's spiritual development.

In some yogic traditions, as seekers develop spiritually, a type of energy (*kundalini*) is said to rise upward like a serpent from the root to the crown, terminating, if discipline has been sufficiently rigorous, in a unitive experience (Avalon, 1919; Goswami, 1980). This developmental sequence may take years of meditative work and is not without risk. One well-known seeker, Gopi Krishna (1971), awakened his kundalini "serpent" without supervision, resulting in disequilibrium that took years to resolve.

Spiritual development through activation of the chakras has taken somewhat different forms in Tantra, Shakta, Tibetan Buddhism, Vajrayana Buddhism, and Himalayan Bonpo, among others, and in the more recent writings of Aurobindo (1962) and Bhatnagar (Bhatnagar & Lassey, 2009). The latter adept has incorporated Western psychological principles into his developmental model and has prescribed detailed exercises, such as the visualization of various chakras to facilitate spiritual growth.

Taoist paths to spiritual development also emphasize working with one's *subtle body* (the sheath that allegedly envelops the physical body and extends beyond it), often through internal alchemy (i.e., the positive transformation of lower material into higher), visualization exercises, or ritualized movement such as *qigong*, thought to promote mental and physical health (Chia, 1993). These practices interact with traditional Chinese medicine and the purported circulation of *qi* energy through its alleged network of some 265 acupuncture points and the dozen or so meridians that are thought to connect them. Healthy regimens are prescribed to balance one's *yin* and *yang* propensities (one's receptive and expressive propensities). Here, spiritual development takes an embodied approach. However, *qi* is not seen as merely physical, although there are alleged practical benefits for the practitioner's physical, mental, emotional, and sexual health by unblocking energy channels and increasing energy balance (Mayer, 2003; Meech, 2007).

Integrative–Philosophical Models of Spiritual Development

Underhill (1911/1961) was one of the first scholars to look across various traditions and provide an organizing scheme of spiritual development. She proposed that five stages lead toward the ultimate goal of mystical spirituality, the merging of the individual soul with God or the Absolute. The first is "awakening," in which one becomes conscious of the divinity, followed by the second, "purgation," in which one struggles to eliminate personal imperfections. The third stage of "illumination" is often mistaken as the last stage, as it is accompanied by a glimpse of "transcendence." Extraordinary mystics, however, go through a fourth stage, which St. John of the Cross called "the dark night of the soul" a profound sense of abandonment by God. Then if surrender to God's will occurs, there is a

final stage with complete loss of the individual self and a permanent union with the absolute. By organizing descriptions of people's experiences, Underhill used a philosophical, rather than faith-based, approach, and her integration resembles Jacob's Ladder in terms of a vertical hierarchy of spiritual states with development consisting of passing from each state to the next "higher" one.

Wilber (1980, 1997, 2000, 2004) organized a massive amount of material into a coherent framework of spiritual development. Taking a cultural-historical approach, Wilber (1980) described four fundamental phases in the evolution of human consciousness. In Wilber's earliest writings, the sense of self was wholly identified with physical being and the primordial forces of nature. Consciousness later became separated from the physiological life of the body, but it had not advanced beyond a childlike sense of magically mingling in this world. In his second era, the myths structuring this reality were still bound to the body, but an external world was recognized and responsibility for events was magically assigned to it. In the third era, with the advent of more complex forms of language some 12,000 years ago, the verbal mind climbed out of the body and into a world of extended time. The physical world could now be represented, manipulated, and narrated through mental symbols, making it possible to use complex-shared symbols to understand and control one's impulses and world. However, the cognitive abilities necessary for self-reflection were not yet well developed and so the individual's emerging sense of self drew from images of the culture's mythology. As the capacities for self-reflection evolved and the individual's assumptions could be tested through deductive reasoning, emerging perhaps some 3,000 years ago in different parts of the world, a self-observing aspect of the psyche came into being. This marked the beginning of Wilber's fourth era, characterized by the differentiation of the separate personal ego, the capacity to step back and observe oneself. The current era, Wilber's fourth, is dominated by the rational, self-reflecting, individual ego. In primordial times meaning was lodged in the group; today it is primarily centered in the individual.

Wilber (2000) also created a model of spiritual development based on his examination of Western and Eastern reports of mystical development. One can, Wilber asserted, progress from "gross level mysticism" to the "causal," "subtle," and "integral" stages. The last of these represents the resolution of one's conflicts and imbalances in favor of a unity of thought, feeling, and action. Wilber contended that children do not have ready access to the higher spiritual realms. He did not dispute the claim that children were capable of having some sort of spiritual experiences, only that they cannot skip developmental stages. He argued that children's absence of strong ego-boundaries means they cannot differentiate between themselves and the environment, a capacity that characterizes higher-level mystical experiences. According to Wilber (1980, 2000), pre-egoic spirituality differs from "transegoic" spirituality and to equate them is to commit a "pre/trans fallacy." Wilber's model is probably the most impressive modern example of a vertical model similar to Jacob's ladder.

However, Wilber's model has been questioned by many, including Washburn (2003) and Taylor (2009). Washburn's model is less hierarchical, allowing for alternating ascents and descents. Taylor conceptualized spiritual experiences as occurring at many different levels of intensity and reports of the spirituality of children meet his criteria for being authentic spiritual experiences, albeit at lower intensity levels. Taylor's model describes five levels that may occur developmentally or may be encompassed within a single experience:

1. A heightening of physical perception; the world seems brighter, more colorful, and more intricate;
2. A sense of the "aliveness" of ordinarily inanimate phenomena; the world comes alive;
3. A sense of meaning, harmony, and benevolence pervading one's surroundings or the world as a whole;
4. A sense of inner well-being, peace, bliss, or joy; and
5. An awareness of spirit in the world—what Christian mystics call deification, what some Buddhist traditions refer to as *nirvikalpa samadhi*.

These experiences can occur in a solitary context or in a communal context, such as group sporting activities, lovemaking, or a group artistic performance (including among members of the audience at such a performance; Riebel, 2020). Taylor (2009) found support for his position from Loevinger's (1976) speculation that a child's openness to experience is reduced during maturation but might be regained at higher levels of ego development. Taylor concluded that spiritual experiences are accessible to individuals at both Wilber's pre-egoic and transegoic levels, but that certain aspects of "transegoic" spiritual experiences are not a part of the pre-egoic experiences, for example, the realization that one's "ego-self" is not one's "true self." This debate about childhood spirituality is also reflected in Hay and Nye's (1998) notion of "relational consciousness," which is proposed as a noncognitive spiritual construct that presumably bypasses linear-cognitive development constraints and allows for the equal validity of childhood and adult spiritual experiences.

Wilber (2016) later clarified some of his developmental distinctions in a helpful way, namely, by differentiating between "waking up" and "growing up." The distinction between these, made earlier by Welwood (2000), argues for separate developmental pathways for waking up being related to *states* of consciousness, and for growing up, being related to *structures* of consciousness. From this vantage point, children can have profound mystical experiences that allow them to wake up to higher states of consciousness, but their everyday understanding of these states would be limited to how grown up they are (e.g., their cognitive complexity). This would apply similarly to people in cultures that are less developed in Wilber's hierarchy, such as those whose worldviews are characterized by what Wilber calls magical and mythological thinking rather than rational, inclusive, and

integral thinking. Conversely, those who have what Wilber would see as more sophisticated worldviews may be more grown up, but if they lack the requisite direct experience, not necessarily wakened up. This distinction solves the theoretical problem of children who have experienced highly awake states yet who have not integrated these in grown-up ways as well as addresses how some people may be very awake in terms of reaching high states of consciousness, yet still commit atrocities such as sexual abuse of their students.

Philosophical models of spiritual development use various classification schemes, but in general they use concepts not easily amenable to empirical testing, or they have not subjected their speculations to empirical tests, although they may have integrated empirical data into a theoretical edifice. What separates them from scientific approaches is this lack of being open to empirical examination, although the boundaries between philosophy and science are not always clearly delineated. In this regard, some aspects of theories like Wilber's can potentially be subject to empirical scrutiny, and might be seen as "prescientific" rather than totally outside the realm of science.

Psychological Models of Spiritual Development

Many psychologists have proposed stage theories of spiritual development within the scientific tradition, which calls for some form of empiricism, using sensory perception to gain information to support or disconfirm a theory. For example, Roehlkepartain et al. (2005) presented an overview of various theories of spiritual development in childhood and adolescence. In the quantitative traditions of research, measurement is essential and there is a robust literature using measures relevant to this topic. There is also an abundance of tools designed to assess spirituality, including more than 100 identified constructs related to spirituality and the transpersonal (MacDonald et al., 1995; MacDonald, Friedman, & Kuentzel, 1999; MacDonald, Kuentzel, & Friedman, 1999). Many additional measures have been developed since these review papers, evidencing a growing research tradition (MacDonald & Friedman, 2002). There is also a strong qualitative research tradition in studying spiritual development, as well as a variety of emerging mixed-method approaches (Robbins & Friedman, 2009).

Psychology of Religion

One of the earliest psychologists of religion, Gordon Allport (1969) distinguished between immature and mature religious sentiments. Immature religion uses less developed thought processes, which are concrete and magical (as in accepting sacred scriptures literally), while mature religion uses more developed thought processes (as in seeing sacred scriptures metaphorically). His ideas developed into related concepts of intrinsic and extrinsic religion, which can be seen as a stage delineation, albeit with only two stages. Allport's work generated a tremendous amount of empirical research (see Hood et al., 1996), placing it in the realm of science. However, even a scientific approach must face the conceptual conundrums we have pointed out. For instance, some religious traditions

hold that accepting scripture literally demonstrates a higher level of spiritual development, whereas other traditions may see uncritical literalism as a relatively undeveloped stage of spirituality.

Morality is the focus of another widely used psychological approach to spiritual development. Kohlberg (1971) was influenced by the well-known Piagetian stages of cognitive development, as he created a model of moral reasoning consisting of six stages. Individuals at presumed different stages of moral development provide different justifications or condemnations of actors in given vignettes. Kohlberg postulated three main stages: a “preconventional” approach based on self-interest without concern for another, a “conventional” approach based on prevailing moral values, and a “postconventional” approach that sometimes contradicted prevailing moral values in service of a higher good. He saw his stages as universal, but progression through the stages occurred at different rates in different cultures. Of particular interest to our discussion is Kohlberg’s belief that some people regressed into earlier stages, depending on life circumstances such as crises (just as the angels both ascended and descended Jacob’s Ladder). Kohlberg also sometimes speculated about a seventh stage of cosmic and transcendental morality.

If moral decision-making represents an aspect of spirituality, one’s primary form of moral reasoning could be thought of as an indicator of spiritual development. Interestingly, some spiritual traditions explicitly defy notions of morality and encourage adherents to break extant taboos. For example, Jesus admonished his followers to shirk the day-to-day responsibilities of family and other conventional ties in order to follow Him, such as to ignore Sabbath rules in order to help others, while some Hindu tantric practices encourage violating social norms, such as codes of sexual conduct, in order to gain liberation. Thus moral criteria cannot form a uniform approach to understanding spiritual development, since morality itself is so variable. In addition, as religions ossify, the fundamental moral messages of their founders, which often were quite radical, frequently become distorted into instruments of social control benefiting the status quo.

Freud and his followers attempted to build a scientific theory of development devoid of reliance on any vestiges of religion and spirituality (considering religion and spirituality as *prima facie* signs of failure to mature). However, several followers of this approach created revisions and extensions of Freudian theory that did encompass spiritual development. Erikson (1980) extended Freud’s theories across the entire life span into an eight-stage model of development. Although each stage can be linked to spiritual development, perhaps most salient to this discussion is Erikson’s last stage, integrity versus despair. Erikson argued that, at the end of life, the developmental crisis needing resolution is finding meaning with life itself, including its inevitable end in death. To the extent that this successful resolution requires facing at least existential, if not spiritual, concerns, achieving it can be a mark of spiritual development.

Gilligan (1982) took exception to Kohlberg and Erikson, pointing out that their models were male-centered and hierarchical. Her interviews with women indicated that,

when faced with moral decisions, they thought more about caring and connection than about abstract rules. Gilligan interpreted the fact that females tended to score lower on Kohlberg's measures of moral development as an artifact of the model, rather than a demonstration that the moral development of women is in some way inferior to that of men. Her critique exemplifies the dilemma of imposing any uniformly vertical model of spiritual development, as these may not only be culturally and historically limited but also gender biased.

Perhaps the best-known stage theory of spiritual development is based on both cognitive (Piagetian) and affective (Freudian and Eriksonian) precursors. Fowler (1981) envisioned spiritual development as a sequence of seven universal stages: "Primal or undifferentiated" faith during the first two years (focused on security issues and not on faith per se); "intuitive-projective" faith in preschoolers (focused on unconscious material and magical beliefs); "mythic-literal" faith in grade-school preadolescents (focused on following rules, such as in adhering to conventional justice); "synthetic-conventional" faith in adolescence (focused on conformity); "individuating-reflective" faith in early adulthood (focused on struggles to find personal meaning); "conjunctive" faith in middle adulthood (focused on achieving reconciliation of paradoxes); and last a "universalizing" faith, similar to other models of transcendence. This scientific theory developed into a robust research tradition (Leak, 2008).

The psychology of religion, as an empirical scientific tradition, has provided many avenues to understanding spiritual development, typically involving the use of measures and surveys. However, much of this research has been based on a Judeo-Christian approach to spirituality and, as mentioned, may not be very universally applicable.

Transpersonal Psychology

The word "transpersonal" was first introduced into psychology by William James in a 1905 lecture and used in 1942 by Carl Jung as the German term, *überpersonlich*, which his English translators rendered as "transpersonal" (Vich, 1988). A few years later, this term was also used by Murphy (1949) and then in the 1960s others picked up the term (Sutich, 1969) as a type of unifying framework. Friedman (1983) applied the term "transpersonal self-expansiveness" to experiences in which one's sense of identity extends beyond its ordinary limits to encompass wider, broader, and deeper aspects of the cosmos. Friedman (2002) later argued that the transpersonal perspective allows a scientific approach to understanding such phenomena that can benefit from the wisdom of religious traditions and spiritual experiences without being bound by their underlying assumptions or doctrines, a point to which we will return in our conclusion.

In contrast to the psychological study of religion from a more or less "objective" position (such as exploring demographic patterns related to phenomena), transpersonal psychology also embraces the "subjective" study of the experiential aspects of spirituality. Today the distinction between transpersonal psychology and the psychology of religion

is fading, as the psychology of religion has renamed itself the “psychology of religion and spirituality” (Emmons & Paloutzian, 2003). Some scientific research has come out of the transpersonal psychology tradition (e.g., Tart, 2009), but most of the work has been experiential.

One example of a transpersonal scientific-research tradition stems from the Self-Expansiveness Level Form (SELF), a self-report test measuring transpersonal self-expansiveness, defined as “the amount of True Self which is contained within the boundary demarcating self from not-self through the process of self-conception” (Friedman, 1983, p. 38). The SELF measures three levels of self-expansiveness: a personal level of the here-and-now; a transpersonal level in which identity expands beyond present place and time, and self dissolves as a separate entity; and a middle level between the personal and transpersonal. In this regard, the SELF was specifically designed not to measure a vertical–hierarchical level of spiritual development, but rather a horizontal–nonhierarchical expansion of the self-concept across space and time. This transpersonal approach has resulted in an empirical-research tradition, placing it within the realm of science (Friedman, 2018). Using Wilber’s (2016) distinction between waking up and growing up, transpersonal self-expansiveness might be considered a type of growing up to a more inclusive view of one’s self. As a trait (namely, a stable cognitive structure in which to understand one’s identity), rather than a temporary state, it is often obtained through making sense of the direct experiences of waking up in a process of growing up. Contemporary culture, in which knowledge of different worldviews are widely available (Glover & Friedman, 2015), allows more people than ever to both grow up and wake up.

Self-expansiveness, as one approach, provides an integrative framework to understand this phenomenon from a transpersonal vantage. MacDonald’s (2000) pioneering work identifying five factors of spirituality’s expressions left transpersonal self-expansiveness as an outlier that does not fit well within his five-factor model, suggesting there are important differences between spirituality as commonly conceptualized and this transpersonal construct. For example, there can be transpersonal states and traits that are secular and not at all spiritual, at least as that construct is usually conceptualized, such as transpersonal identification with atoms.

From its onset, transpersonal psychology has been about development, as reflected in the titles of some of its foundational work (e.g., Assagioli, 1991/2007; Washburn, 1988; Wilber, 2016). These go beyond conventional approaches to psychology by addressing aspects of development that ordinarily are ignored, such as higher states of consciousness and mystical experiences, as well as their integration into stable traits such as self-expansiveness. Also, other transpersonal constructs, in addition to self-expansiveness, address the developmental processes of waking up and growing up to a wider and deeper sense of identity (Friedman, 2018). There are also many related constructs, such as awe (Bonner & Friedman, 2011), that can provide mechanisms to help explain some of these processes in transpersonal ways.

Neurobiological Models of Spiritual Development

The neurobiological approach to spiritual development, now rapidly growing, uses emerging technologies (functional magnetic resonance imaging, or fMRI, Quantitative Electroencephalogram Test, or QEEG, etc.) that can measure the physical expressions or concomitants of spiritual variables. For instance, activation of certain brain states (theta and perhaps gamma brain waves) or the development of certain brain areas (following years of meditation) lend themselves to neurobiological study. Spiritual traditions have long discussed physical factors, such as breath and alleged “subtle energies” (e.g., *qi*), in relationship to spiritual development. A convergence of interest in traditional spiritual issues and these new scientific methods has begun to occur, such as by Krishna (1971) who held several seminars with scientists, attempting to elicit their cooperation in verifying the existence of “kundalini energy,” which he felt held the key not only to spiritual development but also to human genius and creativity. Motoyama (1971, 2009, pp. 86, 174–175) claimed to have invented a technology for measuring acupuncture points, meridians, and chakras, asserting that his data validate the existence of these ancient constructs, and called for independent replication of his studies. Alper (2001) and McNamara (2009) have linked the neurobiology of spirituality to human evolution, and the latter author has proposed that religion was a primary force in the evolution of self-awareness.

The neurobiology of spirituality is emerging as a distinct discipline, with studies of meditation, near-death experiences, dissolving of ego boundaries, and other phenomena taking place with rigorous methodologies. In this regard, accounts of extraordinary experiences studied through the tools of neuroscience are attracting the attention of many scholars (Cardena et al., 2000; Krippner & Friedman, 2010) looking at spirituality from this vantage. It is even conceivable that one day spiritual development might be assessed by neurobiological indicators (the overall ratio of theta to beta brain waves produced during meditation, the activation of certain areas in the left temporal lobe of the brain, etc.). This would not necessarily be an exercise in reductionism but rather could be an acknowledgment of neurobiological concomitants to spiritual life. It is becoming increasingly clear that nature, not just nurture, may have a lot to do with spirituality (Granqvist & Nkara, 2017), including its development.

Conclusion

This chapter began with the metaphor of Jacob’s Ladder as a starting point for discussing models of spiritual development, but there is another lesson to be learned from this Biblical account. Once Jacob reached the top of the ladder, Jehovah was said to have given Jacob and his descendants dominion over all the land that they could see. This promise could represent the rewards of spiritual development (Maslow, 1968). But when it is interpreted literally, as by some of Jacob’s descendants who base their claims to political and economic control of Judea and Samaria on this story, it causes no end of

turmoil, bloodshed, and warfare. This type of literal interpretation affects many traditions, presenting seemingly irreconcilable positions in the name of what is held sacred. This illustrates some of the very real challenges for understanding spiritual development, for taking a sacred text literally can have high costs to humanity and the earth. We believe that more deeply understanding and being able to facilitate spiritual development could benefit people in important ways. The models we have described serve as one set of tools to explore this possibility.

Another approach is to recognize barriers to spiritual development. These can be microsocial (as in conformity pressures from other individuals), macrosocial (as in pressures from collective structures such as laws), or individual, as in character flaws. For instance, Trungpa (1973) defined “spiritual materialism” as a pursuit of enlightenment driven by egoistic needs. Clearly, this whole area is one of great challenges and potential rewards, as well as one where the costs can be high if no integration is found.

Ferrer (2009) has argued for a participatory approach to spirituality and its development. He proposed abandoning any predetermined ultimate criteria for evaluating spiritual development, as they can soon collapse into dogmatic formulations. He argued that this does not mean abandoning discernment but that we need to simply recognize that spiritual-truth claims cannot be supported in terms of ontology, as their multiplicity is both a natural and essential expression of a mystery to be celebrated. He maintained that this is not an abdication of the obligation to evaluate the differential worth of various paths, but that we need other grounds to evaluate competing truth claims. He was especially averse to the use of any predetermined doctrines (spiritual hierarchies) and instead suggested that the consequences of different paths be used to evaluate them. Specifically, he proposed two guidelines: an assessment of how a path might liberate practitioners from self-centeredness and another assessment of how a path might lead to a person’s fulfillment. These proposals recall the pragmatic solution proposed by James (1890) for resolving conflicts between positions (such as belief in free will vs. determinism) by looking at their fruits. In this way, different paths to spiritual development may not be inferior or superior, just different—and spiritual development may not be subsumable within any one system of understanding or measured in any unidimensional way.

Future Directions

We have attempted to capture some of the many complexities involved in understanding models of spiritual and transpersonal development and hope we have supplied readers with some useful concepts to aid their study of this important and provocative avenue of human inquiry. We are delighted with the many advances in conceptually understanding spirituality in more nuanced ways (e.g., Yaden et al., 2017), as well as how these approaches are being furthered in so many directions, such as across cultures and languages (e.g., MacDonald et al., 2015) and linguistically (Yaden et al., 2016). In addition, there are many advances in methods applicable to this area, such as new neurobiological

(e.g., Newberg, 2014) and innovative mathematical (e.g., using fractals; Sacco, 2017; Wolf & Friedman, 2020) approaches. All these advances portend better understanding of spiritual development.

Whether readers see Jacob's Ladder of spiritual development as vertical, horizontal, circular, or something else, we wish them well in their quest. Finally, we hope that the panoply of models of spiritual development does not obscure the goal of so many individuals and traditions to further spiritual development, whether it is seen as salvation, enlightenment, or plain healthy living in a fully embodied state of the here and now.

Questions presenting future directions for the field, difficult problems to be solved, or topics that remain to be addressed.

How might spiritual development be significantly influenced by historical and cultural context?

Can spiritual development ever be understood in a universal way across all cultures and all times?

Can there be models of spiritual development that do not rely on untestable metaphysical assumptions?

Can a unifying scientific model of spiritual development be constructed that appropriately addresses the complexity and multidimensionality of this area?

What empirical research methods (or mixed methods) might best address the complexity of spiritual development?

What innovative or new methods might be created or utilized to study spiritual development?

What are possible genetic components of spiritual development?

How might spiritual development models better integrate the body, embodiment, and/or somatic phenomenology?

How might neuroscience inform, modify, or guide spiritual development models?

How might current research with psychedelics and/or pharmaceuticals enhance our understanding of spiritual development?

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Awakening Education: Nurturing Spirituality in K–12 School Culture

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Abstract

This chapter presents the basic science on child spirituality paired with the findings of collaborative educational field research to culminate in the initiative for Awakened Schools. Basic science shows a child's spirituality to be an innate capacity, with roughly one-third of adult formation attributed to heritability and two-thirds attributed to environmental socialization. When the natural "spiritual core" of the child is supported, the likelihood of a lifetime of greater mental health and thriving, committed and meaningful relationships, and being outwardly effective in the world are all substantially increased. The traditional immersive places in society where spirituality has been fostered in children and adolescents are decreasingly engaged by families, mitigating their ability to fulfill that role. Thus, other youth-centered institutions must find ways to nurture children's innate spirituality to provide the necessary two-thirds socialization of the spiritual core. Schools thus offer a rich context to support the spiritual core, in a way that is constitutional and consistent with any given school's mission to focus or not focus on religion. This chapter presents the findings of a three-year qualitative study of 22 schools (private and publicly funded; religious and secular in mission) which intentionally have designed their relational cultures to be spiritually supportive. Our findings reveal 11 drivers of a spiritually supportive, or awakened, school culture. These 11 drivers are concrete and actionable, ready to be implemented by any school as well as other institutions (private or public; religious or secular) to nurture the development of spirituality in children and adolescents.

Key Words: spirituality, K–12 education, school culture, adolescence, relational spirituality

Introduction

In the United States, one of the primary objectives of education is to prepare students to be informed, participatory citizens (Krutka, 2014; Mann, 1842). The progressive educational scholar John Dewey argued that American democracy required of its citizens an interconnectedness which worked toward the common good (Dewey, 1916, 1934; Rockefeller, 2009). Freedom is founded upon a deep interconnectedness with other humans and with all life: as Indigenous epistemologist Lilla Watson said of societal dynamics, "your liberation is bound up with mine" (1985). When we know ourselves to be part of a greater whole, our actions in the civic sphere reflect that understanding. The

choices that we make, from voting to caring for the environment to our daily interactions with neighbors, are based on what would be best for the society, rather than only ourselves. In this way, we are only truly free when all members of a society are working for the collective welfare of the collective. In societies that have participatory forms of self-government, preparing students to inherit that self-government is a necessity. This must include creating a school environment that nurtures each student's innate spirituality.

Although scholars have argued for the necessity of returning to this original purpose of education in order to prepare students to inherit self-government, most mainstream education does not do so (Chapman & Miller, forthcoming; Elam et al., 1996; Gleason & von Gillern, 2018; Heath, 2018; Krutka, 2014). Schools serve as incubators of spirituality before students set out to the wider world. They create the environment that provides the light and heat for spirituality to grow, and that environment also serves as a space in which students can reflect that light and heat back to each other. In this way, schools function as a microcosm of the larger society they are preparing students to enter and govern (Dewey, 1897). When schools design their environments to nurture students' spirituality, they are preparing students to live in the wider world in ways that promote interpersonal, intrapersonal, and societal well-being.

The empirical findings of our three-year study show how some schools are cultivating such spiritually supportive environments. The schools in this study present a roadmap for intentionally designing school culture as incubators of students' innate spirituality, schools we call "Awakened Schools." These Awakened Schools nurture each student's inner core; they also serve as a society in which students learn to make decisions that support the well-being of others and the whole.

The Science of Spirituality

All People Are Born Spiritual Beings

Spirituality is a deep and innate human capacity through which we experience the sacred and the transcendent in the imminent (Kendler et al., 1997, 1999), which burgeons across the lifespan, particularly in adolescence (Button et al., 2011; Koenig et al., 2008). Twin studies have shown that every child is born with an innate capacity for spiritual life (Button et al., 2011; Kendler et al., 1997; Koenig et al., 2008); by adulthood, one-third of our inherent spiritual core comes from our genetic constitution, while two-thirds of our spiritual core is developed into being by our interactions with the people and environment around us (Button et al., 2011; Kendler et al., 1997; Koenig et al., 2008). Within the two-thirds contribution from the environment is the often rich and developmentally supportive practice of a family religious tradition. Spirituality is innate and then socialized. Religious observance can be seen as a rich environmental embrace of natural spirituality, as it is introduced and taught to the child.

One way of exploring the common phenomenology, or lived spirituality held in the one-third heritable contribution, is through cross-cultural investigation of potential phenotypes. In a study of over 5,500 adults from China, India, and the United States, at least five common forms of universal spiritual awareness were identified, potentially marking phenotypes of the one-third heritable contribution to innate human spirituality (McClintock, Lau, & Miller, 2016). Similarly, Benson and colleagues asked over 9,000 adolescents and emerging adults from eight different countries across five continents about their spiritual engagement (Benson, Scales, Syvertsen, & Roehlkepartain, 2012). For many of the adolescents and young adults in this study, spiritual engagement occurred even without participation in religious or spiritual practices; spiritual development appeared to burgeon from the inside out in common ways across cultures and religious backgrounds, including those who did not identify as religious, to include a sense of connection to a Higher Power, an imperative for service, seeking for truth and purpose, and a practice of prayer or meditation (Benson et al., 2012).

Like other aspects of human development, one's spiritual development surges during puberty. Along with biological puberty, there is a burgeoning of this natural spiritual capacity, through which there has been identified a 50% increase to the heritable contribution during adolescence (Button et al., 2011; Koenig et al., 2008). In other words, during puberty, there is a surge of spiritual development, alongside other lines of development (Koenig et al., 2008; Miller & Gur, 2002). The surge, or "biological clock," of the emergence of spiritual life in puberty has also been tracked cross culturally to indicate some universal potential phenotypes which are expressed developmentally. Both in countries with theism and non-theism, an intentional and loving greater universe is clarified into awareness with puberty (McClintock et al., 2016).

Neural correlates of spirituality have been identified which implicate the regions of attention, perception, orientation, and emotional bonding. Of note, the neural correlates of personalized spiritual experience have been shown to be consistent across people who are within and without a faith practice or religious identification (McClintock et al., 2019; Miller et al., 2018; Newberg, 2010). By identifying the neural correlates of spiritual awareness, together with a phenomenological report, we can discern a cluster of perceptions which otherwise, in other states of awareness, tend to be held disparately. Specifically, in a state of spiritual awareness, a Ventral Frontal Temporal Network has been shown to be associated with a felt sense of love and connectedness with life, together with the awareness of unity or oneness sustained in the Parietal and Precuneus regions (McClintock et al., 2019). The uncommon simultaneity of awareness of oneness and unity on one hand, with individual locus of awareness and sense of individual path and purpose on the other, undergirds or holds the dialectic of individual freedom with collective compassion. The settling of these apparent appositives is essential to the balance of personal choice and responsibility with connected compassion needed in relational spirituality.

Spirituality Must Be Nurtured, Not Taught

As an innate and basic human capacity, spirituality is much like our innate capacity for language: it can be shaped, supported, or hampered, but it is not taught as the transmission of knowledge as might occur when learning something that requires lower-level thinking skills like recall. Spiritual motivations, perceptions, and relationality are supported, as the hardwired innate capacity is guided, presenting a distinct set of opportunities within the developmental windows of youth. However, the epidemiological findings on a heritable contribution suggest that a full and rich development of the spiritual core is dependent upon its nurturance by parents, grandparents, peers, and community. If the spiritual core is supported, encouraged, and guided, the innate capacity for spirituality blossoms into development and can be fully realized. The growth of spirituality hinges on its being supported, particularly in childhood and adolescence.

Religious observance often can be a powerful and successful pathway for nurturing natural spirituality. However, as at the national level, family attendance at religious services dwindles; children are no longer introduced to faith communities in the same way that they were decades ago (Smith & Denton, 2009). Houses of worship and other similar institutions offer a community and guide parents with a pathway to support innate spirituality in children; its absence reflects a dearth, leaving children without the socialization necessary for the two-thirds contribution for spiritual development (Miller, 2015; Smith & Denton, 2009). Here is where, as a natural human capacity, intertwined with all other lines of development, attention must be paid to the spiritual growth of children and adolescents.

Education Can Cultivate Spirituality

Given the scientific call to support a child's innate spirituality, our question then becomes: how might K–12 schools do this work? The necessity of an education that touches the deep spiritual core has been part of the holistic education movement for more than 20 years (Miller, 2000; for a review, Miller et al., 2018). Originally, the most pervasive and broad-reaching movement in the United States for school-based social emotional learning (SEL), as formulated by Rachael Kessler, called for the nurturance of spiritual emotions such as transcendence, joy, and gratitude (Kessler, 2000); this was followed by the work of Linda Lantieri, a cofounder of the Collaborative for Academic, Social, and Emotional Learning (CASEL), in her focus on “schools with spirit” (Lantieri, 2002). Kessler's specific conceptualization of Seven Gateways provides a guide for education. At the center of the Seven Gateways is “deep connection,” a term Kessler used to describe relationships that are caring and meaningful, foster belonging, and allow each person in the relationship to be seen and known. Students are effectively “seen into existence,” much as Parker Palmer wrote that students can be “listened into existence” (Palmer, 1999). Given this research, teachers are best viewed as *ambassadors*, guides who show the innately spiritual child and adolescent the world through the lens of spiritual awareness. When that is done,

in keeping with Kessler's Seven Gateways, there is support for the spiritual core that is found in the relationship between teacher and students.

Relational Spirituality as a Pathway to Fostering Spiritual Development in Schools

Relational spirituality presents a way of understanding how spirituality may be fostered in young people. *Relational spirituality*, which has been defined as “ways of relating with the sacred,” includes how people connect with a transcendent being or deity, ultimate reality, or truth (Shults & Sandage, 2006, p. 161). This same connection with the sacred flows through relationships with human beings and all life (Thomlinson et al., 2016; Tucker & Swimme, 2011). Relational spirituality is in the connection between people whose relationships are grounded in seeing and knowing each other's full humanity (Buber, 1923/1970; Faver, 2004; Lahood, 2010).

Schools can provide environments in which these types of relationships can develop and thrive (Faver, 2004; King et al., 2011). Several components of relational spirituality apply to education, such as spiritual seeking and spiritual dwelling (Thomlinson et al., 2016). Schools are well situated to nurture the shifts between spiritual seeking, when people ask existential questions, and spiritual dwelling, in which one's relationship with the sacred is more secure, as this process occurs throughout childhood and adolescence (Thomlinson et al., 2016). Relational spirituality has also been shown to be a key component of spiritually supportive education because of its impact on school culture (Chapman et al., 2020). Institutions grounded in relational spirituality nurtured belonging and connectedness to others and upheld each person's inherent worth (King et al., 2011). Incorporating relational spirituality into education has the potential to be transformative because of its ability to foster interconnectedness among school community members.

Basic science calls forward a clear need for support of the spiritual core of the student, and work on relational spirituality provides a theoretical understanding for how this might be done. Within this framework, how might relational spirituality deliberately be brought into the social ecology surrounding young people? For children and adolescents, who spend at least two-thirds of waking hours in school or on school-related social networks or activities, schools are a foremost and impactful developmental context.

Awakened Schools

This chapter presents empirical research that identified common ways in which K–12 schools can choose to prioritize support for students' innate spirituality by creating a spiritually supportive culture, which is to say a culture that nurtures the child's innate capacity for spiritual awareness. More specifically, we aimed to harvest thousands of hours of educational innovation living daily in K–12 settings, to offer a broad distillation in a conceptualization that might be adapted by any K–12 school. The level of analysis of this conceptualization was sufficiently broad to hold a diverse array of community culture

and values yet still concrete and actionable; transparent and published to be used free of charge, as readily implementable by school leadership, teachers, and parents. We intended to empower school leadership and teachers with a conceptualization able to be adopted, adapted, and appropriated in a way that aligns with a given school's culture, mission, and values. And yet, Awakened Schools have a common blueprint.

An Awakened School immerses each young person in a relational culture to nourish their innate spiritual capacity. These Awakened Schools intentionally engage the deep inner spiritual core of the child, realizing that loving relationship is the context in which spirituality is fortified. Spirituality is not taught in a program delivered through curriculum alone, it is embodied through the 10,000 exchanges in a school day. Awakened Schools provide students with both scaffolding and freedom, creating an environment that nurtures each child's innate spirituality and yet also offers room for them to engage their spirituality in ways which are authentic to them. Awakened Schools foster wonder, awe, and reverence; they are grounded in loving relationships that see each person as sacred; they honor each student's self-worth and inner wisdom.

Methods

To date, very little systematic research has been conducted on spirituality in K–12 education outside specific religious traditions. That said, a great number of schools in the United States nurture the spiritual life of children, some within a faith tradition and some outside a specific faith tradition. An inefficiency exists in the transfer of knowledge from the “living lab” of classrooms to a pedagogical conceptualization of support for the growth of natural spirituality in students, in a way that is culturally inclusive and constitutional. Such a conceptualization might be used by fellow schools, inform teachers trainings, and ultimately recast normative expectations around the possibility for student growth and development in a way that integrates the spiritual core.

In light of the emerging nature of the field, we designed research that would harvest the experience and acumen of master educators in K–12 schools. Contributing educators came from schools with mission statements within faith traditions and outside faith traditions, with our aim being to identify universal and transferable pedagogical practices to support spiritual development in K–12 students.

In the form of extensive qualitative research, we conducted visits to 22 leadership schools; 16 of which were independent schools (9 with religiously oriented mission statements) and 6 of which were public schools. Among the independent schools with religion in the mission statement, four were Catholic, two were Protestant, two were Jewish, and one was Sufi. The six public schools came from different cultural traditions: one was derived from a Black Panther tradition, another from the Muslim tradition. One of the public schools was interfaith driven, and three were silent on religious or spiritual life but had implemented mindfulness as a technique and were located in communities with a strong presence of family faith.

Our data were collected through observations and through semistructured interviews with members of the faculty, staff, administration, and the student body of each school. In order to observe the culture of each school, we joined the school culture, across academic, social, artistic, and service activities and experiences for spontaneous visits, curated discussions, and participated in routine daily events. More specifically, we sat in on classes and met and spoke with students in dining halls, in mindfulness classes, in the library, and in community service meetings. We met with disciplinary groups, attended communitywide meetings, and were on playing fields. We were in chapel services and other sacred spaces, and we were witness to sacred rituals.

Our intent was to be present throughout the school day in a variety of settings in which the culture of the school could be observed. In each space within a school we visited, we observed how people interacted with each other, including both students and adults in formal (e.g. classroom) and informal (e.g. hallway) settings. Additionally, we were attentive to how spirituality or spiritual practices were integrated into the school day, such as daily chapel services and regular and required classes which focused on deep reflections on spiritual topics.

In addition to our observations, we conducted semistructured interviews with a wide variety of members of each school's community to identify ways in which spirituality was embedded in school practice, curriculum and culture, faculty development and training, and parent engagement. We interviewed every school head. We met with psychotherapists, counselors, and physicians on campuses. We met with heads of community service, chaplains, and student wellness and student life leaders. We also interviewed classroom teachers, coaches, and members of each school's administrative teams. We usually were able to interview parents of current students and alumni of the school. We asked these different members of each school's community about how spirituality was embedded in school culture.

Data were analyzed using a grounded theory approach (Charmaz, 2008). Following our school site visits, our research team wrote up field notes of these site visits to make a record of our observations; all interviews were recorded and transcribed. These coded interviews and the field notes of our site visits served as the basis for analysis by our research. Interviews were initially coded using an open coding process to allow codes to emerge from the data (Creswell, 2013; Glaser, 2012); we then applied conceptual coding to both interviews and field notes (Saldaña, 2016). Through this bottom-up, iterative process, we identified patterns across schools; this process generated a conceptualization of the commonalities across schools that support spiritual development. Findings were then sent to contributing school heads and fellows for comment and feedback; through this process of member-checking, the model was refined (Miles et al., 2014).

Pseudonyms have been used for both schools and individuals (heads, educators, or students) to protect the privacy of those who participated in our research.

Findings on Awakened School Culture

The next sections present the findings from our empirical study of 22 leadership schools.

The 11 Drivers of an Awakened School Culture

Our program of research identified 11 drivers of an Awakened Schools, defined as prioritizing an intentionally designed and instantiated spiritually supportive, school culture. Our conceptualization of the common 11 drivers found across Awakened Schools express elements that are conceptually developmentally significant to nurturing natural spirituality yet concrete and actionable. Educators’ use of the 11 drivers creates and maintains a school culture that supports and nurtures the spirituality of children and adolescents. Two of these drivers speak to the awareness that Awakened Schools foster in their students, faculty, and staff: the *authentic being* and *transcendent practice*. Six of the drivers describe the ways in which schools encourage a sense of belonging in their students, faculty, and staff: *transformative relationships*; *integrated mission*, *aspirational values*; *inherent worth*; *ritual*; *intentional lexicon*; and *authorized keeper*. The final two drivers, *nature consciousness* and *meaningful learning*, speak to the ways in which schools foster connectedness among their students, faculty, and staff. Table 8.1 briefly explains each of these 11 drivers, which are further illuminated with support from interview and observational data below.

Table 8.1 Drivers of Spiritually Supportive Culture	
Driver	Explanation
Transformative relationships	Building student–teacher relationships grounded in connection and love
Inherent worth	Seeing, knowing, and valuing every member of the school community
Authentic being	Committing to drawing out the deep spirit and creative expression of the child
Transcendent practice	Cultivating practices that nurture and elevate an augmented form of awareness
Nature consciousness	Facilitating opportunities to form deep, lived relationships with nature and all life
Meaningful learning	Connecting knowledge and service
Integrated mission	Vertically integrating a lived and meaningful mission
Aspirational values	Holding aspirational goals inside and outside the classroom
Ritual	Promoting community identity and belonging among diverse staff and students through ritual and celebration
Intentional lexicon	Fostering a school language rooted in interconnectedness, transcendence, and service
Authorized keeper	Setting up a professional post for the embodiment and expression of core values

TRANSFORMATIVE RELATIONSHIPS

Education definitionally means not to teach but rather to draw out, realizing the deep nature of the students. In Awakened Schools, relationships among adults, among students, and between adults and students in the schools are viewed as the matrix for growth and development. There is a field of awareness, love, trust, and a palpable sense of uniting together that buoys up the child's sense of being; this is a space of shared discovery and ignites in the child the hunger to learn.

At each school that we visited, these transformative relationships were present in our interviews with students, faculty, and staff, and also through our observations, both in formal and informal learning spaces. This understanding of transformative relationships was well-described by a private school teacher who had been with their school for more than 30 years, who shared the following with us:

As an educator at Belvedere, a “deep way of being” is to look into the eye of a student you're working with and feel that you're really communicating. That you're in the act of both listening and being listened to. That you're sharing in that sense of awe of the universe. Sometimes the “universe” isn't the great star field in the sky but instead the human spirit we all share. Belvedere has a “spirituality” of relationships.

Seeing relationships in this way moves beyond adversarial or transactional relationships, even beyond caring and meaningful relationships. Transformative relationships are grounded in an understanding that we are all deeply connected, and from that connection we are called to honor, value, and see the other person as a fully human being.

One of the areas in which transformative relationships were found to be most impactful was in the way they influenced disciplinary actions, as shown by the following quote, about a teacher and student at a public elementary school:

Derek's attitude toward school and staff was dismissive at best. He had a tendency to bully other students verbally and used his body to gesture and intimidate. I met with Derek for 15–20 minutes every morning at the start of the day. We practiced breathing strategies, mindful minutes (meditation). Often we just talked. I introduced Derek to the singing bowl. One afternoon, I watched Derek storm into the building from the playground. When I arrived at my office door, Derek was in the hall crouched on the floor near my office door, his hands were balled into fists and his face, angry and tense. I offered my office as a space for Derek to sit. Derek accepted the offer, walked in and sat down next to the singing bowl. I sat and watched Derek strike the bowl and proceed to make it sing. His whole body relaxed, his face softened and his breath was more even. After a few minutes of striking and listening to the sound of the bowl, Derek was able to talk about the incident on the playground.

In this anecdote, we see that of the many paths that this teacher could have chosen in response to Derek's attitude and behavior, she chose to situate her responses in the context of their transformative relationship. As a result, she treated Derek as a whole person, and gave him the time and space he needed to discuss his experiences and feelings. This prepared the way for growth and development in ways that other alternatives would not have fostered.

Another example of the way in which growth and development can come through transformative relationships was shared by one of the faculty members at a private, non-sectarian high school:

This fall, I had a student meet with me to discuss the topic of his upcoming chapel. He was distraught and claimed he had no ideas. I realized he was upset and tried asking some different questions. Finally, he burst into tears and said that he was struggling with whether or not to come out (as gay) in this talk, and that was why he was so stuck. We had a long talk, and weighed the pros and cons of doing so, and he felt good about his ultimate decision. The relationship I had with this student allowed him to be honest and vulnerable—and it is this kind of relationship that I am most proud of creating—more than any program or syllabus or speech.

As seen in the example above, the power of transformative relationships lies in the fact that each member of the school community is seen, known, and valued. This deep care for each individual affects everything that occurs within a school, from interactions in the hallways to learning activities. One such example of a learning activity that was dependent upon transformative relationships was shared by a faculty member at a Catholic K–8 school:

I believe that life is defined and marked by transformative and defining moments which alter the foundation of one's life. One such moment occurred after a particularly difficult class. An 8th-grade class participated in a formal debate about privacy and the reach of government power in order to prevent violence. An 8th-grade student, whose father perished in the Twin Towers during the September 11th terror attacks, decided that he would offer his personal experiences when it was his turn at the podium. The student eloquently and passionately detailed his struggles and the pain he still has as a result of his loss. When he finished, his peers were silent. Some openly cried, some consoled him, others simply reflected on his words and respected his experience. Everyone was empathetic. Later in the school day, I checked in on the student. After some more tears, I was the one who needed to be consoled with a hug. I was so proud of this student.

The core driver of an Awakened School culture is its focus on transformative relationships; each of the remaining drivers is connected to and flows from these relationships, as depicted in figure 8.1.

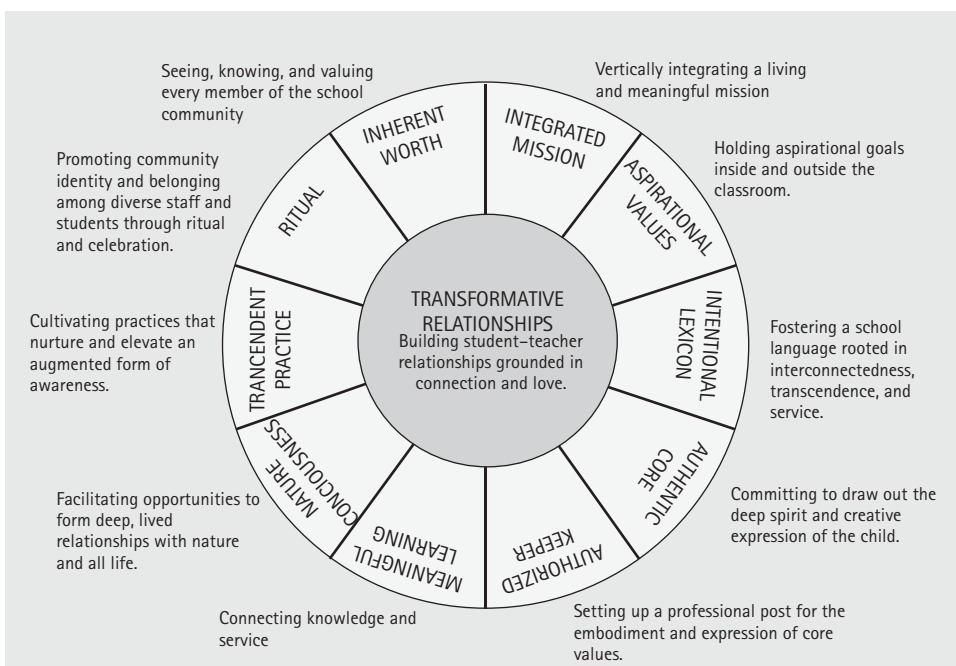


Figure 8.1 Connections Between the 11 Drivers of Awakened Culture

INHERENT WORTH

Each student is a being of ultimate inherent worth. A commitment by Awakened Schools to the inherent worth of each student holds that irrespective of academic performance or effort, pleasing or unpleasing ways, level of emotional intelligence, or any other outward expression, all students are valued. As teachers of beings of inherent worth, the faculty is endowed with a sense of a sacred trust. At a Christian school in an affluent and rather formal suburban setting, following a loud and busy day in a class, a first-grade teacher shared not exhaustion but exhilaration, “they are all just little Jesus’s, that’s what we say. We see the Jesus inside of them.”

Knowing that each child or adolescent has an inherent worth changes the way in which teachers interact with students (Chapman, 2019). We observed this in a variety of ways in the schools that we visited, but the most profound examples of faculty and staff interacting with students based on their inherent worth was best shown to us through the stories told by members of the school community. At one K–8 private Christian school, the chaplain shared with us the way in which the school honors each member of the community through their process of addressing difficult behaviors:

We address conflict and mistake-making with love since it is at the center of our spiritual life. Conversations begin with the assumption that the student is loved and that the community cares for them. *When love is the beginning point of difficult discussions, then adults are able*

to help students understand that we are here to help them be the best person possible. When students feel loved it does not take away the pain or the consequences of their actions, but it does remind them that they are part of a community. As part of council, we also practice “restorative justice.” Restorative justice is an approach to achieving justice that involves those who have a stake in the offense to collectively identify and address harms, needs and obligations in order to heal and put things as right as possible. It is also an effective alternative to punitive responses that brings together persons harmed with persons responsible for harm in a safe and respectful space promoting dialog, accountability and a stronger sense of community.

Centering interactions with children and adolescents on their inherent worth moves beyond singular disciplinary issues. Children and adolescents enter school with a variety of needs, but whether they are hungry, sick, sad, lonely, or hurting, honoring a student’s inherent worth means meeting them in ways that uphold their dignity. The following story, from a public junior and senior high school principal, shows the truly transformative nature of leading with a student’s inherent worth:

I met [Elizabeth] where her sex-ed teacher asked me to come and pull her from class because she didn’t know where she was or who was in the room. I came to know that she was abused for eight years by a family member who is currently incarcerated. Although she was referred to community-based therapy, she never attended more than a handful of sessions due to family inconsistency. Over the course of 3 years, we worked to establish safety with many ups and downs. During this time, Elizabeth had a serious suicide attempt and an inpatient hospital stay. She was chronically truant, smoking weed regularly, and repeated a grade. She knew she was always safe in my office and reached out regularly to build positive relationships with adults. She was a regular supporter and advocate to peers who experienced rape and sexual abuse. After three years and a period of relative sobriety, Elizabeth decided she wanted to write a book telling her story. She spent weeks writing drafts and we bought a blank book. She wanted to share her story with family and supportive school staff. We chose a date and invited folks to come. We made a plan to have snacks and drinks. We called her parents several times to prepare them for the story that she would share at school. On the anointed day, we set up the room with snacks and arranged the room for Elizabeth to speak. I sat next to her as she read the story of her trauma. The room full of family and invited staff cried as they listened. Elizabeth got a lot of hugs and apologies from her parents for not protecting her better. We ate cookies and juice. The next school year, Elizabeth worked to double up her credits so that she was no longer a grade behind. She got the highest grade in the school on her math benchmark. She is on track to graduate from high school on time.

Grounding relationships with children and adolescents in their inherent worth allows school faculty and staff to see and know the complexity of a student’s experience. In

knowing that experience, faculty and staff are better able to journey with each child or adolescent. This is clearly shown by the following example from a public high school:

Last fall, this 18-year-old boy emancipated himself from his abusive family, rendering himself homeless and destitute for the majority of his senior year in high school. Our faculty and staff, along with their friends and families, began supplying Jerry with clothes, food, toiletries, and anything else an 18-year-old boy would need to survive on his own. Three members of the faculty became his lead advocates to ensure that all of his needs were met. His grade-level administrator took care of Jerry's financial, educational, legal, and medical paperwork. Her office became his safe place where he could study, eat, sleep, and store his meager belongings. One of his beloved football coaches helped Jerry navigate the world of NCAA sports and college applications. One of his teachers supported Jerry emotionally, encouraged him to take care of himself physically, and helped him schedule and attend medical appointments. She treated him like a son and encouraged her younger children to draw him pictures, bring him presents on holidays, and share meals with him. Although hesitant to accept assistance, Jerry was deeply grateful for everything our community did to support him.

This ability for adults to journey with students also took the form of companionship for students in their relationship with a transcendent power in religious schools. The following example, from a PK–8 Catholic school, shows the way in which a faculty member identified and understood a student's distress and responded in a way that attentively valued the student:

Last year, I briefly mentioned in passing, “if God tells something, your job is to listen!” A student looked at me, eyes wide and straight up panicked. “But God doesn't talk to me. I can't hear him!” She started to cry and I calmly walked her over to the windows, which overlook our stretch of the forest. I asked her to tell me the three most beautiful things she saw. Then I asked her the three people she loves being with most in the world. I explained that God is always talking to her, but maybe not in words. The tree she loved is God jumping up and down to say “this! This here! I made this for you!” I explained how our families are perfect examples of God's love, and how when a parent hugs us, God's there too. Sometimes, God will shout, but others, we have to be very quiet to hear God's soft whisper of love.

AUTHENTIC BEING

The concept that “every child is seen, known and needed for who they truly are” was shared by teachers and heads of nearly every Awakened School we visited. The adults in these schools had an active regard for the authentic being of the student; recognition of each student's authentic being is a daily and primary goal of teaching in spiritually supportive schools. Teachers in these schools had a relational pedagogy of being: beholding as a way of being known and valued, seen and heard into being (Palmer, 2000).

As the head of one of the private nonreligious schools said, “From the start, our mission was to ‘find the promise that lies hidden’ in every student, and that message of individuality, hope, and possibility guides us today.” Attention to this natural teleology of a child’s authentic being involves finding and valuing what makes each child unique and special, and honoring each child’s inherent worth as they work to develop that authentic core. A story from one of the public schools in this study illustrates this:

Tomás came to us in 8th grade. He was deeply dysregulated and cursed at teachers and adults. He had been removed from his mother’s care at age ten after she left him and his half-sister alone for several days. He was living with his maternal aunt. He did not know who his father was. His sister went to live with her father, and he had limited contact with her. His aunt cared deeply for him, they loved to cook together and shared a deep love for Beyoncé. He could not sit through a class period or go a couple days at a time without doing something worthy of suspension. He connected with therapy in school. We recognized attachment challenges and worked to form a healthy attachment with him. This involved tolerating his anger, where for weeks at a time he would come visit daily to express hatred and anger and refuse to cooperate. He has strong creative talent and joined the school sewing club. We got a sewing machine in the therapy office and brought in extra fabric so he could sew in his free time. He watched YouTube videos and taught himself how to work the sewing machine. About three times a year, he would tell stories about the neglect, physical, and verbal abuse he received from his mother. After three years of building a caring relationship, we began to talk about how trauma impacts the brain, body, and development. I taught him about attachment styles, and we studied together what attachment style matched him. During this time, he built strong relationships with some teachers. By senior year, he was able to support the deans and mentor younger children. He successfully graduated from high school. Much to his shock, he returns regularly to school to help out and stay connected. He has a budding design and hair business.

Schools also help each student to access their authentic core by providing ways in which students can creatively express their deep, inner being in the context of a school community. Although these modes of expression of a person’s inner core could be found in any number of schools, in Awakened Schools these creative outlets are named, identified, and designed as practices that cultivate a child’s connection to their inner core. At two schools that are members of a network of Catholic schools, there is a common, daily tradition of the entire school taking time together for each member of the school’s community to connect to their inner core. The practice is described well here:

Espacio is a cornerstone activity in our spiritual lives. A term that literally translates to space, it is used as an invitation to mindfulness, interiority, and prayer. *Espacio* connects us to our Catholic heritage and tradition of our founding sisters, emerging from a desire “to

deepen our interior life,” our capacity for contemplation and for listening to the heartbeat of God in ourselves and in our world; to discern in silence and welcome the action of the Spirit that transforms us, energizes us, and calls us to live our prophetic and educational mission. *Espacio* is not merely quiet time, not merely meditation, but an opportunity for all individuals, students and faculty, to listen deeply and feel more connected with existence around and beyond us.

At these schools, time is set aside for each member of the school community to connect with their authentic core. This space for each child’s authentic core is intentional, consistently available, and woven into the fabric of the school’s life. Another example of the ways in which schools create space for each student to access their deep, inner core comes from a K–8 Catholic school, which actively works to engage students’ sense of wonder by connecting them with nature:

Our boys get outside. It’s part of our learning principles and how you connect with your environment. It’s a neat spirituality in children . . . these children are born innately spiritual and creative. Unfortunately, systems that are in place can seek to beat that out and install some other rationale, that the wonder can get easily sucked away, right? I would hope that one of the things that we’re trying really hard to do here is preserve that. The beauty of being in a [Catholic] school is that we can talk about God. Your God, my God, we’ve hosted bar mitzvahs here. A young man who graduated here, he’s the first Muslim, devout to his faith, in a [Catholic] school. Anyway, how do we preserve that, nurture it, and foster it in a way that they’re comfortable and confident?

TRANSCENDENT PRACTICE

Transcendent practices nurture and elevate spiritual awareness in children and adolescents by accessing their deep inner core and allowing for the expression of that core. These modes of expression can vary, from listening to music or creating art to silence, chanting, or the meditative practice of a labyrinth. One example of this type of expression in one of our public elementary schools was a mindful drumming group. A teacher describes this transcendent practice in this way:

[We formed] a mindful drumming group. We start with calming breaths and then set an intention for our week. Each group member has a drum and our drum becomes our voice. We discuss the importance of not talking over one another, and letting our drum speak in rhythm with the group. On a recent morning, Robert, a student who is Spanish-speaking and speaks English as his second language, was bursting with excitement! He respectfully kept the tone and rhythm of the group but it was clear he had something to share. Robert asked if he could play a solo. I believe he found a part of his spirit that morning and he was sharing it with the group! Everyone in that room experienced the joy of Robert’s spirit as he

played his drum for us. Robert found a different way to speak and we found a different way to listen.

It is readily apparent from the way in which this teacher spoke of this mindful drumming group that awareness, belonging, and connectedness were all interwoven into the creative expression of music. In spite of a spoken language barrier, Robert was able to express his authentic core to others in his school through the common language and transcendent practice of music.

Other schools were more explicit about their purposes in choosing and implementing their transcendent practices. Several of the schools we studied taught their students mindfulness, the practice of coming to awareness of the present moment, including thoughts and feelings, in a nonjudgmental and attentive way (Meiklejohn et al., 2012). One of the schools that taught mindfulness was one of the private high schools with which we worked. As one of the teachers at that high school reflected:

Mindfulness has helped me understand that the way I was living life was not the only way to go about it. I've found it most useful in times of joy, where it can help me experience life fully, and in times of pain, both physical and mental, where it can help me see the transience of the sensations and find the strength to persevere. Additionally, in the time between extremes, mindfulness helps me remember to not take anything for granted, and that there is beauty in every moment of life. I am so grateful that Gloucester has introduced me to this practice.

In this school, the mindfulness program teaches practices that help each student learn to access and understand their authentic core; these practices are intended to be lifelong ways for each student to continue to nurture their own authentic core.

Transcendent practices at religious schools can take place during worship, as was described to us about chapel at a K–8 Christian school:

At the elementary opening chapel, two 6th grade students were asked to welcome the community back and speak about the value of chapel in their lives. One of the students began her presentation with the following words, “Good morning, everyone: My name is _____, I am in 6th grade, and I have been at Fraser since Kindergarten. In the passage about Moses encountering God in the burning bush, Moses experiences the specialness of God. I’m growing up in a home with two religions, Christianity and Judaism. And as a result, I see how wonderful God is from two different perspectives. To me, chapel is a place where I can connect to God, feel spiritual, start my day off with others who care about me, and appreciate all that I have.

At this school, it is clear that students of all faith traditions are welcomed, included, and invited to participate as coequal members of the school community. At a religious school

on the West Coast, students are invited to participate in an experience at the ocean. The way in which one of the teachers described his experience in bringing students to the beach shows how both he and the students found the experience to be transcendent:

It was said, “Go out on the beach.” It was almost 45 minutes. Find your own space, sit on the beach for a half an hour, and just look out at the ocean and think about whatever. And I thought, “Oh, great. I’m just going to have to walk around and tell them to be quiet.” I walked on the beach, walked past about 20 of them, and they were just sitting there being quiet. So I got to sit down and be quiet. And I thought, “Where am I? What’s going on here?” Because they weren’t goofing around, they weren’t running about, they weren’t sitting so close that they could even whisper and not do it. They literally just found their own spots, sat down, and they were quiet. I was like, “This is extraordinary.”

NATURE CONSCIOUSNESS

Awakened Schools also emphasize nature consciousness as a way in which students can connect not only to their own authentic being but to a felt sense of oneness with nature and connection with all life. Schools that exhibit this driver create and facilitate opportunities to form deep, respectful relationships with the natural world. The schools we studied varied in the ways in which they made the experience of engagement with nature an important part of their school’s experience. For one K–8 Jewish day school, a teacher shared a story of how a student’s deepest connection to the authentic core came through an experience of being deeply connected to nature:

Throughout my years at Rubenstein, the time I felt most connected to myself was on the 8th grade retreat and I was lost on my own in the wilderness. I had gone for a run with two friends, but they wanted to go fast on a certain rocky section, so we said we would meet back at camp later in the day. I eventually got lost, and I couldn’t find the trail. At first I was panicked, but then I realized how awesome it was that I was on my own in nature! At this moment, I felt connected to myself and all of the nature around me. It was amazing. I could hear the water rushing down the mountain into the creek. All of the plants were beautiful, and I even saw a deer. At this moment, I felt very connected to myself and to nature.

Nature consciousness is built upon a sense of wonder, awe, and reverence of the natural world and all life, and this story illustrates the profound effects of nature consciousness on the cultivation of students’ spirituality. The cultivation of this wonder and shared sense of oneness with nature can be seen in the trip that 10th-graders at an Episcopal school take to visit caves in a national park:

One of the activities that we do with kids is to take them through a talus cave system, and that doesn’t seem so daunting at first, but there are several sections of the cave where one

person can go at a time, and it's a pretty tight squeeze. You're pressed down on all sides by the rock, and certain people can't actually fit because they're too big, and you only know where to go because you're being told by the person in front of you what the correct way to go is, so you have to trust the person in front of you. And you all have to be on board with what you're doing, because otherwise someone can get hurt, and you don't want to get hurt in the middle of a talus cave where you have to squeeze people through holes. A lot of groups that I've taken through those caves really come together because of that shared challenge, but usually it has to get to a tough place first before that coming together occurs. With the Fraser kids, they were together from the moment they began. They were singing throughout the cave, and when I suggested a moment of silence in the first room that was completely dark, they were all into it. They were all like, "Yeah, yeah. Shh. Turn off your voice." And we sat there for a long time, and in reflecting upon the experience afterward, they loved it. They loved that moment of silence, which to me is the best part of the cave, this total quiet that you don't get very many places in the world at all, that we get to sit in as a group in this shared sort of sacred experience for just a minute. And that being special to them was special to me.

Experiencing wonder and reverence in nature can even come in the classroom, as was illustrated by the story shared with us from a student at a K–8 Christian school:

One of the experiments we conducted that really filled me with wonder was when we looked at plant and animal cells through a microscope. There were so many cells in such a small space that it made me think about how we are all small parts of a larger whole. We are all part of something connected. Not all science experiments have answers, yet but most of them help us understand the world around us. Faith can help fill the gaps in our understanding. Science explains why things happen, but faith can help us deal with it emotionally.

Each of these stories show that interacting with nature connects each student's authentic core to the living beings that surround us in the natural world, which creates space in which children and adolescents are better able to know themselves and the world around them.

Spending time in nature was an integral part of the school experience at one of the independent boarding high schools that we studied. At this school, a defining characteristic of the learning experience was the Horse Program, in which students cared for and rode horses throughout their time at the school. Participating in the program is imbued with meaning, as students come to understand themselves and their place in their community through their interactions with the horses. A seasoned teacher describes the experience in this way:

The fall brings with it another first: horse camping. Small groups of freshmen and riding instructors meticulously pack up horses and burros with supplies before heading out into

the wilderness on horseback, generally spending a long weekend in the backcountry behind Belvedere before making the iconic ride “over the ridge” and back to campus. Looking back on his riding experience, senior Jacob Davis put it this way: “The entire freshman horse camping program leads to the freshmen learning again that, hey, it doesn’t matter who I am, what background I come from, we’re all in this together, we’re going to smell after a few hours on these horses, but that’s where most of the fun comes in.”

This experience is an example of the ways in which Awakened Schools build a deep connection with nature into the life of the school. Engaging with nature, and specifically with animals, on a regular basis, grounded in wonder and awe, has a transformative effect on child and adolescent spirituality.

MEANINGFUL LEARNING

The schools in our study understood learning to be part of the process of contributing value to the world and made conscious and explicit connections between knowledge and purpose. In other words, at these schools, learning and service were interconnected, which we term “meaningful learning.” Learning is presented as dedicated to a generative purpose. At a Catholic school in a technology corridor of the United States, where STEM (science, technology, engineering, and math) is an energized academic area, computer coding and design were not taught as problem sets or as hypothetical academic cases. Rather, the STEM class visited a nearby children’s hospital where they saw young burn victims without limbs. The students in the STEM program figured out a way to use computer programs, searched online for downloaded applications, and used the new 3-D printer to create artificial limbs of the size and form that could help the children they had seen only a few miles away. Awakened Schools frame learning as the road to participation in the world in which they contribute in a purposeful and meaningful way. To create a lived awareness of meaningful learning, community service was the outcome of learning.

Another anecdote from a boarding high school, which illustrates this interconnectedness of service and learning, comes through the care given and meaning taken from participating in the Horse Program:

Walk on the Belvedere campus and you’re bound to encounter a pretty unusual sight: students saddling horses and heading out for an afternoon ride, dust trailing as they hit the field or a nearby mountain trail. This is the Horse Program, one of the school’s most unique educational experiences—and one of its oldest traditions. It can also be a source of uncertainty or anxiety for prospective students and their families as they navigate the host of other questions that come with considering boarding school. To be sure, there will be challenges: Getting to know an unfamiliar horse, rising early in the morning to muck a barn stall before class, handling difficult moments when your horse is stubborn or scared or

flighty. But there will also be moments of accomplishment and wonder: Sitting horseback on a ridge near campus as our famous “pink moment” transforms the evening sky, clearing the final jump to win crucial team points in front of the crowd on family weekend, riding bareback into a cool watering hole during a horse camping trip in the backcountry.

This story clearly indicates that the Horse Program is an example of the complete integration of service and learning. Students must learn about the horses in order to care for them, and caring for them provides a space and activity in which students learn about nature, the horses, and themselves.

As seen in the above example, In Awakened Schools, service is not a set of discrete projects but rather is integrated into the fabric of school life. Another example of this comes from a private high school which describes how they connect with and support one organization each fall through multiple methods of outreach. A teacher at this high school described their practice this way:

We are currently preparing for our annual fall service program with a nonprofit that moves homeless families into permanent housing. Gloucester volunteers collect furniture and other home goods throughout the year, and then move them into the family’s new home on a Sunday in the fall.

This focus on one organization allows for conversation, reflection, and learning about the issues that create the need for service. Meaningful learning occurs through the process of coming to know, intellectually and through practice, about the purpose and necessity of service.

In some schools, the development of meaningful learning was not as directly tied to service; rather, it was in the cultivation of connection between the student and the wider world. This can be seen from the following example from a K–12 Christian school:

Science is both wonderful, and mysterious. Wonderful, because with it, we can answer some of the biggest questions that exist such as, “where do we come from?” and “how did we get here?” We can also understand how gigantic and extraordinary our universe is. Mysterious because even with today’s knowledge and technology, we have only just barely begun to understand it. To me science is very important because it allows us to understand nature, and for all my life I have been fascinated by nature’s complexity. I believe that faith is closely tied in with science because from my point of view, I see God as more of a force, or energy that exists within everything and everyone and makes them who and what they are.

Another example comes from a Catholic high school. A faculty member there took students into an area of the city where the school is located and asked them to think about

their roles in the community. Here, he described his process of facilitating this experience of meaningful learning for his students:

Well, you went to an area in a city, now, you're in a city; what's important to a city? What doesn't a city have a lot of? Trees and gardens, right? So you went in there and you helped create this space and clean it up and made it healthier for the plants. So I said, now you have a beautification going on that affects the community, and it's been proven that people in the community who do things, who are stable and get involved in that community hold that community together, and have a dynamic impact on everyone around them. So I said, "Okay, so now guess what you just did: you stabilized a community by beautifying an area that would be wasted." So take it one step further, if you're helping life to grow here, does it not then have an effect globally? Does it not just begin to spread itself around? I said, "That's what you need to think about. You need to think about how your particular action in this particular space and time is not contained just to this space and time. It has an impact everywhere." It's basic quantum physics—this is quantum theology, if you want to put it that way.

As these examples show, the ways in which spiritually supportive schools design their learning experiences and activities is grounded in meaningful learning.

Schoolwide Drivers

In addition to these Awakened School drivers, which speak to relationships and practices, we also identified schoolwide practices that nurture and support innate spirituality through a communitywide psychospiritual ecology. Five related drivers (integrated mission; ritual; aspirational values; intentional lexicon; and authorized keeper) direct aspects of schoolwide culture; these include ways in which schools are attentive to their values, mission, language, and community identity.

INTEGRATED MISSION

Although most schools have mission statements, the mission statements at the schools we studied were deeply embedded in the practices of the schools. School leaders used the mission to help them in their decision-making. Other members of the school community spoke of the mission often, and they lived their missions in frequent and tangible ways. One example comes from a religious high school, where a teacher shared this story:

I think our school's Goal 3, "educating a social awareness which impels to action," was made most real for me at this sight. Goal 3 talks about seeing an issue in our communities, and being impelled to act. Each day when I see homeless people, I am called to serve them. Through this experience, I'm able to help feed those in need, and try to make change in our society. I think that required community service is good and it is valuable to personal growth.

In this example, the school's mission statement becomes the foundation for service done by members of the school community for and with members of the greater community. The mission statement has also become ingrained into the consciousness of the teacher who shared this story; it is the mission of the school which prompts her to act and to think about her service in the way that she does.

Our research showed that the impact of integrated missions is not limited to the adults in the building; children, adolescents, and parents are strongly influenced by the mission as well. One of the more impactful stories came from a teacher at a Christian K–12 school, who described a situation which showed how the mission is integrated into how each person's inherent worth is at the forefront even for disciplinary matters:

After a disciplinary problem in the elementary division, the principal invited the parents to her office for a meeting. The principal knew that it was very common for parents in these situations to enter her office on the defensive. Sometimes parents would even start by talking about how great their child was and how the school did not really know the student that well. As the parents were seated, the principal started by saying, "I want to tell you about all the great things that your child has done. Even though this is difficult, we want you to know that we love your child and everybody makes mistakes and this is one of those times." As the conversation continued and the principal was able to discuss the disciplinary problem, she ended by saying that "we have made a 13-year commitment to you and your child, and we hope that you have made a 13-year commitment and we are all on the same team."

The school's mission of treating each child as intrinsically valued and the existence of relationships that carried this mission grounded the discussion, the principal, and the parents were able to speak in a productive and helpful manner. The conversation then had the potential to move not only the discussion but the growth and development of the child forward because of the school's deeply embedded mission of honoring both the child's and the parents' inherent worth.

Other members of the local community can also be included in the lived practice of a school's integrated mission. Parents of students at a public elementary school have worked to develop a garden program there, and in the process have also included several community partners:

Sprout has a parent sponsored garden and FIE Program (Food is Elementary). Classes plant in raised beds and harvest the food to prepare recipes from cultures around the world. The program is supported by a local grocery store located a block from school. Parents volunteer each Thursday to work with our 1st grade classes to prepare these recipes designed to introduce kids to healthy food and it's preparation. A local farm is a partner in this project and students visit the farm on field trips.

The intentionality of a school which has an integrated mission, such as including parents and other local partners in the school's teaching and learning, also can extend to the financial operations of the school. The Equitable Financial Model practiced by a PK–12 independent school shows how all members of the school's community affects all members of the school's community:

We have a very wide expanse of socioeconomic variety at our school, including about 25 students who pay no, or almost no tuition, and about 25 who pay more than the required tuition through a program called the Voluntary Equitable Tuition (VET) program. Our equity director leads an equity circle that is made up of staff and parents. Equity circle has its own set of goals, somewhat akin to a strategic plan, of how to continually work to make our school culture more inclusive. Love in Action is a group of volunteers who work to provide some wraparound-style services for families who may be experiencing food insecurity, housing insecurity, lack of transportation, and so on.

This Equitable Financial Model also upholds another driver we identified, closely related to having an integrated mission, which was that Awakened Schools held aspirational values. Schools often spoke about their values, and their values influenced the goals that schools set for themselves, both inside and outside the classroom. Some schools lived out their values through the learning experiences they created for students. The director of community service at a K–12 Christian school develops experiential programs for students designed for students to appreciate and understand themselves, their community, and the natural world as interconnected and of great value. He described one such program here:

I run a trip for them in the summer, and everything is a first for them. First forest, first waterfall, first hike, first wildlife, all of this, first shooting star. Every night we have fireside discussion time, where we unpack the day a little bit. Everybody has a chance to speak and share their experience of the day, whether we're learning about ocean tides and the moon, or we're learning about the life cycles of trees and how they affect the life cycles of everything else in the forest. But it's mostly connecting ecology and the story of life itself with the human story, and with their personal story.

Another religious school similarly puts their values into practice through learning activities. In the case of this Catholic high school, the school's recycling program is more than just one of the school's routines: it is an opportunity for students to learn about and practice the values of the school. A faculty member described this connection in this way:

Getting kids to be aware of the environment and stimulating them to say, "Hey, this matters." How we recycle matters. Not that we're forced to—which we are, because the city here is a

zero-waste city. Now they have to put teeth into it, so they're fining businesses that don't do it. If we don't, we're going to get fined, so we had to do it, but why? It's the invitation to extend the relationship beyond just me and my buddies to me and my world. Even the inanimate object, so the depth of relationality is incarnation. That's really what I find really interesting.

One of the schools in our study, which included grades 7–12, has as a core value the possibility of healing students who are in the midst of trauma. The school's principal described their focus on healing in this way:

Healing is always possible in the present moment. We are gifted in a school to be a community where when the conditions work, we get to have students with us for six years. Students show up living in all sorts of situations; the lucky ones have their needs met and show up ready to learn and thrive. Some show up in the middle of trauma. Many trauma therapy models say that healing isn't possible while the trauma is still happening. Our goal is to make sure students are safe while they are in school and to create the conditions where healing is possible.

For this school, the value that they place on helping students who are experiencing trauma to heal is foundational to the work of the school. This focus on healing is both hopeful and practical, aiming for something greater and also designing aspects of school life in ways that support that foundational value.

Other schools in our study also valued a thoughtful approach to the difficult aspects of life. One of the private PK–8 schools that we studied was very intentional about the way they addressed death. Because of the value the school placed on the inherent worth of each member of the school community, deaths within the school community or from within the families of members of the school community were honored, as was shared here:

Death is openly addressed, honored, and talked about at The Opal School. Students who have had a parent or other loved one who passed away have a safe space at school to talk about that experience, or not talk about it, but to be recognized. Kristen, the 6th grade teacher, explained how a student who experienced the death of a baby nephew was able to share pictures of the baby and talk about it in centering. Centering was a time and space that had the ritual space to hold those thoughts, without it seeming odd or like anyone was making a big deal about it. Because the ritual of centering happens every day, the teacher can use that time to do activities or have discussions that address current events in the students' lives or in the world.

Profound lived experience, sometimes at the edge of life and death, is so often grasped by a child as a spiritual knowing or even a discovery. Holding space and honoring a student's experience as worthy, and even central, to the school life nurtures the natural emergence of spiritual awareness.

Awakened Schools elevate the importance of a regular space, time, and practice in which important aspects of a community member's life could be shared. All members of the school community understood and aspired to live by the values of upholding community members' experiences and creating a space in which those experiences could be named, honored, shared, and allowed the breathing space to pull the child forward in spiritual development.

RITUAL

Rituals and celebrations were practiced both schoolwide and in individual classrooms, fostering collective spiritual experience, common ground of spiritual connection, community identity, and a sense of belonging. The value placed on the sense of ritual and celebration was clearly seen in one K–8 Christian school, which had created a significant space on their campus for various types of rituals:

Our spiritual center provides a welcoming campus home and regular opportunities for the Fraser School family to develop helpful habits of spiritual practice and inquiry. We believe that good habits of prayer, mindfulness, and contemplative creativity are crucial to developing and sustaining a healthy and virtuous community. Completed in 2013, the center encompasses a meditation room, a prayer wall, the main sanctuary chapel with an altar, an ark that houses a Torah, and a meditation garden outside.

In religious schools, many of these rituals were rooted in a faith tradition, but in secular and public schools, the presence of ritual was also found to be strong. For example, while some of the religious schools began the day with a prayer service in their particular faith tradition, some of the nonreligious schools we studied began the day with an affirming ritual, gratitude practice, reflection, or contemplative practice including the common practice of mindfulness. Other schoolwide rituals occurred as they were needed, based on the season, school year, or events in the community. One of our school leaders shared an example of this last type of ritual from her private, secular, PK–8 school:

A few times a year a sacred fire is held in the outdoor classroom. The fire is lit in the morning and tended all day. Classes can come sit by the fire, parents, community members come and sit. They can remain quiet, talk, or tell stories. When a previous teacher committed suicide last year, we held a fire for the day as a way for people to process what happened, honor the teacher's life, and support one another. Again, because this is a ritual that we have regularly, it was graceful to hold.

One of the public middle schools in our study developed a new ritual following a traumatic death for their community, as their principal described here:

Our 29-year-old Chemistry teacher died suddenly after a heart attack while he was training for a race. A scholarship fund was created on Go Fund Me for a student who wanted to

study science. It was gifted at graduation. The graduating seniors gave the teacher's family their class flag. On the one-year anniversary of the death staff wore his favorite color, purple, or bow ties. The scholarship will continue to be awarded annually with the recipient chosen by his widow.

In ritualistically carrying forward his memory, the school community had found a way to hold a shared, deep feeling for the teacher. In all these Awakened Schools, the inclusion of regular, ritual practice allowed this school to come together as a community in a way that was familiar and offered a practice through which members of the community could honor and process a tragic experience together.

Rituals and celebrations were centered around student experience; a place to gain awareness of inner life and build shared relational spirituality. In both religious and secular rituals and celebrations, students were given opportunities to lead and share. One example of this comes from a student at a Jewish elementary school, who describes the preparation and experience of preparing to take a leadership role in a prayer service:

One moment that I felt a sense of connectedness was in our fifth grade Tefillah (student-led prayer service). I was chosen to read a couple of sentences from the Torah. I studied profusely for a month and when it was the day of the Tefillah, I was ready. I was extremely nervous as I walked up to the bimah (the area where the service is led from). I was the first to read and after the blessing for the Torah, I started. The countless hours of practice paid off and I was extremely proud of myself. I felt very connected with the school community and with my Jewishness.

The fact that this student was able to lead part of the school's ritual prayer service fostered for him a sense of belonging to the community. These rituals were also important in the schools as a place of deeply engaged meeting, where students shared their questions, beliefs, experiences, and pain with the community. In these examples, the importance of the ritual here was that the school community was coming together in ways that were familiar to them, important to their identity, and cultivated a sense of inclusion.

INTENTIONAL LEXICON

At the most basic level, the use of a common, intentional lexicon refers to the fact that spiritually supportive schools have a language that allows members of the school community to locate spiritual awareness and relational spirituality and reflect on ways to support the inner core of each child. This intentional lexicon is unique to each school, consistent with its values, shared religious or spiritual understanding, and community language, which can be seen in the following example from a Christian PK–12 school:

The foundation of our school culture is the acronym WATCH. Which stands for Words, Actions, Thoughts, Character and Habits. We have WATCH touchstones, a WATCH Tower,

a WATCH Prayer, WATCH clothing and signage. It's the name of our literacy magazine. It's ever present and represents our core values. All programming is founded in it, and all students understand the premise of WATCH.

Each school's intentional lexicon can be based on language from a religious tradition or not; the critical factor is that all members of the school community know and use the language with ease.

The following example shows a way in which a religious school, in this case a Jewish elementary school, uses language to talk about spirituality in the context of their faith tradition:

As a grade we would all spend time in the Beit Midrash (the space in which the students gather for prayer and other assemblies) for Tefillah (prayer service). Standing there all of us in silence, praying or appreciating how grateful we were for our lives. We did this every week. Week by week I would just love to stand, look around and think, I am so lucky to have such a great class that I can lean on if I'm sad or just want someone to make me laugh; I know that my grade is there for me. As the years go on and I look back at my 3rd, 4th, and 5th grade experiences, I remember those moments and how grateful I am for moments where I can be with the people I love as a whole. I feel connected because maybe some people are thinking the same thing as me and some just thinking that this is boring but either way I cherish those moments. I feel connected when we are all doing the same activity.

This example shows the critical aspects of this driver which can be applied to any school: that the lexicon is known and used commonly among members of the school community and that the language is tied to the school's values.

Another example comes from a private, secular high school, whose language about spirituality was deeply connected to their practice of mindfulness:

The mindfulness program helps our students to better understand, accept, and interpret themselves and the world around them. In addition to the physical and mental skills practiced, they also gain a vocabulary that helps them self-analyze and self-reflect. These are invaluable virtues that benefit our students in their time here, and will continue to do so in the years to come.

This example explicitly names the need and benefits of a common language to describe the practices that help each adolescent in this school to access and develop his or her innate spirituality. This can also be seen in this example shared by a parent from a PK–12 independent school:

We had to put our family dog, Betsy, down about a month ago. We have two daughters, almost 4 years and 6 1/2 years. At first it seemed difficult to hold space for myself and husband to grieve and then also for our children to grieve. But then we just took cues from

our children's daily centering. We made an altar, light candles for Betsy (and now all dead loved ones), speak openly about Betsy's death, have moments of silence and prayers for her. It is really a beautiful thing to watch our girls create their own space for grieving Betsy. Because of their experiences at The Opal School, they both know the importance of this focused honoring, praying, and meditation. And my husband and I have too!

Here, the spiritual language of the school provided a framework for a family that was grieving a significant loss. The salient and sometimes painful moments in community life, that are best understood on spiritual grounds, are held in community by a common language. As shared by a parent of a K–12 student who survived a tragic school shooting, “Build your arc before it rains.”

AUTHORIZED KEEPER

In nearly all Awakened Schools, a professional is employed and named by the school to embody and express the school's deepest values and lived mission; we have termed this person the “authorized keeper” of the school's core values. This professional post is not the head of school but rather someone who serves the school community in another capacity (mindfulness teacher, counselor, chaplain, dean of students, etc.). The person in this role holds on to the values of the school and helps the head or school or principal in making sure that the school's values and its collective focus on the inner child permeate the school. The authorized keeper is legitimized to speak up, privately or publicly, bringing a reminder to the community of an ethical or spiritual perspective when the focus shifts among fellow faculty or even senior administrators. For instance, at a disciplinary meeting in a highly resourced independent school, where two sophomore boys were to be punished for rudely dismissing the words of a guest speaker, the authorized keeper reminded the presiding faculty of the school's value on broadening, growth, and development over punitive measures. The response was additional learning for the two boys in the form of reading and discussion with an interested faculty member.

At a suburban Catholic high school, the role that functioned as the authorized keeper recently shifted, as described below:

In the Fall of 2018, the high school overhauled its administrative structure in order to attend to an often-stated need for greater clarity regarding behavior matters and conflict resolution. A new role was established: Chair of Community Life. The core of the role, shared by two longtime community teacher-leaders, has elements of both dean of students and director of student activities. The spirit of the role is less the traditional disciplinarian and more an attendant to matters of community wellness.

At this school, the authorized keeper plays a role in all aspects of the community, a position that allows its holder to ensure that the people and programs of the school are focused

on each student's deep inner core. In schools like this, the authorized keeper ensures that the school community and its various classes, programs, and activities are grounded in the school's values and mission.

In other schools, the role of the authorized keeper serves as the well from which others draw in order to connect to and access the school's mission and values. An example comes from a Christian K–12 school, where the Health Office serves as the authorized keeper of the school's values:

Members of the Health/Nurse's Office believe that because the students see how often the Fraser community promotes openness, they are able to trust in the faculty and staff to practice openness daily. The underlying trust the students have in the faculty and staff creates a safe place for them to communicate about uncomfortable topics they may not feel comfortable discussing at home or with friends. I strongly believe this openness and trust from the students stem from the foundation of faith the community keeps alive on campus daily.

These examples illustrate ways in which a school's authorized keeper is centralized in a position in which they would likely interact with all members of the school community. In other cases, the authorized keeper emerges, as was the case for a public high school English teacher, as explained here:

Upon learning of a beloved 16-year-old student-athlete's death, Dr. Talbot, an English teacher at the high school, decided to share his expertise in dealing with grief. Without thought of credit or compensation, Dr. Talbot trained 15 of his colleagues to specifically help grieving students, and incidentally, heal themselves. Dr. Talbot redesigned and condensed the grief recovery training into a three-week program in order to more effectively serve those who were grieving Matthew's death. Dr. Talbot and his committed teachers met every other day, while reading and completing assignments on the off days, to learn and practice the techniques presented in the Grief Recovery Handbook. In fact, Dr. Talbot presented each of the participants with a copy of the handbook free-of-charge, although he had personally purchased the books. The teachers met with Dr. Talbot before school learning the techniques prescribed by the book and baring their souls to themselves and each other. As a participant in the training, it was both the most excruciating and most rewarding life-training I have ever received. Matthew's death was a call to service for the high school faculty. We answered, and we will continue to serve those students, faculty and staff who are grieving, without compensation, without recognition.

In each of these cases, the authorized keeper serves as a phosphorous ring: members of the school community can seek this person out in order to keep their own inner core activated and alight.

Discussion

Spirituality is an innate capacity for an awakened sense of perception, but in order to fully develop, it must be nurtured by a child's relational environment, as established by twin studies (Kendler et al, 1997, 1999) and replicated in youth (Miller et al., 2000). The growth of one's spirituality is a developmental task of childhood and adolescence, which either by intentional cultivation or through a lack of attention is impacted by one's relational environment. Because those institutions where spirituality has traditionally been cultivated (e.g., religious communities) have seen declining participation in recent decades (Pew, 2015; Smith & Denton, 2009), other institutions stand poised to take on the role of supporting the development of spirituality in young people in a way that is constitutional and consistent with the values and voice of the school community. Schools that do this are Awakened Schools.

Awakened Schools open our eyes to the deeper nature of life. By engaging and nurturing this awakened seat of perception, Awakened Schools engage, nourish, and effectively socialize each child's innate spirituality, thus providing the environment in which that spirituality can fully develop. Schools are ideally poised to do this. Our findings show that it is within and through school culture where transformation happens: being immersed in a relational school culture fosters and forms each young person so that this seat of perception is awakened and attuned to the world around us and beyond us in deep and lasting ways.

The 22 Awakened Schools in this study brought forward the once "hidden curriculum of a school"—its culture—and brought it forward to act as an agent of transformation for the entire school community. By centering the work and life of the school community on relational spirituality, each school in this study created an awakened, spiritually supportive, relational culture. This focus on relational spirituality allowed each of these schools to teach students to relate to others and to nurture in ways that draw deeply from the original purposes of education, but which are far too often absent from much of mainstream education today. This change in school culture oriented each school to the preparation of young people to live and actively participate in the world, resulting in the betterment of society, nature, and the individual.

The findings of this study have significant implications for the field of education. The purpose of education, as argued foundationally by Dewey and others, has been to prepare students to live and actively participate in democratic society (Dewey, 1934). Schools must create the next generation of citizens capable of inheriting political democracy, first by creating a social, moral, and spiritual democracy of civil society (Rockefeller, 1994). As Rockefeller's prescient analysis on Dewey's approach to religious faith and democratic humanism holds: civil society requires the ability of fellow citizens to engage on common ground in discussion and common purpose, even when facing a sharp difference of opinion. To prepare students for civic society, a school culture effectively is a pedagogical mini-laboratory for resolving inevitable conflicts and difficulties, the pathway through which

is formed a sense of commonality, shared purpose, and the relational moral and spiritual democracy undergirding the political democratic process.

It is conceivable that an unbalanced focus on academic achievement of the past three decades in the United States has allowed this original purpose of education—the formation of democratic citizens—to recede from its prior place of primacy. The struggles of civil society and the inability to engage on common ground with people of different opinions might be viewed as a significant educational failure. If so, this failure may present an essential educational opportunity.

All schools carry this purpose of preparing students to be the future leaders of democracy, and all schools can become Awakened Schools. However, both the responsibility and opportunity of becoming an Awakened School is particularly imperative for public schools. Public schools reach a far wider section of our population, thus expanding the potential for leadership by cultivating in children a wider perception which sees and understands the connectedness of all life. As we look to schools to increase students' informed and active civic engagement, we must ensure that the call to do so is equitably distributed and truly represents the depth and diversity that make up the United States.

The schools in this study succeeded in reclaiming that original purpose of education by grounding their a priori commitment to a functional democracy in preparing students with the necessary inner capacity of relational spirituality. If schools are to be the incubator of democracy, then each school must create an environment in which students can learn and practice living in an interconnected community, a mini-democracy unto itself as conceptualized by Dewey (1916). By intentionally designing a school culture centered on relational spirituality, any school is able to prepare young people to live and actively participate in civil society.

Further, these findings have implications beyond the field of education. This research presents a framework for organizations to create an awakened culture for themselves. The 11 drivers presented here are specific, concrete, actionable, and, foremost, transferable to any site of organizational life. Various sectors of society, such as the health sector, the service industry, and business, could implement this framework to design spiritually supportive cultures in their institutions.

The atrophy of the spiritual core in a generation of youth carries powerful, long-term collective implications for civil society; as such, it is necessary to find solutions among the collective to sustain democracy. We live in a time where there is enormous divisiveness amongst people who have traditionally been able to connect and to work together to uphold the type of social and moral cultural democracy that is essential for a political democracy (Dewey, 1897, 1934). This divisiveness is derived from the same basic issue of feeling disconnected and lacking awareness of deep and meaningful relationships that has shifted away from the traditionally relational culture in the United States. It is up to our educational, cultural, and societal institutions to take on the mantle of nurturing spirituality in children and adolescents.

Acknowledgments

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Independent School Leadership

Akiva School

Nashville, Tennessee

Brandeis School of San Francisco

San Francisco, California

Campbell Hall

Studio City, California

Convent School of the Sacred Heart of San Francisco

San Francisco, California

Deerfield Academy

Deerfield, Massachusetts

Middlesex Academy

Concord, Massachusetts

Millbrook School

Millbrook, New York

Porter-Gaud School

Charleston, South Carolina

Princeton Academy of the Sacred Heart

Princeton, New Jersey

Rainbow Community School

Ashville, North Carolina

Stuart Country Day School of the Sacred Heart

Princeton, New Jersey

Stuart Hall School of the Sacred Heart of San Francisco

San Francisco, California

Thatcher School

Ojai, California

The East Harlem School

East Harlem, New York

Trinity School

New York, New York

Public School Leadership

Brentwood High School

Brentwood, Tennessee

Bloom Elementary School

Louisville, Kentucky

Chalmette High School

Chalmette, Louisiana

Forte Preparatory Charter School

East Elmhurst, NY

Mastery Charter School—Shoemaker Campus

Philadelphia, Pennsylvania

Murry High School

Charlottesville, Virginia

REACH Academy

Oakland, California

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Appendix A

List of Leadership Schools in The Collaborative for Spirituality in Education

Akiva School

Nashville, Tennessee

Brandeis School of San Francisco

San Francisco, California

Brentwood High School

Brentwood, Tennessee

Bloom Elementary School

Louisville, Kentucky

Campbell Hall

Studio City, California

Chalmette High School

Chalmette, Louisiana

Convent School of the Sacred Heart of San Francisco

San Francisco, California

Deerfield Academy

Deerfield, Massachusetts

Forte Preparatory Charter School

East Elmhurst, NY

Mastery Charter School

Philadelphia, Pennsylvania

Middlesex Academy

Concord, Massachusetts

Millbrook School

Millbrook, New York

Murry High School

Charlottesville, Virginia

Porter-Gaud School

Charleston, South Carolina

Princeton Academy of the Sacred Heart

Princeton, New Jersey

Rainbow Community School

Ashville, North Carolina

REACH Academy

Oakland, California

Stuart Country Day School of the Sacred Heart

Princeton, New Jersey

Stuart Hall School of the Sacred Heart of San Francisco

San Francisco, California

Thatcher School

Ojai, California

The East Harlem School

East Harlem, New York

Trinity School

New York, New York

Virtues in Positive Psychology and the Psychology of Religion and Spirituality: Existing Overlap and Promising Possibilities

Everett L. Worthington, Jr., Richard G. Cowden, Edward B. Davis, and Julie J. Exline

Abstract

By the early 2000s, positive psychology had emerged as a complementary subfield to those who historically focused on treating psychopathology and solving psychological problems. Because positive psychology involves the scientific study of hedonic well-being and eudaimonic virtues, a reasonable expectation is that positive psychology has transformed the field of the psychology of religion into a related yet broader field of the psychology of religion and spirituality. This could be attributable to the study of virtue, which overlaps more directly with religion than does the study of hedonic well-being. Thus, positive psychology might have drawn investigators who had not previously studied psychology of religion to study virtue and spiritual formation and to contextualize them within religious frames. We examine trends in scholarship to identify whether such commonsense assumptions are warranted. The available evidence does not appear to support this interpretation. Rather, it appears that psychologists of religion and spirituality publish research related specifically to virtues and religion within journals focusing on religion and spirituality. When scholars venture into secular positive psychology journals, they infrequently include religious or spiritual measures. We discuss some implications of these trends and the potential benefits of integrating religious and spiritual variables into the study of processes that lead to the development and practice of virtues. The general considerations for counseling within and across faith traditions that we included pertain to culture, client welfare, client autonomy, and therapist competence. Religion and spirituality are treated as cultural issues.

Key Words: character strengths, virtues, religion, spirituality, well-being

In the early 2000s, positive psychology—the scientific study of strengths, virtues, and well-being—emerged as a mainstream subfield of psychology. It was hailed as a scientific platform for correcting psychology’s historic emphasis on understanding and treating human problems and pathologies (Peterson & Seligman, 2004; Seligman & Csikszentmihalyi, 2000). In the two decades since its inception, positive psychology has revolutionized not only the field of psychology but also the broader popular culture (Snyder et al., 2016).

From its beginnings, positive psychology has had direct and indirect ties to the psychology of religion/spirituality (R/S). For example, in developing their classification system of virtues and character strengths, Peterson and Seligman (2004) identified virtues and strengths largely on the basis of what philosophers and religious thinkers have esteemed universally across cultures, faiths, and time (see also Dahlsgaard et al., 2005; McGrath, 2015). R/S also was one of the 24 strengths Peterson and Seligman (2004) identified. Moreover, several other identified strengths (e.g., hope, altruism, compassion, forgiveness, gratitude, humility, and patience) have clear conceptual associations with R/S, are highly esteemed across all major faith traditions, and are often the focus of R/S efforts to transform people's lives and character (McMinn, 2017; Rye et al., 2013; Schnitker & Emmons, 2017).

The purpose of this chapter is twofold: (a) to explore the existing overlap between the positive psychology and psychology of R/S subfields and (b) to offer practical recommendations for enriching and expanding this overlap. Toward these ends, we begin with an overview of relevant theory. Second, we systematically examine how much overlap there currently is between the positive psychology and the psychology of R/S literatures, both at a microlevel (e.g., in niche journals) and macrolevel (e.g., in broader "secular" journals). Third, we discuss possible barriers to potential cross-pollination between these two literatures. Fourth, we offer suggestions for improving such cross-pollination, including a proposed agenda for guiding future research.

Review of Relevant Theory

We began writing this chapter by hypothesizing there was already extensive overlap between the positive psychology and psychology of R/S literatures. As we demonstrate below, what we found led us to a quite different conclusion, yet it revealed several exciting possibilities.

Virtues and Character Strengths

In their seminal classification scheme, Peterson and Seligman (2004) defined *virtues* as "the core characteristics valued by moral philosophers and religious thinkers" (p. 13) and *character strengths* as "the psychological ingredients—processes or mechanisms—that define the virtues. . . . [and are] distinguishable routes to displaying one or another of the virtues" (p. 13). Nonetheless, at this point in the evolution of positive psychology, the terms "virtues" and "character strengths" are often used synonymously. (We follow suit and use them interchangeably in this chapter.) Furthermore, because Peterson and Seligman's (2004) definitions are conceptually imprecise and morally (and religiously/spiritually) bound, some positive psychology theorists have proposed redefining virtues/strengths as "dispositional qualities people possess that enable or promote well-being" (Goodman et al., 2019, p. 62).

Well-Being

Well-being is a notoriously complex and difficult construct to define (Dodge et al., 2012). Countless definitions have been proposed, yet there is growing consensus that well-being is multidimensional, involving several underlying aspects (for reviews, see Dodge et al., 2012; Linton et al., 2016). The field of positive psychology has historically focused on two major dimensions—*subjective well-being* (SWB) and *psychological well-being* (PWB)—but conceptual and empirical distinctions between each have been fiercely debated (Disabato et al., 2016). On the one hand, SWB (also called hedonic well-being) typically refers to people's overall evaluation of their life and emotional experiences, including their level of life satisfaction, positive affect, and lack of negative affect (Busseri & Sadava, 2011; Diener et al., 2017). PWB (also called *eudaimonic well-being*) usually refers to the ways people engage with life's existential challenges (Keyes et al., 2002) and strive toward actualization of themselves and others (Ryan & Deci, 2001; Ryff, 1995). As such, PWB often emphasizes virtues and benefits for others as well as oneself (Ryff, 2014; Seligman, 2011). PWB is traditionally conceptualized as having six facets of human actualization: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance (Ryan & Deci, 2001; Ryff, 2014). Despite vigorous assertions that SWB and PWB are two distinct types of well-being, there is growing empirical evidence that such claims are more philosophical than empirical, because SWB and PWB capture the same latent well-being variable and show a similar pattern of correlations with other criterion variables (Disabato et al., 2016; Worthington et al., 2018).

Instead, what is perhaps more theoretically and empirically defensible is to conceptualize well-being's dimensions in terms of functional domains of life. For example, Linton et al. (2016, p. 12) found that existing measures of well-being assess six functional domains: (a) *mental well-being* ("the psychological, cognitive, and emotional quality of a person's life"), (b) *social well-being* ("how well an individual is connected to others in their local and wider social community"), (c) *physical well-being* ("the quality and performance of bodily functioning"), (d) *R/S well-being* ("meaning, a connection to something greater than oneself, and in some cases faith in a higher power"), (e) *personal activities/functioning* ("the behavior and activities that characterize daily life"), and (f) *personal circumstances* ("the conditions and external pressures that an individual faces [including] environmental and socioeconomic concerns").

Religion and Spirituality

Like well-being, religion and spirituality are also complex and difficult to define (Hill et al., 2000). Nevertheless, there is growing scholarly consensus that *spirituality* refers to "a search for or relationship with the sacred" (Harris et al., 2018, p. 14), whereas *religion* refers to "ritual, institutional, or codified spirituality which is culturally sanctioned" (Harris et al., 2018, p. 14; see also Pargament, et al., 2013, pp. 14–15).

Positive Psychology as Fertile Soil for Psychology of R/S Research

The birth of positive psychology catalyzed the accelerated scientific study of virtues. To illustrate, we tabulated the growth of scholarly article and book entries on seven virtues that have clear conceptual associations with R/S (see table 9.1)—hope, altruism, compassion, forgiveness, gratitude, humility, and patience. Research on all these virtues has increased strikingly over the past 40 years. Since the birth of positive psychology in 2000, these increases have

Table 9.1 Cumulative Number of Academic Article and Book Entries on Select Virtues in PsycINFO From 1979 to 2019

Year	Virtue						
	Hope ^a	Altruism ^b	Compassion ^c	Forgiveness ^d	Gratitude ^e	Humility ^f	Patience ^g
1979	72	56	9	5	3	3 (0)	7
1980	153	102	14	13	5	5 (0)	14
1981	221	164	21	15	8	8 (0)	17
1982	330	237	45	21	9	15 (0)	31
1983	443	302	67	25	12	21 (0)	38
1984	575	379	97	39	17	26 (0)	57
1985	731	469	119	58	25	32 (0)	70
1986	918	531	146	66	32	38 (0)	83
1987	1,155	594	178	76	40	46 (0)	97
1988	1,445	680	218	98	51	54 (0)	106
1989	1,746	753	264	120	54	57 (0)	118
1990	2,056	845	296	131	60	60 (0)	126
1991	2,364	963	338	155	66	72 (0)	136
1992	2,718	1,062	374	183	73	73 (0)	153
1993	3,018	1,139	421	204	79	78 (0)	164
1994	3,362	1,256	486	227	89	83 (0)	181
1995	3,744	1,354	554	254	98	91 (0)	194
1996	4,129	1,436	629	281	113	97 (0)	210
1997	4,590	1,518	685	309	124	101 (0)	229
1998	5,000	1,617	754	366	141	105 (0)	241
1999	5,437	1,713	826	414	155	119 (0)	250
2000	6,022	1,836	918	513	173	133 (0)	267
2001	6,578	1,952	1,020	605	187	141 (0)	282
2002	7,282	2,176	1,163	717	205	163 (0)	305
2003	8,246	2,334	1,327	796	239	188 (0)	332
2004	9,451	2,577	1,507	903	308	210 (2)	360
2005	11,058	2,785	1,759	1,059	371	256 (5)	395

Table 9.1 *Continued*

Year	Virtue						
	Hope ^a	Altruism ^b	Compassion ^c	Forgiveness ^d	Gratitude ^e	Humility ^f	Patience ^g
2006	12,810	3,085	2,062	1,236	470	297 (7)	442
2007	14,723	3,420	2,381	1,423	547	350 (11)	499
2008	16,610	3,741	2,688	1,626	642	405 (16)	556
2009	18,613	4,051	3,025	1,816	768	444 (21)	608
2010	20,753	4,399	3,374	2,034	904	505 (30)	670
2011	22,970	4,752	3,799	2,236	1,013	561 (42)	718
2012	25,343	5,185	4,248	2,468	1,150	637 (57)	809
2013	27,684	5,605	4,756	2,730	1,322	723 (70)	863
2014	30,212	6,163	5,330	2,958	1,572	844 (104)	957
2015	32,610	6,605	5,915	3,243	1,781	939 (137)	1,042
2016	34,845	6,995	6,444	3,450	1,994	1,064 (165)	1,107
2017	36,917	7,423	7,096	3,675	2,236	1,228 (198)	1,185
2018	38,384	7,725	7,490	3,848	2,448	1,361 (228)	1,235
2019 ^h	38,714	7,812	7,583	3,895	2,499	1,386 (240)	1,250

Note. Entries were identified using the following search terms: ^a(hope); ^b(altruism*); ^c(compassion* NOT self-compassion*); ^d(forgiv* NOT self-forgiv*); ^e(gratitude); ^f(humility NOT HEXACO); ^g(patience). Values in parentheses represent additional entries identified using the following search term: (HEXACO AND honesty-humility). ^hUp through April 30, 2019.

been exponential, even for virtues (e.g., hope and altruism) that already had a substantial literature base by then. With this proliferation of research on virtues, positive psychology offers a fresh, fertile soil for conducting and disseminating psychology of R/S research (Schnitker & Emmons, 2017). Given the historical genesis of positive psychology (e.g., virtues being identified based on moral and religious teachings; Peterson & Seligman, 2004) and the myriad conceptual and practical associations between virtues and R/S (McMinn, 2017; Rye et al., 2013), it is reasonable to assume that cross-pollination between the positive psychology and psychology of R/S subfields would readily have occurred. But has it?

Existing Overlap Between Positive Psychology and the Psychology of R/S

To demonstrate the overlap between positive psychology and the psychology of R/S, we undertook two case studies. First, we examined the overlap in niche psychology journal outlets. Second, we examined the overlap in secular journal outlets.

Case Study 1: Existing Overlap in Niche Psychology Journal Outlets

To explore this question, we first compared articles from what are widely considered the two flagship niche (i.e., specialty) journals in these respective subfields: *The Journal of Positive Psychology* (JoPP, established in 2006) and *Psychology of Religion and Spirituality* (PRS, established in 2009; see table 9.2). As an approximate indication of overlap over

Table 9.2 Articles on Virtues and Religion/Spirituality in *The Journal of Positive Psychology* (JoPP) and *Psychology of Religion and Spirituality* (PRS) From 2009 to 2019

	2009–2010		2011–2012		2013–2014		2015–2016		2017–2019#	
	JoPP	PRS	JoPP	PRS	JoPP	PRS	JoPP	PRS	JoPP	PRS
Total number of articles	81	41	91	48	100	69	105	70	179	186
Total number of authors	243	130	287	155	327	226	371	246	618	636
Mean number of authors per article (range)	3.00 (1–8)	3.17 (1–9)	3.15 (1–12)	3.23 (1–7)	3.27 (1–10)	3.28 (1–12)	3.53 (1–11)	3.51 (1–8)	3.45 (1–17)	3.42 (1–12)
Number of articles on virtue ^a	16	7	23	5	26	13	30	6	57	17
Percent of total articles on virtue	19.75	17.07	25.27	10.42	26.00	18.84	28.57	8.57	31.84	9.14
Number of authors with 1+ article on virtue in both JoPP and PRS	8		5		5		7		15	
Mean number of articles by authors with 1+ article on virtue in both JoPP and PRS (range)	1.38 (1–2)	1.00 (1–1)	1.40 (1–2)	1.00 (1–1)	2.00 (1–3)	1.40 (1–2)	3.43 (1–6)	1.00 (1–1)	1.87 (1–3)	1.80 (1–4)
Number of articles on virtue and R/S ^b	1	7	4	5	3	13	7	6	5	16
Percent of virtue articles addressing R/S	6.25	100.00	17.39	100.00	11.54	100.00	23.33	100.00	8.77	94.74
Number of authors with 1+ article on virtue and R/S in both JoPP and PRS	2		3		–		7		7	
Mean number of articles by authors with 1+ article on virtue and R/S in both JoPP and PRS (range)	1.00 (1–1)	1.00 (1–1)	1.00 (1–1)	1.00 (1–1)	–	–	1.86 (1–3)	1.00 (1–1)	1.00 (1–1)	2.43 (1–4)

Note. Entries were identified using the following search terms: ^a(humility NOT HEXACO) OR (hope) OR (gratitude) OR (patience) OR (forgiv* NOT self-forgiv*) OR (compassion* NOT self-compassion*) OR (altruism*); ^b(humility NOT HEXACO) OR (hope) OR (gratitude) OR (patience) OR (forgiv* NOT self-forgiv*) OR (compassion* NOT self-compassion*) OR (altruism*) AND (relig* OR spiritu*). [#]Up through April 30, 2019. R/S = religion/spirituality.

the past 10 years, we analyzed these journals for articles on the same set of virtues (hope, altruism, compassion, forgiveness, gratitude, humility, and patience) and on R/S. Of note, over the past five years, these journals have had roughly equivalent impact factors (2.00 ± 0.50), so they are likely equally attractive in terms of publication quality. Also, over the past 10 years, these journals have maintained a similar mean number of authors per article (roughly 3 to 3.5).

We anticipated more articles on virtues would be published in *JoPP* than *PRS*, and that was indeed the case. From 2009 to 2019, the percent of *JoPP* articles that focused on virtues climbed steadily from 19.75% to 31.84%, whereas the percent of *PRS* articles that focused on virtues fell from 17.07% to 9.14% (with a brief spike to 18.84% in 2013–2014).

Next, for each journal, we examined the articles on virtues and identified which ones also addressed R/S. Unsurprisingly, almost all the virtue articles in *PRS* addressed R/S. We were particularly interested in how often the virtue articles in *JoPP* mentioned R/S. Although we had hypothesized that most would do so, the evidence did not support that expectation. Across each publication period, only 6.25% to 23.33% of virtue articles in *JoPP* addressed R/S. We found this to be surprising given the historical origins of positive psychology, as well as the conceptual and practical overlap between the study and cultivation both of virtue and R/S.

Case Study 2: Existing Overlap in “Secular” Journal Outlets

But what about broader “secular” psychology journal outlets (i.e., journals that are not focused specifically on R/S, as *PRS* is)? Generally speaking, secular journal outlets include both mainstream psychology journals (e.g., personality and social psychology journals) and niche positive psychology journals (e.g., *JoPP* and the *Journal for Happiness Studies* [*JHS*]). With psychology’s increasing scholarly interest both in the scientific study of virtues (see table 9.1) and the scientific study of R/S (see table 9.3), we expected to see secular journal outlets featuring increasing amounts of (a) research on virtues and (b) research on virtues plus R/S.

Table 9.3 Number of Academic Article and Book Entries on R/S in PsycINFO From 1970 to 2019			
Years	Number of entries on religion ^a (R)	Number of entries on spirituality ^b (S)	Number of articles on both religion and spirituality ^c
1970–1979	3,411	182	121
1980–1989	5,145	615	522
1990–1999	6,790	1,760	1,223
2000–2009	14,617	5,166	5,207
2010–2019 [#]	19,783	6,853	7,877

Note. Entries were identified using the following search terms: ^a(relig*) NOT (spiritu*); ^b(spiritu*) NOT (relig*); ^c(relig*) AND (spiritu*). [#]Up through April 30, 2019.

To test these hypotheses, we conducted another series of *PsycINFO* searches, focusing on six leading “secular” personality, social, and positive psychology journals: *Journal of Personality and Social Psychology* (JPSP), *Personality and Social Psychology Bulletin* (PSPB), *Journal of Research in Personality* (JRP), *Journal of Personality* (JP), *Journal of Happiness Studies* (JHS), and *The Journal of Positive Psychology* (JoPP; see table 9.4). Again contrary to our expectations, we found that since 2006, these secular journal outlets have *not* increased the degree to which they feature either (a) research on virtues or (b) research on virtues plus R/S. Most of the identified articles on virtues and on virtues plus R/S were published in the two niche positive psychology journals (*JHS* and *JoPP*). Over time, this trend became increasingly skewed toward those two journals. Part of this change may be because *JHS* and *JoPP* were established relatively recently (2000 and 2006, respectively), and those journals have quickly matured into higher-impact journals, thereby attracting more and higher-quality manuscript submissions. Nevertheless, it is surprising that mainstream psychology journals have published so little research on virtues and on virtues plus R/S, considering psychology’s trends toward increased scholarly interest in virtues and in R/S.

Taken together, to the extent these case studies highlight actual scientific trends, it appears that to date little cross-pollination has occurred between the positive psychology and psychology of R/S subfields. This lack of cross-pollination seems apparent both at the microlevel (within respective niche journal outlets) and the macrolevel (within broader secular journal outlets). What might be some reasons for this lack of cross-pollination?

Barriers to Cross-Pollination Between Positive Psychology and the Psychology of R/S

We examine four barriers to cross-pollination. First, psychology has traditionally neglected R/S. Second, psychologists have been among the least likely to endorse R/S personally among scientists. Third, funding for R/S research has not been abundant. Fourth, research in R/S has not always been up to “industry standards” of some other subfields of psychology.

Psychology’s Historic Neglect of R/S

Positive psychology emerged from within mainstream psychology (Seligman & Csikszentmihalyi, 2000), which has historically neglected R/S—and sometimes even sought to supplant or dismiss it (Gorsuch, 1988; Jones, 1994). Many positive psychologists were trained during that period of R/S neglect and therefore often may not have (a) paid much prior scholarly attention to R/S, (b) received much training in R/S, or (c) felt competent either to conduct or review R/S research (Schafer et al., 2011; Vieten et al., 2016). Similarly, many mid-to-late career scholars on editorial boards of “secular” psychology journals were also trained during this era of R/S neglect and thus often may have been less inclined to look with interest or favor on positive psychology manuscripts

Table 9.4 Articles on Selected Virtues That Were Published in “Secular” Personality, Social, and Positive Psychology Journals From 2006 to 2019

	2006–2010						2011–2015						2016–2019 [#]						Total
	JPSP	PSPB	JRP	JP	JHS	JoPP	JPSP	PSPB	JRP	JP	JHS	JoPP	JPSP	PSPB	JRP	JP	JHS	JoPP	
Hope ^a	2	3	8	4	4	15	3	4	2	0	23	19	3	1	1	3	20	17	132
Altruism ^b	17	14	4	6	2	2	15	4	5	2	1	8	3	3	1	3	5	6	101
Compassion ^c	5	3	0	0	0	3	6	4	1	3	1	5	5	3	0	4	7	10	60
Forgiveness ^d	11	12	8	2	2	5	7	6	5	3	1	10	2	7	3	1	3	6	94
Gratitude ^e	3	1	3	2	5	15	1	6	2	1	16	27	3	1	2	2	23	31	144
Humility ^f	1	1	0	0	0	2	2	0	1	1	0	6	6	1	0	0	2	14	37
Patience ^g	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	1	1	0	5
Total number of virtue articles ^{h†}	39	33	21	14	10	36	32	23	16	8	38	65	20	16	8	10	61	75	525
Total number of articles published	733	635	543	295	164	142	645	630	434	261	381	241	411	392	208	276	528	235	7154
Percent of published articles on virtues	5.32	5.20	3.87	4.75	6.10	25.35	4.96	3.65	3.69	3.07	9.97	26.97	4.87	4.08	3.85	3.62	11.55	31.91	7.34
Number of articles on virtues with R/S ^{††}	1	3	0	2	2	4	0	2	0	1	2	9	0	1	0	2	2	10	41
Percent of virtue articles with R/S	2.56	9.09	0.00	14.29	20.00	11.11	0.00	8.70	0.00	12.50	5.26	13.85	0.00	6.25	0.00	20.00	3.28	13.33	7.81
Percent of total published articles on virtues with R/S	0.14	0.47	0.00	0.68	1.22	2.82	0.00	0.32	0.00	0.38	0.52	3.73	0.00	0.26	0.00	0.72	0.38	4.26	0.57

Notes. Entries were identified in PsycINFO using the following search terms: ^a(hope); ^b(altruism*); ^c(compassion* NOT self-compassion*); ^d(forgiv* NOT self-forgiv*); ^e(gratitude); ^f(humility NOT HEXACO); ^g(patience); ^h(humility NOT HEXACO) OR (hope) OR (gratitude) OR (patience) OR (forgiv* NOT self-forgiv*) OR (compassion* NOT self-compassion*) OR (altruism*); ((humility NOT HEXACO) OR (hope) OR (gratitude) OR (patience) OR (forgiv* NOT self-forgiv*) OR (compassion* NOT self-compassion*) OR (altruism*)) AND (relig* OR spiritu*). [†]Because records may address multiple virtues, the number of entries derived from searches involving all seven virtues may be lower than the sum of entries identified from searches involving each virtue in isolation.

^{††}Up through April 30, 2019. JPSP = Journal of Personality and Social Psychology; PSPB = Personality and Social Psychology Bulletin; JRP = Journal of Research in Personality; JP = Journal of Personality; JHS = Journal of Happiness Studies; JoPP = The Journal of Positive Psychology; R/S = religion/spirituality.

that focused on R/S. Indeed, scholars have proposed a few hypotheses for why mainstream psychology has historically neglected R/S, and one explanation is that psychologists have tended to avoid “taboo” topics that could be seen as too philosophical, subjective, or theological (Emmons & Paloutzian, 2003; Gorsuch, 1988). Even researchers in the psychology of religion may follow these norms of isolating religious topics. For example, many researchers study virtues and R/S, but when they publish in secular journals, they tend to withhold R/S measures from their analyses. This seems like a missed opportunity to learn more about religious and spiritual variables as moderators within processes that lead to the development and practice of virtues.

Psychologists’ Historic Lack of Personal R/S

Another hypothesis for why mainstream psychology has traditionally neglected R/S is that R/S has historically been less relevant to psychologists’ personal lives (Gorsuch, 1988). For example, nationally representative studies have consistently found that approximately 60% of Americans indicate that R/S is a *very important* part of their lives, whereas only 10–15% report that R/S is *not very important* (Pew Research Center, 2015; Shafranske & Cummings, 2013). In contrast, studies of various subgroups of psychologists (e.g., American Psychological Association leaders; clinical, counseling, and rehabilitation psychologists) have found that only 20% to 40% of psychologists report that religion is a *very important* part of their lives, and 30% to 50% report that it is *not very important*. Thus, psychologists’ historic lack of personal R/S might be another barrier that has hindered cross-pollination between positive psychology and the psychology of R/S.

The Historic Lack of Openness to Funding R/S Research

Yet another potential barrier is granting agencies’ historic lack of openness to funding R/S research (Miller & Thoresen, 2003; Park et al., 2017). This reluctance may stem largely from concerns about the separation of church and state. Nonetheless, no court has ever ruled it is improper or unconstitutional to use federal funds to support the scientific study of R/S. In fact, prohibiting the allocation of funds to R/S research might ironically infringe on the constitutional principle that forbids the government from regulating matters of R/S (Miller & Thoresen, 2003). Obviously, without funding it is difficult for scholars to conduct scientifically rigorous, practically useful, large-scale and societally beneficial research on R/S and virtues.

The Historic Lack of Conceptual and Methodological Rigor in Psychology of R/S Research

One more plausible reason for the lack of cross-pollination between positive psychology and psychology R/S research is a putative historic lack of conceptual and methodological rigor in the latter (Gibson, 2017; Park et al., 2017; Rosmarin et al., 2011). As discussed, R/S is notoriously difficult to define with conceptual precision. It is correspondingly difficult

to operationalize and measure with methodological rigor. Often, R/S is assessed using single-item R/S measures (e.g., frequency of attending religious services), only one R/S measure, or R/S measures with poor psychometrics. Moreover, researchers studying R/S sometimes employ methodologically weak designs, such as failing to (a) account for relevant confounds and covariates, (b) use strong and representative sampling methods, (c) augment self-report measures with other types of measures (e.g., implicit, indirect, physiological, or other-report measures), (d) apply sophisticated and appropriate statistical analyses, and (e) utilize prospective or experimental designs (Gibson, 2017; Park et al., 2017; Rosmarin et al., 2011). Lack of conceptual and methodological rigor has likely hindered (a) how frequently psychology of R/S manuscripts have been accepted (or even considered) for publication in high-quality journal outlets and (b) how attractive R/S topics have been both to positive psychology researchers and to agencies interested in funding positive psychology research.

Improving Cross-Pollination Between Positive Psychology and the Psychology of R/S

Despite the barriers, cross-pollination between positive psychology and the psychology of R/S is on the cusp of exploding. There are four primary reasons. First, psychological scientific climate is changing. Second, there seems to be interest in mainstream journals in publishing on virtues, which have long been a publication interest in the psychology of R/S. Third, the Templeton foundations in particular have provided substantial grant funding for research in the overlapping area of virtues, well-being, and R/S. Fourth, some topics have been particularly likely to promote overlap in research interest.

Auspicious Changes in Societal, Professional, and Scientific Climates

Several auspicious changes in societal, professional, and scientific climates offer favorable conditions for improving cross-pollination between positive psychology and the psychology of R/S. For example, across the globe, approximately 84% of adults and children are religiously affiliated (Pew Research Center, 2012), and R/S is now societally and scientifically recognized as a potent resilience factor and a robust contributor to health and well-being (Paloutzian & Park, 2013; Pargament & Cummings, 2010). In addition, within the medical and allied mental health professions, R/S is now widely accepted as a respected domain of cultural diversity and a coping resource that can help facilitate people's treatment and recovery (Park et al., 2017; Schafer et al., 2011). Moreover, Americans are increasingly reporting that they are *spiritual but not religious* (Lipka & Gecewicz, 2017), and psychologists are increasingly reporting that spirituality (but not religion) is an important part of their lives (Shafranske & Cummings, 2013). Considering these changes in climate, there seem to be fewer barriers to integrating R/S into positive psychology research generally and into virtue research specifically, especially given positive psychology's focus on human strengths, virtues, and flourishing.

Mainstream Psychology Outlets and Openness to Publishing Research on Virtues and R/S

Not only did the birth of positive psychology usher in the creation of niche journals focused on publishing positive psychology research (e.g., *JoPP* and *JHS*), but it also led mainstream psychology journals (e.g., social and personality psychology journals, clinical, counseling, and consulting psychology journals, assessment psychology journals, relationship-focused journals, and culture-focused journals) to become increasingly open to publishing research on virtues. Similarly, not only did the scientific maturation of the psychology of R/S subfield lead to the creation of niche journals focused on publishing psychology of R/S research (e.g., *PRS*, *The International Journal for the Psychology of Religion*, and *Spirituality in Clinical Practice*), but it also led mainstream psychology journals to become more open to publishing research on R/S.

Mainstream psychology's increased openness to virtue research and R/S research has attracted more scholars to studying positive psychology and the psychology of R/S, because high-impact journals have shown increased openness to receiving manuscript submissions on these topics. Now, researchers need more often to study virtues and R/S simultaneously and seek to publish that research in mainstream psychology outlets. Instead, what seems to be occurring so far is that researchers have sought to publish research on virtues in mainstream psychology outlets but sought to publish research on R/S in niche R/S journals.

Increased Grant Funding for Research on Virtues and the Psychology of R/S

Over the past 20 years, there has been substantially increased grant funding for research on virtues and the psychology of R/S. One of the leading and pioneering sources of this funding is the John Templeton Foundation (founded in 1987) and its two sister charitable entities—the Templeton World Charity Foundation (founded in 1996) and Templeton Religious Trust (founded in 1984). Since even before the birth of the positive psychology movement, these three foundations have provided funding for research on character strengths and virtues, because such aims were central to the vision of its benefactor, Sir John Templeton. Also central to his vision was scientific research on R/S. Although virtues and R/S are not inextricably linked as requirements for receiving funding from one of the three Templeton foundations, these foundations offer an optimal funding mechanism for this research, because the scientific study of virtues and R/S is central to the vision and mission of these foundations (Gibson, 2017). Importantly, because Templeton foundations encourage publication in mainstream high-impact journals, their funding has (a) catalyzed substantial increases in high-quality, impactful (widely cited and disseminated) research on positive psychology and the psychology of R/S; (b) contributed to expanding the training, career, and funding opportunities available to scholars who study these topics; and (c) strengthened the quality of research and related outputs from these two subfields.

Growing Interest in Topics That Offer a Fruitful Platform for Research on Virtues and R/S

In basic research, posttraumatic growth has been recast as a positive psychology phenomenon, and R/S has been integrated into recent conceptualizations (Davis et al., 2019; Jayawickreme & Blackie, 2014; Tedeschi et al., 2017). The development of virtues, especially within religious traditions, has historically drawn a lot of interest in religion, but little interest in longitudinal experimental study in psychology. There are many unstudied virtues, and many of those overlap with R/S traditions. For example, mercy is little studied. Aspects of hope, such as persistence when desired outcomes are seen as not possible or unlikely, are also not studied.

In the past few decades, there has been growing interest in topics that offer a fruitful platform for intervention research on virtues and R/S. For example, there has been growing interest in developing and studying psychological interventions that are not explicitly R/S, are founded on Eastern philosophies and religions, and are supported by empirical evidence (Patel, 2012). Such interventions include mindfulness-based treatments (Baer, 2014), self-compassion interventions (Neff & Germer, 2017), acceptance and commitment therapy (ACT; Hayes et al., 2012), and dialectical behavior therapy (DBT; Linehan, 2015). Similarly, there has been growing interest in developing and studying positive psychological interventions, including ones focused on cultivating virtues that have clear ties to R/S (e.g., gratitude, forgiveness, and meaning/purpose in life; Parks & Schueller, 2014). Taken together, these clinically oriented topic areas offer fruitful platforms for research on virtues and R/S. For instance, researchers could explore the effectiveness of these various interventions in not only promoting virtues but also in promoting R/S outcomes (e.g., higher R/S well-being and lower R/S struggles). Likewise, researchers could explore whether certain R/S factors (e.g., R/S orientation, coping, commitment, or struggles) mediate (explain) or moderate (conditionally influence) the effectiveness of these different interventions. Correspondingly, researchers could examine whether certain virtues (e.g., hope, humility, forgiveness, or gratitude) mediate or moderate the effectiveness of various spiritually integrated interventions (Captari et al., 2018). More broadly, researchers could examine whether specific virtues mediate or moderate the well-established links between R/S and various dimensions of well-being (e.g., physical, mental, and social health; Koenig et al., 2012; Park & Slattery, 2013).

Summary and Conclusions

We initially drafted this chapter in 2018. In the course of writing this chapter, we moved away from an initial set expectations that virtue research (which was catalyzed by the creation of the field of positive psychology) might have transformed research in the psychology of R/S. After a quasi-systematic evaluation of different publication trends, we have tentatively concluded that although both the study of virtues and the study of R/S are vigorous, there is sparse evidence to suggest that these two fields have strongly influenced

each other to date. In response, we have offered some potential reasons for the lack of cross-pollination as well as some reasons to be hopeful about more work that combines virtues and R/S in the near future.

Given the centrality of virtues and R/S in many people's lives, along with the favorable changes in research climate that we have mentioned here, we want to encourage psychologists with interests in virtues and R/S to take steps to disseminate their work more widely. More specifically, we hope that researchers interested in R/S and virtues will take advantage of opportunities to design rigorous studies, pursue grant funding, present their work to a wide range of audiences, and publish their work (including R/S variables) in influential mainstream journals wherever possible. Successful attempts to publish on virtues and R/S in secular journals will often require careful conceptual and theoretical work, methodological rigor, strategic collaborations, patience and persistence in the face of rejection (and, in some cases, bias against R/S topics), and clear communication about how the constructs at hand relate to the broader interests of a journal's readership. By cultivating these skills, psychologists interested in R/S and virtue can increase the odds that their voices will be heard by a wider audience.

We were persuaded by this chapter's review that the fields of positive psychology and psychology of R/S had substantial overlap, but it was poorly documented and a field-building review was necessary if the field were to advance. Edward Davis, Everett Worthington, and Sarah Schnitker (2023) undertook such a task. In 2023, under complete open access, Davis et al. published the *Handbook of Positive Psychology, Religion, and Spirituality*. The *Handbook* brought together 30 research teams to write about the past research in their fields and to point the way forward for new researchers. This new resource is an exciting invitation into the overlapping subfields of positive psychology and the psychology of R/S.

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Personality, Spirituality, and Religion

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Abstract

The current review explores advances in research linking personality with religion and spirituality. The chapter is organized around five broad principles of personality research that may contribute to the understanding of individual lives: evolution, dispositional traits, characteristic adaptations, narrative identity, and culture. First, we examine evolutionary theories of religion and spirituality, and we review informative behavioral genetic studies. Second, we summarize the links between aspects of religion and spirituality with dispositional traits associated with the Big Five (extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience) and Big Six (the Big Five traits plus honesty-humility). Third, we describe evidence for the associations between various characteristic adaptations (attachment styles, motivational variables, values, and social attitudes) and religious/spiritual variables. Fourth, we briefly review nascent narrative identity work on religion/spirituality. We discuss cross-cultural research findings in the areas of dispositional traits, characteristic adaptations, and narrative identity when available. We conclude by offering directions for future research.

Key Words: personality, religion, spirituality, evolution, genetics, traits, characteristic adaptations, narrative identity, culture, personality, spirituality and religion

Historically, there has been strong interest in the connections between personality psychology and the psychology of religion/spirituality (R/S). The famous schism between Sigmund Freud and Carl Jung was due in part to Jung's insistence that R/S should be considered within the purview of personality (Palmer, 2003). Eminent personality theorists such as Gordon Allport (1950) and Henry Murray (1960) encouraged the psychological study of R/S because they believed that doing so would foster a better understanding of the whole person across environmental and cultural contexts. Abraham Maslow (1964), a founder of humanistic approaches to personality, proposed that spiritual elements were present in peak experiences and the self-actualization process. This theoretical focus did not translate into systematic empirical investigations during the 20th century (Emmons, 1999b); however, the beginnings of the 21st century have been marked by increased numbers of studies of R/S phenomena from a personality perspective. This state of affairs is evident in the number of handbook chapters (including the earlier version of this chapter)

devoted to the relationships between these fields (Ashton & Lee, 2014; Emmons et al., 2008; Piedmont & Wilkins, 2013; Rose & Exline, 2012). Our first chapter reviewed research conducted mainly between 1999 and 2009; the current version reviews research from 2009 and 2018. We have also aligned this review with the framework for personality psychology put forward by McAdams and Pals (2006). In line with this new structure, we added several sections to cover topics that were not included in the previous version (Rose & Exline, 2012).

In the McAdams and Pals (2006) framework, and in many conceptions of personality (e.g., Allport, 1937; DeYoung, 2015; J. A. Johnson, 1997), the overarching aims of the field are to describe and understand patterns and variations in affect, behavior, cognition, and desire—the “ABCDs” of personality (J. A. Wilt & Revelle, 2015, p. 478)— across time and situation.

McAdams and Pals (2006) proposed that these variations may be studied across five interrelated principles in order to gain a better understanding of the individual human life. First, individual variations in personality rest upon a shared evolutionary design, with natural selection being responsible for the universal characteristics (e.g., physical needs, psychological needs, and sociocultural practices) that are common to all people. Second, individuals vary on a relatively small number of dispositional traits (e.g., extraversion and neuroticism) that account for coherence and stability of ABCD patterns across time and situation. Traits provide a broad sketch of individual differences that are relatively stable over time. Third, individuals vary with respect to a large number of characteristic adaptations, which comprise motivational constructs (e.g., goals and values), developmental variables (e.g., attachment styles), and social attitudes (e.g., moral attitudes and prejudice) in which ABCD patterns are contextualized by time, situation, and/or social roles. These variables are more specific than dispositional traits and may change quite a bit over the life course. Fourth, individuals vary in regard to narrative identity, a level of personality that includes a person’s self-authored life stories connecting ABCD patterns from the past, present, and imagined future into an integrated whole that theoretically provides a person with a sense of unity, coherence, and purpose. Life stories are unique to the individual and may change markedly over time, reflecting personality development. Fifth, culture has different effects on dispositional traits, characteristic adaptations, and narrative identity. Culture influences the expression of traits (e.g., extraversion’s ABCD patterns may differ across cultures), the content of characteristic adaptations (e.g., cultures may endorse different values), and the kinds of narrative identities available (e.g., rules for telling and living life stories may differ drastically between cultures).

How may R/S be integrated within this framework? To answer this question, we first need to consider the conceptual nature of R/S variables and the scope of R/S. Variables in the R/S domain are, straightforwardly, ABCD patterns that are concerned with spirituality and/or religion. Though several definitions of religion and spirituality persist, empirical examination has revealed some common, basic elements: Spirituality concerns the

search for or relationship with the sacred, whereas religiousness refers to spirituality within the context of an identifiable group or institution (Harris et al., 2018). Broad R/S variables such as one's overall level of involvement in spirituality or religion may comprise each ABCD component, whereas narrower variables (e.g., spiritual *affect* during mystical experiences, ritualistic *behaviors* such as prayer, *cognitive* views of supernatural agents, and *desires* to become closer to God) may focus on only one or a subset of components. In the framework of McAdams and Pals (2006), R/S ABCD patterns are classified at the level of characteristic adaptations. They are narrower in scope than broad dispositions. Similar to constructs such as goals, values, and social attitudes, R/S factors appear later in development than broad dispositions, and their content is influenced by culture.

This chapter has five main aims that serve the overall purpose of integrating R/S within the McAdams and Pals framework. First, we consider evolutionary explanations for R/S and highlight informative behavioral genetic studies. Second, we review research linking dispositional traits to R/S variables. Third, we review research linking other characteristic adaptations (e.g., attachment, values, and social attitudes) to R/S variables and examine work focusing specifically on R/S adaptations, such as R/S goals. Fourth, we review research focusing on how R/S themes may be incorporated into narrative identity. Fifth, we consider culture as a moderator in the sections devoted to dispositional traits, characteristic adaptations, and narrative identity.

Evolution and Behavior Genetics

In these sections, we focus on biological perspectives that have informed our understanding of the origins of R/S and that have been influential in the discovery of genetic and environmental factors that contribute to development and variation in R/S.

Evolutionary Theories of R/S

The premise of evolutionary psychology is that we can develop psychological theories based on our knowledge of how natural selection works (Buss, 1995). Briefly, natural selection proceeds according to a number of basic principles. There is variation in traits, and some of those traits are heritable (passed down from parents to offspring). There is differential reproduction based on traits, and heritable traits that increase the likelihood of survival and reproduction are more likely to occur in subsequent generations. The end result is that adaptive variants spread to most or all members of a species. Thus, natural selection “designs” physiological and psychological characteristics that have been useful for navigating adaptive problems. Psychological adaptations are defined by their ability to increase the likelihood of genetic replication and are not necessarily beneficial to individuals.

As applied to personality psychology, ABCD patterns may have helped with adaptive problems in ancestral environments such as obtaining nourishing food, finding sexual mates, and protecting offspring. Examples of ABCD patterns that have received a great

deal of research attention are altruism and aggression; these characteristics have various benefits and costs for individuals but are posited to have helped human societies to get along and get ahead, respectively, over the course of evolutionary history (Buss, 2009). Other topics garnering significant interest in evolutionary personality psychology are motivations for mating, motivations for parenting, and universal emotional experience (Buss, 2008). The evolutionary psychology of R/S, which may be considered a subfield of evolutionary personality psychology, focuses on explaining the universality of R/S across cultures. The field is concerned with patterns of R/S ABCDs rather than R/S group affiliations or institutions.

There is ongoing debate about the evolutionary origins of R/S. Some theories propose that R/S directly increases genetic fitness. At the individual level, R/S may lead to such potentially adaptive characteristics as higher levels of comfort, lower levels of anxiety, and specifically lower levels of death anxiety (Jong, 2013). At the group level, R/S may facilitate cooperation and reduce conflict, and groups with these tendencies may survive and reproduce better than other groups (Wilson, 2002). Other theories propose that R/S are by-products of adaptations that met purposes that were not R/S-specific. One hypothesis is that the human brain has evolved to infer agency (animate and intentional forces) behind natural processes (Guthrie, 1993). The hypothetical evolutionary advantage is that it may be more adaptive to incorrectly infer agency when none exists in a safe situation, such as mistaking the wind rustling for a predator, than to not infer agency in a dangerous situation, such as mistaking the sounds of a predator for wind rustling. This hyperactive agency detection device may lead people to posit supernatural agents to explain events that seem to defy natural explanations (Atran, 2002). Another hypothesis is that R/S emerged from the ability to form ideas about others' minds, which may have been adaptive by increasing the ability to relate to social interaction partners and thus facilitating cooperation (Bering & Parker, 2006). These mind properties could then be assigned to supernatural entities, such as an agentic God. Further, ideas about the supernatural may have spread quickly and widely because of their counterintuitive nature (i.e., they violate natural expectations), which makes them more attention-grabbing and memorable (Barrett & Nyhof, 2001). These theories have received some empirical support and continue to be tested using innovative designs (for reviews, see, e.g., Bulbulia, 2007; Kirkpatrick, 2013; Y.-T. Lee & Kanazawa, 2015).

Behavior Genetics

Evolutionary theories of R/S continue to be debated; however, one assumption underpinning all of these theories is that R/S characteristics must be heritable. Heritability is the focus of behavioral genetic studies. Briefly, behavior genetics is a methodology that allows researchers to quantify the extent to which the variations in a given trait are attributable to genetic variation in the population, shared environmental factors, and nonshared environmental factors. Shared environmental factors exert a similar influence on all members

of a group (e.g., general parenting style across siblings). In contrast, nonshared environmental factors uniquely impact individuals within a group (e.g., unique parenting style for each sibling). Variance attributed to nonshared factors includes measurement error; as such, estimates of nonshared variance may be inflated by the use of measures with low levels of reliability.¹ The behavioral genetic studies reviewed next provide evidence of genetic effects on R/S variables, but this should not be mistaken for evidence of one-to-one correspondence of specific genes and R/S. It is highly unlikely that complex social variables such as R/S can be reduced to single genes or even sets of genes; rather, they are most likely due to complex interactions of various genetic and environmental factors (Lo & Sasaki, 2017).

INCREASING GENETIC CONTRIBUTIONS FROM EXTERNAL TO INTERNAL R/S

R/S life may be roughly dichotomized into external and internal aspects (L. B. Koenig et al., 2005). The ABCD acronym may be helpful for distinguishing these aspects: External variables comprise overt behaviors (Bs), where prototypical variables may be R/S affiliation and attending R/S services. Internal variables comprise covert ACDs, such as feelings about R/S (Affect), R/S beliefs (Cognition), and R/S motives (Desire). Some variables may not fit neatly into this dichotomy, such as praying, a B variable that likely includes ACD components. It is hypothesized that genetics exert weaker influence on external R/S variables because they are more prone to social pressures and thus more influenced by shared environments, whereas internal R/S variables may be determined more by personal rather than social factors (Bradshaw & Ellison, 2008).

EXTERNAL R/S VARIABLES

Based on a review of prior research as well as findings from their own study of nearly 15,000 twins and family members, D'Onofrio et al. (1999) concluded that variation in R/S affiliation is determined primarily by shared environmental factors. Compared to R/S affiliation, estimates of genetic effects for church attendance tended to be more substantial, ranging from roughly 19% to 32%, whereas estimates of shared environmental factors ranged between 16% to 21% (Bradshaw & Ellison, 2008; D'Onofrio et al., 1999). The aforementioned estimates were obtained primarily in the United States, a population relatively high in R/S. A more recent study of 2,237 same-sex Danish twins showed weak genetic effects on church attendance and stronger shared environmental effects, estimated at 80% (Hvidtjørn et al., 2013). The discrepancy between findings may be due to church attendance being more closely linked to family tradition in secular societies such as Denmark.

INTERNAL R/S VARIABLES

Earlier studies of American samples revealed substantial genetic effects on internal variables. Genetic effects for the importance one places on R/S life, which may be conceived as

reflecting Desire (D) aspects of R/S, were estimated at around 30% (Bradshaw & Ellison, 2008). Genetic effects on specific D components such as intrinsic R/S (i.e., R/S as a means to itself) and extrinsic R/S (i.e., R/S as a means of fulfilling other needs) have been estimated at 40% (Bouchard et al., 1999). Genetic effects for specific R/S beliefs such as biblical literalism and exclusivist beliefs were also around 40% (Bradshaw & Ellison, 2008; D'Onofrio et al., 1999). In Denmark, Hvidtjørn et al. (2013) found a range of effects across several internal variables. Belief in God was equally influenced by genetic and shared environmental effects (around 40% each), whereas belief in life after death was influenced more strongly by the shared environment (around 50%) than genetics (around 20%). The importance of God in one's life was influenced mostly by the shared environment (around 60%) and unique environment (around 40%), with trivial genetic effects. The variable of finding strength and comfort in R/S had about equal genetic, shared environmental, and unique environmental effects. This study echoed prior research showing substantial genetic effects on internal variables while also showing that these effects may differ depending on variables and populations being studied.

INCREASING GENETIC CONTRIBUTIONS WITH AGE

Early studies of adults relying on retrospective reports found that R/S measured broadly (i.e., items assessing multiple ABCD components) revealed lower genetic effects in childhood versus adulthood (Bradshaw & Ellison, 2008; L. B. Koenig et al., 2005). In these studies, genetics accounted for only a small portion of the variance in retrospective ratings of childhood R/S (around 15% on average), whereas shared environment accounted for much more variance (more than 50%). In contrast, R/S in adulthood was more accounted for by genetics (around 40%) than the shared environment (around 20%). These differences across age may reflect the increased autonomy and decreased family influence that accompanies the transition from late adolescence to adulthood (L. B. Koenig et al., 2005).

The previous findings may be limited due to the memory biases of retrospective reports. However, in another study of adolescents with a mean age of 15, the shared environment also accounted for nearly 50% of R/S variation, with trivial genetic effects (L. B. Koenig et al., 2009). This study was unique for its use of a sample of adoptive families (two adopted siblings), biological families (two biological siblings), and mixed families (one adopted sibling and one biological sibling), which allowed for estimates of shared environmental effects due to cultural transmission via parents. Cultural transmission accounted for 70% of the shared environmental effect in this study, suggesting that parents play a prominent role in determining adolescent R/S.

The previously described studies all used broad measures of R/S. Building on these findings, Vance et al. (2010) used a twin design to confirm strong genetic effects in adulthood for general R/S, as well as for narrower variables reflecting social aspects of R/S,

belief in God's involvement in human affairs, and views of God as judgmental and punitive. Genetic effects were above 50% for all variables.

More recent studies have given a more complex picture with regard to aging. One study that grouped twins between ages 17 and 30 (late adolescents and young adults) and 31 and 82 (middle and older adults) found similar patterns of effects for general R/S across groups (Kandler & Riemann, 2013). Genetics accounted for between 13% (older group) and 22% (younger group) of the variance in R/S, and the shared environment accounted for between 60% (older group) and 69% (younger group) of the variance. The authors noted that this may have been due to grouping late adolescents and younger adults together; most other studies divide individuals from these age ranges into different groups, and it is possible that this age range is where effects diverge. Hvidtjorn et al.'s (2013) study of Danish twins assessed age differences for groups between 20 and 29 (young adulthood) and 30 and 39 (middle adulthood) and found relatively modest (compared to previous studies) increases in genetic effects and decreases in shared environmental effects with age for R/S dimensions such as belief in life after death, praying to God, importance of God in one's life, and finding strength and comfort in R/S. Yet this study found a small decrease in genetic effects with age for church attendance. These studies together speak to how effects may depend on the age groups being compared and populations being studied.

MEDIATING FACTORS

In the previous version of this chapter (Rose & Exline, 2012), we encouraged future research to identify the mediating factors through which genes influence R/S. A few studies since that time have made progress on this front. One study found that measures of religiousness specifically (e.g., service attendance), some forms or facets of spirituality (e.g., mystical spirituality and cognitive orientation toward spirituality), and meaning in life (Steger et al., 2011) shared genetic variance. That is, the genetic effects were correlated across these variables. The authors noted that all these variables may reflect the pursuit and generation of meaning, and they posited that this meaning-making process could have originated in the evolved capability to understand others' minds. Another study showed that a broad R/S variable shared genetic variance with variables reflecting existential certainty and community integration (Lewis & Bates, 2013). These findings suggest that genetic effects of R/S are mediated by biological systems meeting meaning needs, as described above, as well as social needs. Finally, Kandler and Riemann's (2013) study found that a broad R/S variable shared small amounts of genetic variance with the traits of agreeableness, conscientiousness, and openness to experience. (Associations between these traits and R/S variables are discussed in greater detail in the section "Dispositional Traits.") The authors pointed to cognitive abilities and interests as other variables that may have genetic effects on R/S that could be considered in future investigations.

STABILITY AND CHANGE

Some behavioral genetics studies have gone beyond focusing on current levels of R/S to examine stability and change of R/S over time. One longitudinal study measured religiousness specifically (i.e., all items referred to religion rather than spirituality) in two cohorts, one ages 14 to 18 and the other ages 20 to 25 (L. B. Koenig et al., 2008). Stability in the younger cohort was accounted for primarily by the shared environment, whereas change was accounted for by genetics and the nonshared environment. In the older cohort, stability was accounted for by genetics and the shared environment, whereas change was accounted for by the nonshared environment. Another longitudinal study (wave 1 was conducted with participants ages between 12 and 18, and wave 2 was conducted when participants were between 17 and 29) revealed (a) genetic and shared environmental effects on the stability of religious values and attendance, (b) genetic and nonshared effects on changes in religious values, and (c) genetic, shared, and nonshared effects on changes in religious attendance (Button et al., 2011). Though findings differ somewhat across studies, we suggest the following conclusions: First, genetics consistently explains some variance in both stability and change. Second, the shared environment may contribute more consistently to stability than change. Third, nonshared environments may contribute to explaining religious change.

Summary

Evolutionary psychology and behavior genetics changed the early, prevailing assumption that R/S is influenced solely by the environment (D'Onofrio et al., 1999). Over the past decade, research has made notable advances in these areas. More sophisticated evolutionary hypotheses have been proposed and tested in innovative ways. Behavioral genetics studies have gone beyond retrospective reports, identified mediators of genetic effects, and examined R/S stability and change.

Yet the treatment of biological (nature) and environmental (nurture) effects on R/S often lacks complexity, as nature and nurture have been conceived as having additive influence only (Granqvist & Nkara, 2017). Conceptually, evolutionary approaches focus on evolved brain mechanisms and look to culture to fill in specific expressions of those mechanisms. Statistically, behavior genetics studies apportion variance explained to genetics, the shared environment, and the nonshared environment. Future work may aim for a more mature integration. For example, evolutionary theories might be advanced by considering the cultural mechanisms (e.g., value systems, education, and rules for relational interactions) that interact with evolved biological mechanisms (e.g., the hyperactive agency detection device) to affect R/S development (Granqvist & Nkara, 2017). Behavior genetics studies could examine gene–environment interactions on R/S variables. These nuanced research directions could lead to a more precise understanding of how nature and nurture influence R/S.

Dispositional Traits

The Big Five

Thousands of adjectives refer to personality traits (friendly, timid, responsible, anxious, intellectual, etc.). These terms reflect the abundance of ways that people differ from each other in terms of broad, decontextualized patterns of ABCDs over time and situation. A fundamental goal for personality psychology is to identify basic dimensions of individual differences that summarize and organize related terms. Over the past century, researchers have devoted a great deal of work to this goal and developed many trait taxonomies, with most identifying between three and seven dimensions (Revelle et al., 2011).

One of the greatest achievements in the field is the consensus that has emerged around the Big Five (extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience) as representing higher-order dimensions of dispositional traits (Goldberg, 1990; John & Srivastava, 1999; McCrae & Costa, 2008). Extraversion reflects differences in tendencies to be sociable and enthusiastic versus quiet and reserved. Agreeableness encompasses tendencies to be polite and compassionate versus rude and callous. The conscientiousness domain reflects differences in responsibility and orderliness versus recklessness and disorganization. Emotional stability (or reverse neuroticism) is defined at one pole by tranquility and ability to handle stress, and at the other by negative emotions and vulnerability. Openness to experience reflects individual differences in imagination and intellect versus traditionalism and a lack of curiosity.

Over the last two decades, researchers have been increasingly interested in determining the associations between the Big 5 and aspects of R/S. We reviewed early work in our previous chapter, noting that most studies relied on self-reports of concurrent associations among Big 5 traits and R/S in American samples. Studies using these methods generally found positive but modest correlations (around 0.1 to 0.2) relating agreeableness and conscientiousness to R/S broadly conceived and to internal aspects of R/S (see, e.g., Lodi-Smith & Roberts, 2007; Saroglou, 2002). Some studies also found associations between peer-reported agreeableness and self-reported R/S (Saroglou & Fiasse, 2003; Saroglou et al., 2005). The associations between (self-reported) agreeableness and conscientiousness and external aspects of R/S did not typically reach statistical significance. Further, agreeableness tended to correlate positively with measures of religiousness specifically but not with measures of spirituality. Openness (in self-reports, peer reports, and expert ratings) was typically unrelated to broad R/S measures, positively related (correlations around 0.4) to measures of spirituality, and negatively related (around -0.2) to measures of religiousness (for another review, see, e.g., McCullough & Willoughby, 2009). Extraversion and emotional stability were generally unrelated to R/S.

Since our previous review, a large-scale meta-analysis of 71 studies conducted by Saroglou (2010) generally confirmed the conclusions noted above. The studies were

conducted primarily in North America, Europe, and Oceania. (Cross-cultural findings from this analysis and other studies are discussed in the subsection “Moderation by Culture.”) Analyses distinguished between the R/S variables of religiousness, spirituality, and fundamentalism (defined as dogmatic religiousness). All three variables had modest, positive correlations (between 0.1 to 0.2) with agreeableness and conscientiousness. Openness showed positive associations with spirituality (around 0.2), negligible associations with religiousness, and negative associations with fundamentalism (around -0.2). Somewhat contrary to previous findings, extraversion was positively correlated with spirituality (0.15). Emotional stability was not associated with R/S measures in the meta-analysis; however, some recent studies (Galen, 2015; Galen & Kloet, 2011) showed positive, curvilinear associations between strength of belief in God and emotional stability, with moderate levels of belief predicting lower emotional stability than high levels of belief and disbelief.

A number of other studies are worth mentioning due to their use of narrower measures of R/S variables. In one study, the shared variance of R/S scales tapping into the construct of a positive relationship with God related positively to extraversion, whereas the shared variance of R/S measures assessing a negative relationship with God related negatively to emotional stability (Simpson et al., 2007). Another study showed that daily spiritual experiences (e.g., feeling close to a higher power) related negatively to extraversion and positively to emotional stability (Johnstone et al., 2012). Fox et al. (2017) showed that the tendency to use spirituality to avoid emotional problems (i.e., spiritual bypass) related positively to agreeableness and emotional stability. Building on earlier studies that suggested that Big Five dimensions might only relate to broad R/S measures, these studies showed that narrower measures of R/S also relate to extraversion and emotional stability.

The Big Six

Research has also examined the concurrent relations between R/S and the new, six-dimensional HEXACO model of traits. This model keeps the Big 5 largely intact and adds the factor of honesty-humility, which reflects individual differences in sincerity and fairness versus greed and selfishness (Ashton & Lee, 2005). Similar to other work, studies using this model have found positive links between various R/S measures and the traits of agreeableness and conscientiousness (Aghababaei, 2012; Aghababaei et al., 2016; Aghababaei et al., 2014; K. Lee, et al., 2005; Silvia et al., 2014). All these studies found that honesty-humility predicted variance in R/S measures above and beyond the Big 5, and some studies (e.g., Aghababaei, 2012; Silvia et al., 2014) showed that honesty-humility was the strongest predictor of R/S. Across studies, honesty-humility was a particularly strong predictor of intrinsic R/S and showed more modest, positive associations to extrinsic R/S.² Additionally, extraversion and emotional stability (termed emotionality in the HEXACO model) positively predicted measures of R/S consistently; the inclusion of more emotional content in HEXACO measures of these

traits, introducing overlap with well-being, may be responsible for their relatively stronger associations with R/S.

Facet-Level Associations

The Big Five (and Bix Six) traits are thought of as higher-order traits that comprise several narrower facets (Costa & McCrae, 1998). Taxonomies differ in terms of the content and organization of facets, as well as the number of facets (between two to nine) specified (DeYoung et al., 2007; Hofstee et al., 1992). A few studies have looked at associations between facet-level characteristics and broad measures of R/S. Generally, these studies are useful because focusing on the domain level only may obscure heterogeneity in facet-level associations (Costa & McCrae, 1998); for example, a trait may be uncorrelated with R/S at the domain level, but the different facets may correlate with R/S.

Chang et al. (2015) showed that the sociability facet of extraversion (but not the activity or positive emotions facets) was uniquely, positively related to broad measures of R/S, whereas the unconventionality facet of openness (but not the aesthetic interests or intellectual interests facets) was uniquely, negatively related negatively to R/S. Silvia et al. (2014) found that, among honesty-humility facets (sincerity, fairness, greed-avoidance, and modesty), only sincerity was uniquely related (positively) to overall R/S, intrinsic and extrinsic R/S, and fundamentalism. Ashton and Lee (2019) showed that fairness (but not other facets of honesty-humility) had a strong, positive association with a single-item measure of religiousness. This study also found a positive association between religiousness and the forgiveness facet of agreeableness (but not the facets of gentleness, flexibility, and patience). A study of people diagnosed with HIV revealed several facet-level predictors of faith in God and religious behavior (Lockenhoff et al., 2009). In general, few facets of extraversion (positive emotions) and openness (aesthetics and ideas) predicted higher levels of R/S variables. Most facets of agreeableness (trust, altruism, compliance, and tender-mindedness) and all facets of conscientiousness (competence, order, dutifulness, achievement-striving, self-discipline, and deliberation) predicted higher levels of R/S variables. Most facets of neuroticism (anger-hostility, anxiety, depression, impulsiveness, and vulnerability) were negative predictors of R/S variables.

Directionality and Causality

A few longitudinal studies have addressed the direction of associations between Big 5 personality traits and R/S measured broadly (Heaven & Ciarrochi, 2007; McCullough et al., 2005; McCullough et al., 2003; Wink et al., 2007). These studies showed that measures of agreeableness and conscientiousness in childhood and adolescence predicted measures of R/S in later life and that openness in adolescence predicted spirituality in adulthood. In these studies, R/S measured earlier in life did not predict later ratings of personality traits. Furthermore, studies have shown that religious conversion and faith exit do not predict subsequent changes in the Big 5 for time spans of up to three years, but low

levels of emotional stability tend to precede faith exit (Hui et al., 2018; Hui et al., 2017; Paloutzian et al., 1999). Only one study examined the longitudinal associations between measures of R/S and humility and found that closeness to God predicted higher levels of humility six years later (Krause, 2012).

In sum, most longitudinal work is consistent with the idea that causal direction flows from personality traits to R/S. Some theorists have proffered plausible causal explanations for agreeableness and conscientiousness (Emmons et al., 2008; Saroglou, 2010). For example, people higher in agreeableness are generally averse to conflict and concerned with maintaining harmony, and these motivations may lead them to adhere to their families' R/S traditions throughout life. People higher in conscientiousness may be motivated to conform to societal norms, which could include adopting conventional R/S systems. Additionally, the effects of agreeableness and conscientiousness on R/S may be traced back to genetic effects; that is, the genetic effects on R/S may be mediated by these traits (Kandler & Riemann, 2013). In contrast, a review of relations between humility and R/S conceived of causal direction flowing in the opposite direction (from R/S to humility) based on the rationale that R/S teachings tend to promote humble traits (Davis et al., 2017).

Moderation by Culture

The studies reported above, including the studies in the two meta-analyses (Lodi-Smith & Roberts, 2007; Saroglou, 2010), were conducted in predominantly Western countries and majority Christian populations. Both meta-analyses concluded that associations between traits and R/S variables were consistent across countries (as well as gender, age, measures of personality and R/S, and age cohorts). Results from monocultural studies conducted in non-Western cultures with other faith traditions (e.g., Buddhists in Belgium, Hindus in the United Kingdom, Jews in Israel, and Muslims in Iran) showed a similar pattern of findings, as agreeableness, conscientiousness, and humility generally predicted high levels of R/S measured broadly. (For a more detailed review of these and other cross-cultural findings, see Saroglou, 2017.) Large studies across many countries around the world have generally confirmed the findings noted above (Gebauer et al., 2014; Leung et al., 2012; Schmitt & Fuller, 2015). These studies also presented opportunities to directly examine moderation of associations across cultures; Saroglou (2017) offered a thorough analysis of moderation effects for each trait, and we present some of the main conclusions next.

Agreeableness tends to have weaker, positive associations with R/S in countries that are more secular as compared to stronger, positive associations in countries with higher overall levels of R/S. One interpretation of these findings is that R/S meets the needs for social assimilation (Gebauer et al., 2014), but see Saroglou (2017) for more nuanced considerations of how associations between prosocial characteristics and R/S may vary depending on the degree of secularity at the country level. Openness appears to relate

negatively to R/S measures in cultures in which R/S overall tends to be more fundamentalist, such as in monotheistic, Western cultures; but openness relates positively to R/S in cultures that are less fundamentalist, such as Eastern cultures, which may be more open to tolerating contradictions. Conscientiousness seems more strongly, positively related to R/S measures in cultures with more fundamentalist expressions of R/S, and weakly, positively related to R/S in cultures where R/S is less fundamentalist. Findings for openness and conscientiousness were interpreted as suggesting that R/S meets different needs depending on whether its expressions are more fundamentalist (needs for order, security) versus less fundamentalist (needs for creativity and self-expansion). There were few cross-cultural differences in relations between R/S and extraversion or emotional stability; however, some findings showed that these relations were more positive in the United States than in European countries. This may be because R/S is more normative in the United States, and therefore R/S individuals could receive more emotional benefits from R/S than do individuals from more secular European countries.

Since Saroglou's (2017) review, one study (Ashton & Lee, 2019) stands out due to its examination of HEXACO domains and facets in a large sample (more than 200,000) across many cultures from around the world. Across domains, personality—R/S associations tended to be stronger in countries that had higher overall levels of R/S. These findings were particularly pronounced for facets characterized as prosocial, such as fairness (in the honesty-humility domain), altruism and forgiveness (agreeableness), and sentimentality (emotionality). Furthermore, the unconventionality facet of openness was more negatively correlated with R/S in highly R/S countries. This pattern was interpreted in a way that is seemingly consistent with explanations of cross-cultural differences noted previously, namely, that R/S may better meet needs for social inclusion and conformity in highly R/S countries as compared to more secular countries.³

Dispositional Traits and R/S Struggles

R/S are typically thought of as providing security, comfort, and meaning (Ardelt & Koenig, 2006; Beck & McDonald, 2004; Pargament, 1997; Park, 2013; Unterrainer et al., 2014), and empirical research has revealed that higher levels of R/S relate positively to many variables indicating better mental and physical health (for reviews, see, e.g., H. G. Koenig, 2012; Krause, 2011; J. A. Wilt et al., 2018). However, R/S life is not without own share of turmoil. Conflicts, tensions, and strains around R/S issues are termed "R/S struggles" (Exline & Rose, 2013) and encompass a range of possible difficulties: anger at God or feeling punished by God (*divine struggle*), feeling tormented by evil spirits or the devil (*demonic struggle*), disagreements with other people about R/S or anger toward organized religion (*interpersonal struggle*), doubts and questions about one's faith (*doubt-related struggle*), struggles to follow moral principles and guilt about perceived failures (*moral struggle*), and concerns about a lack of deeper, ultimate meaning in life (*struggle around ultimate meaning*), among others (Exline et al., 2014).

LINKS TO OVERALL LEVELS OF R/S STRUGGLES

Several recent studies have examined associations between dispositional traits and R/S struggles. The trait most consistently linked to concurrent R/S struggles is neuroticism. People higher in neuroticism reported higher current levels of R/S struggles on a composite measure including multiple domains of struggles (Ano & Pargament, 2013), more negative appraisals of their relationship with God (Werdel et al., 2014), more anger toward God (Grubbs et al., 2013; Wood et al., 2010), and higher levels of meaning struggles (Ciarrocchi & Brelsford, 2009). Current anger toward God also relates negatively to conscientiousness (Grubbs et al., 2013; Wood et al., 2010). Studies examining whether agreeableness relates to anger toward God have found a negative association (Grubbs et al., 2013) and a null association (Wood et al., 2010).

A longitudinal study extended this research by examining the Big Five as predictors of ongoing R/S struggles, both concurrently and prospectively (Grubbs et al., 2016). For concurrent measures, neuroticism emerged as a positive predictor across domains, whereas agreeableness and conscientiousness were inversely related to R/S struggles. Over time, agreeableness predicted fewer moral struggles, and openness predicted more ultimate meaning and doubt struggles. Another longitudinal study of links between traits and R/S struggles found that neuroticism and openness related positively to retrospective reports of a composite measure of lifetime R/S struggles across domains, whereas agreeableness and conscientiousness related negatively to retrospective R/S struggles (J. A. Wilt et al., 2017).

We previously put forth some potential explanations for the relations between Big Five traits and R/S struggles shown across studies (J. A. Wilt et al., 2017). Neuroticism is a general risk factor for the emotional difficulties and poor coping strategies that may accompany R/S struggles. The inquisitive attributes encompassed by Openness might go hand in hand with experiences of questioning or doubting one's transcendent experiences and beliefs. The harmony that agreeable individuals experience in their interpersonal lives may be mirrored in less strife in relationships with the divine. Conscientious individuals, due to their propensity for order and self-control, might engage more persistently in R/S behaviors and practices that reinforce a worldview imbued with meaning, and they might also be more likely to avoid behaviors that elicit guilt. All these explanations are in need of empirical study.

Going beyond the Big Five, other studies have examined the links between R/S struggles and traits and the psychological entitlement aspect of narcissism (Grubbs et al., 2013; Grubbs et al., 2016; Wood et al., 2010). These studies have found positive associations between entitlement and divine struggles, including anger and disappointment toward God (Grubbs et al., 2018). People high in entitlement may experience more struggles with God due to their high levels of deservingness and demandingness, which may in turn lead to disappointment and anger when their expectations in perceived divine relationships go unmet (Grubbs et al., 2018).

LINKS TO ADAPTATION TO R/S STRUGGLES

R/S struggles are often emotionally painful and are associated with myriad negative mental and physical health outcomes (for reviews, see, e.g., Exline, 2013; Stauner et al., 2016). However, they are also a normal and natural part of R/S life for many people, and they may represent turning points toward greater spiritual and psychological maturity (Pargament, 2007). Research has just begun to examine links between the Big Five and perceived adaptation to R/S struggles. One study found that neuroticism predicted more unfavorable attributions of God's role in a current R/S struggle, less meaning found in the struggle, and greater spiritual decline as a result of the struggle (J. A. Wilt et al., 2016). Another study found that openness predicted higher levels of perceived sacred moments during R/S struggles; sacred moments, in turn, predicted better self-reported psychological and spiritual adaptation to R/S struggles (J. A. Wilt et al., 2018). Taken together with findings reviewed in the previous section, these studies suggest that dispositional traits may predict the development of R/S struggles and responses to struggles.

Summary of Research Relating Dispositional Traits to R/S Variables

This section sums up several conclusions. First, there are robust links between dispositional traits and many R/S variables. Agreeableness, conscientiousness, and honesty-humility are generally linked to higher levels of R/S across various measures, and these associations tend to be stronger in countries that have higher overall levels of R/S. Variables in these domains tend to be negatively associated with R/S struggles. Openness is positively related to spirituality specifically but negatively related to more fundamentalist forms of R/S, and these associations tend to be stronger in countries with lower overall levels of R/S. Openness may also relate to R/S struggles around doubt and meaning. Extraversion and emotional stability typically do not relate to broad R/S variables, yet recent research shows intriguing associations between these traits and more narrow R/S variables, and emotional stability is a consistent predictor of lower levels of R/S struggles. Research on facet-level predictors of R/S³ and work on predicting adaptation to R/S struggles is just beginning, but the initial findings suggest these could be fruitful topics to pursue. With the growing body of research relating traits to levels of R/S struggles, a future direction may be to look at cultural moderators of these associations.

Characteristic Adaptations

In contrast to dispositional traits, which have been organized into coherent and parsimonious taxonomies, characteristic adaptations include a diverse array of variables that resist simple classification (McAdams & Pals, 2006). As noted in the introductory section, R/S constructs themselves fit best into this level of individual variation. In this section, we review several other characteristic adaptations that have received attention in the psychology of R/S literature: attachment style, desires (e.g., goals and motives), values, and social attitudes.

Attachment

The attachment behavioral system is defined as the psychobiological system that drives humans to seek support and closeness from protective caregivers (attachment figures), especially in potentially dangerous environments (Bowlby, 1969). Early relationships with attachment figures are considered vital for the development of attachment orientation, which may be defined as an internal working model of expectations, behaviors, and capacities for emotion regulation in relationships (Gable & Isabella, 1992). Attachment orientations are thought to be relatively stable from childhood throughout adulthood, though they can differ across relationships: For example, a person may have different attachment styles with each parent, and a different style for their spouse (Fraley & Shaver, 2000). In secure attachment relationships, people learn to feel worthwhile, that caregiving is dependable, and that emotion is tolerable. Insecure attachment may take two forms: anxious attachment and avoidant attachment. In anxious attachment, a person worries about the caregiver's availability and fears abandonment. In avoidant attachment, a person may lack trust in the caregiver's dependability and remains emotionally distant. In both types of insecure attachment orientations, people may feel unlovable, see others as nondependable, and have difficulties tolerating stress.

CONCURRENT RELATIONS BETWEEN ADULT ATTACHMENT STYLE AND R/S

Research on concurrent relationships between attachment and R/S has yielded inconclusive findings. Several studies have found that securely attached adults have higher levels of R/S and a stronger relationship with God than insecurely attached adults; however, effect sizes tended to be very weak (Granqvist & Hagekull, 2000; Kirkpatrick, 1998; Kirkpatrick & Shaver, 1992). Also, some studies failed to find any significant relationship between adult attachment and current R/S (Granqvist & Hagekull, 2000, 2001), whereas others reported that anxious and avoidant attachment were associated with higher levels of R/S (Granqvist & Hagekull, 2000; Kirkpatrick & Shaver, 1992).

ASSOCIATIONS BETWEEN EARLY ATTACHMENT AND LATER R/S

Secure attachment in childhood related positively to gradual increases in R/S over time when parents are perceived as being highly invested in R/S (Granqvist, 1998; Kirkpatrick & Shaver, 1990). Granqvist and Hagekull (1999) proposed that the securely attached children of R/S parents are likely to internalize the values of close others. This idea, termed the "socialization/exploration hypothesis," is supported by studies showing that R/S conversions for securely attached individuals involve increased correspondence to levels of R/S reported by parents and peers (for reviews, see Granqvist & Kirkpatrick, 2013; Granqvist et al., 2010). Dickie et al. (2006) proposed alternatively that secure attachment leads to higher levels of R/S through increased self-esteem, and path-analytic results supported this hypothesis.

Insecure attachment (anxious and avoidant) in childhood may also lead to higher levels of adulthood R/S. Some studies have found that insecure attachment predicts greater adulthood R/S and closer relationships with God when parents are perceived as having low levels of R/S (Granqvist, 1998; Kirkpatrick & Shaver, 1990). One caveat to these findings is that avoidant attachment specifically predicted lower levels of R/S when one's mother is perceived as highly R/S (Kirkpatrick & Shaver, 1990). Other studies showed that insecure attachment during adulthood prospectively predicts R/S increases irrespective of perceived parental R/S (Kirkpatrick, 1997, 1998). In contrast to the gradual R/S changes predicted by secure attachment, sudden change experiences are predicted by insecure attachment (Granqvist & Kirkpatrick, 2004). The sudden conversions of insecurely attached individuals involve a cluster of experiences that tend to occur later in life and are uniquely tied to problems in relationships and the regulation of painful emotion. These findings inspired the emotional compensation hypothesis, that insecurely attached individuals turn to R/S to compensate for deficits in emotional regulation (for reviews, see Granqvist & Kirkpatrick, 2013; Granqvist et al., 2010).

ATTACHMENT TO GOD

It has been proposed that attachment relationships could extend to God based on the rationale that God may function as a safe haven in times of distress (Kirkpatrick, 1992; Kirkpatrick & Shaver, 1990). For example, praying to God may serve similar functions as seeking proximity to a protective caregiver. These ideas have received support from studies showing that people turn to God in times of crisis, such as a severe illness or physical injury (Kirkpatrick, 1994). Studies also showed that the style of attachment in relationships with God (secure, anxious, avoidant) generally correspond to parental attachment styles (Birgegard & Granqvist, 2004). Furthermore, attachment to God has straightforward relations with beliefs about God: Research has shown that secure attachment relates to beliefs in a loving God, anxious attachment predicts beliefs that God is remote, and avoidant attachment is inversely related to beliefs in a personal God (for a review, see Flannelly, 2017).

SUMMARY

By elaborating on potential developmental pathways, studies of attachment have contributed significantly to our understanding of R/S. One limitation of this research worth noting is the heavy reliance on self-report of attachment styles across studies, which are typically more positive than expert ratings and thus potentially affected by self-enhancement biases (Ross, 2007). Studies of attachment to God suggest that the attachment behavioral system may be activated in response to unobserved agents. Future work may explore whether this is the case with other supernatural agents, such as spirits of deceased loved ones and ancestor spirits.

Desires, Motives, Goals, and Strivings

Desires refer to people's (conscious or unconscious) motives, goals, needs, wants, and wishes (Winter et al., 1998). These constructs represent outcomes, events, states, or processes that people would like to bring about or to prevent (Austin & Vancouver, 1996; Chulef et al., 2001). Desire answers "why" questions concerning behavior and can therefore be used to explain the tendency to behave in certain ways (McClelland, 1951; Mischel & Shoda, 1995).

Gordon Allport (1950, 1961) was perhaps the first personality psychologist to note that desire is a central part of R/S life, making the distinction between intrinsic and extrinsic motivational orientations to R/S. People with higher intrinsic orientation see R/S goals as ends in themselves. For example, the goal of getting closer to God may be pursued for its own sake. People who are more extrinsically oriented tend to engage in R/S activities as a means to other ends, such as for security, comfort, or for social reasons. Research on these orientations dominated early psychology of R/S research, with most studies showing that intrinsic R/S was related to better mental and physical health outcomes as compared to extrinsic R/S (Donahue, 1985). Research on these topics has remained popular (P. C. Hill, 2013), though some have raised conceptual and methodological issues (Kirkpatrick & Hood Jr, 1990). Batson (1976) suggested a third category of motivation termed "Quest." This category is meant to reflect a style of R/S questioning generated by confrontation with the challenges and tragedies of life. Quest motivation has complex relations with well-being and may be better conceptualized as a multidimensional construct (Beck & Jessup, 2004).

More recent research in the desire domain of R/S has focused on personal strivings, which describe both what a person is characteristically trying to do and who a person is trying to be in daily life (Emmons, 1986). That is, personal strivings refer to personally meaningful goals that are salient to one's identity. Personal strivings are elicited straightforwardly by having participants generate lists of objectives they are typically trying to attain. Responses can be coded into various categories, such as intimacy (e.g., trying to spend time with close friends) and achievement (e.g., trying to get good grades). The R/S code is applied when a response addresses issues related to integrating the individual person with more complex units such as the cosmos, humanity, nature, or religion (Emmons, 1999a). These strivings are thought to reflect ultimate concerns because they deal with issues that transcend the self, such as ultimate purpose, ethics, and connection to the divine or a higher power (Emmons, 2005).

The personal strivings approach fills in contextual details that are not assessed by general measures of R/S. People scoring similarly on general measures, such as overall importance assigned to R/S or frequency of participation in R/S activities, may have very different R/S strivings. One person may prioritize getting closer to God, whereas another may want to avoid eternal damnation at all costs, and these strivings might drive divergent behavior patterns. Studies have shown that reporting greater numbers of R/

S strivings relates positively to psychological well-being, and R/S strivings themselves are typically rated by participants as highly important, requiring a great deal of effort, and being pursued for intrinsic reasons (for reviews, see Emmons, 2005; Schnitker & Emmons, 2013).

A related area of research has investigated sanctification, which involves designating certain aspects of one's life or certain objects as sacred (Pargament & Mahoney, 2005). The process of sanctification is essentially one of making an attribution of special or heightened meaning, in which the aspect of life or object being sanctified comes to be perceived as having divine character and significance (Mahoney et al., 2013). Thus, people may attribute R/S significance to strivings that on the surface may not seem spiritual. For example, one found that people sanctified strivings related to R/S issues (e.g., "to work to have a closer walk with God") but also to family relationships (e.g., "to work hard at my marriage"), helping others (e.g., "to help other people and remember the less fortunate"), and existential matters (e.g., "to continue to have inner peace") (Pargament & Mahoney, 2005, p. 249).

There may be both positives and negatives associated with sanctification. Research has consistently shown that higher levels of sanctification predict well-being across a number of domains (for reviews, see Mahoney et al., 2013; Pargament & Mahoney, 2005; Schnitker & Emmons, 2013). These results are consistent with the idea that viewing life as sacred provides heightened perceptions of meaning and purpose in life (Mahoney et al., 2005). Yet sanctification may also present risks, such as when sanctified areas of life or goals are violated or desecrated. Some research suggests that perceptions of these occurrences are associated with negative outcomes across mental health, physical health, and R/S indicators (see Mahoney et al., 2005).

Research on the relations between desires and R/S has shown that people pursue R/S for different reasons, that people have different kinds of R/S goals, and that people may sanctify various R/S and non-R/S goals and aspects of life. Most findings suggest that R/S motivations, goals, and sanctification are positively related to health outcomes; yet there may be some potential pitfalls associated with pursuing R/S for extrinsic reasons and having R/S strivings violated or desecrated.

Values

Values are abstract standards for living that are salient to identity and guide decision-making and behavior. They are motivational and aspirational descriptors of people as they wish to be. There is a rich tradition of research on values in personality psychology (Allport, 1937; McAdams, 1995; Parks-Leduc et al., 2015). It would seem natural to investigate values in the context of R/S because of the emphasis placed on values in teachings across faith traditions (Pargament et al., 2016).

Most studies of the relations between values and R/S employed the Schwartz Value Survey (Schwartz, 1992). This inventory has achieved recognition as a comprehensive,

cross-culturally valid and predictive measure of values (Roccas & Elster, 2014). It includes 10 values of importance that are often conceptualized as existing along three axes. On one axis are values relating to self-transcendence (e.g., benevolence and universalism) versus values of self-enhancement (e.g., power and achievement). A second axis holds values relating to openness to change (e.g., self-direction and stimulation) versus conservation (e.g., security and tradition). A third axis emphasizes hedonism (e.g., pleasure derived from accomplishment) versus acceptance of external limits (e.g., conformity and tradition).

VALUES ARE ASSOCIATED WITH R/S ABOVE AND BEYOND THE BIG FIVE

Two studies of international participants examined relations among R/S, the Big Five traits, and The Schwartz Value Survey (Roccas et al., 2002; Saroglou & Muñoz-García, 2008). In both studies, values accounted for a sizable portion of variance in broad measures of R/S, even after statistically controlling for Big 5 trait scores. Saroglou and Munoz-Garcia (2008) also extended this finding to the prediction of spirituality specifically.

R/S IS ASSOCIATED WITH SPECIFIC VALUES

In a meta-analysis using 21 independent samples of mostly, Western, monotheistic participants (Saroglou et al., 2004), broad R/S measures were strongly associated with valuing tradition and conformity, and R/S was modestly associated with valuing benevolence. R/S was strongly associated with devaluing hedonism, stimulation, and self-direction, and R/S was modestly associated with devaluing power and universalism. These findings were highly consistent across individuals a number of faith traditions, including Christians from various denominations (Catholic, Protestant, Greek Orthodox, Anglicans), Jews, and Muslims (Roccas & Elster, 2014). However, there was some evidence of cultural moderators (Saroglou et al., 2004). The more robust a country's economic development, the more positive the correlation between R/S and benevolence and the more negative the correlation between R/S and power. Greater socioeconomic development in participants' countries also meant that R/S was associated with somewhat less valuing of traditionalism as well as less devaluing of self-direction. In sum, meta-analytic findings suggested that R/S is associated with valuing social harmony/institutions and devaluing personal/egoistic strivings, particularly in wealthier nations.

CAUSAL DIRECTION

Roccas and Elster (2014) hypothesized multiple causal links between values and R/S. People may choose R/S groups that embody their values. For instance, people who value tradition may choose R/S groups that adhere to traditional rituals as a way to act in accordance with their values, and people who devalue hedonism may see R/S as a way to curb hedonistic tendencies. One of the primary goals of R/S faiths is to shape values, and this may occur through teachings and encouraging behaviors consistent with R/S

value systems. Finally, a socialization pathway was proposed in which parents, peers, and schools may transmit both values and R/S belief systems to children.

LONGITUDINAL STUDIES

A couple of recent longitudinal studies may shed some light on the direction of effects between values and R/S. Hui et al. (2018) found that several values included in the Schwartz Value Survey predicted exiting faith over a three-year period in a sample of Chinese participants who initially identified as Protestant Christians. Specifically, as compared with people who stayed within their faith, people who exited endorsed lower baseline levels of conformity, tradition, and benevolence, and they endorsed higher levels of self-direction, stimulation, hedonism, and achievement. Following faith exit, only stimulation values increased among those who exited as compared to those who stayed. These results lend comparatively more support for the path leading from values to R/S than the opposite directionality.

Storm (2016) analyzed data from 48 countries across four waves of the European Values Survey and determined that country-level decreases in R/S over time were associated with increased valuing of autonomy over tradition but not associated with changes in valuing self-interest above social norms. These results were interpreted as suggesting that the increased secularization of Europe may result in changes to values, which would be consistent with the pathway leading from R/S to values.

SUMMARY

There was strong initial interest in links between values and R/S, and empirical evidence showed robust support for various concurrent associations. Though relatively little follow-up research has examined causal mechanisms or directionality, more evidence supports the path from values predicting R/S changes than from R/S predicting changes in values.

Social Attitudes: Morality, Prosociality, and Prejudice

Social attitudes such as morality, prosociality, and prejudice may be viewed traditionally as falling in the field of social psychology (Fiske et al., 2010), yet they are also conceptualized as individual differences at the level of characteristic adaptations in personality frameworks (McAdams & Pals, 2006; McCrae & Costa, 2008). This is due to their relatively high levels of environmental sensitivity, cultural malleability, and appearing relatively later in the life span than dispositional personality traits (Saroglou, 2015).

MORALITY

People generally want to be highly moral (e.g., Merritt et al., 2010). These desires may be reinforced by R/S teachings; faith traditions are universally concerned with morality, detailing the rewards of moral behavior and the punishments befalling those who act immorally (Preston et al., 2014). Thus, it is not surprising that broad measures of R/S are

consistently associated with self-reports of higher levels of moral self-image and adherence to moral values (for reviews, see, e.g., Ward & King, 2018a, 2018b). Yet, experimental and naturalistic studies yield equivocal evidence at best regarding the relations between R/S and moral behaviors (for a review, see McKay & Whitehouse, 2015).

These contrasting findings have sparked skepticism, and some scholars have posited that the associations between self-reported R/S and morality may be due to socially desirable responding (see Shariff, 2015). That is, R/S individuals may feel heightened pressures to report a highly moral self-image or may deceive themselves into thinking that they are more moral (Rowatt et al., 2002). A recent set of studies addressed this issue by testing whether measures of socially desirable responding and personality traits accounted for the association between broad measures of R/S and multiple self-report measures of morality (Ward & King, 2018b). Agreeableness and conscientiousness emerged as mediators, and these findings held in a bogus pipeline condition that reliably reduces socially desirable responding. These findings suggest that R/S is associated with self-reported morality due to links with personality traits rather than social desirability.

Another set of studies has helped to clarify the inconsistent experimental and behavioral findings relating R/S to morality (Ward & King, 2018a). Results showed that R/S variables (broad R/S, belief in God, intrinsic R/S) predicted measures of moral emotions, moral behaviors, and moral self-regulation only after experimental manipulations of moral self-image threat. Higher levels of moral identity mediated these effects. These findings suggest that R/S individuals may not typically exhibit higher levels of morality but rather that R/S individuals are likely to engage in moral behaviors when under moral threat as a way of protecting their high moral self-image.

PROSOCIALITY

World religions emphasize prosocial behaviors, which are defined as acts done in the aim of helping others at personal cost to oneself (Norenzayan & Shariff, 2008). Self-report surveys show consistent associations between broad R/S measures and various prosocial behaviors, such as making charitable donations, blood donations, and volunteering (for reviews, see Norenzayan & Shariff, 2008; Preston et al., 2014; Rose & Exline, 2012). R/S also predicts self-reported negative attitudes toward adultery and cheating on taxes (Preston et al., 2014). A more nuanced picture was given by a recent set of studies: Affiliative interpersonal style was positively related to positive valence measures of R/S, such as intrinsic R/S, spiritual transcendence, and finding meaning in faith, but negatively related to extrinsic R/S, perceiving God as negative or punishing, and R/S struggles (Jordan et al., 2014).

As noted previously, self-report findings may be called into question because of social desirability biases. Thus, other studies have complemented self-report assessments with behavioral measures. In one study, R/S conservatism was negatively correlated with self-reported trait vengefulness but uncorrelated with participant ratings of how vengeful

they would be in various scenarios that were hypothetically vengeance-inducing (Cota-McKinley et al., 2001). Other studies found that undergraduate participants who scored higher on intrinsic religiousness tend to report lower aggression and vengefulness; however, intrinsic R/S did not predict behavioral measures of retaliatory aggression (Greer et al., 2005; Leach et al., 2008). A set of experimental studies showed that self-report measures of R/S broadly conceived and R/S fundamentalism were related to higher levels of affiliative interpersonal style assessed through behavioral and implicit measures; however, these results only held when affiliation targets came from the same R/S tradition (Christian) as the participants (Van Cappellen et al., 2017). In sum, behavioral findings paint a less positive picture of R/S prosociality.

Priming methods have also been used extensively to study the relations between R/S and prosociality. In experimental priming studies, a stimulus is presented passively for a short period of time. The prime may be delivered in such a way as to go undetected consciously (e.g., implicit or subliminal primes), but this is not a necessary condition (e.g., explicit primes). In R/S priming studies, the stimulus is of course R/S in character; primes can take the form of R/S words (embedded in text or audible), R/S pictures, or using R/S contexts as the setting for a study. A recent meta-analysis (Shariff et al., 2016) of 25 studies that employed implicit, subliminal, and explicit R/S primes found robust effects on prosocial behaviors across all participants ($d = 0.18$) and particularly strong effects for R/S believers ($d = 0.27$). The authors suggested that priming may work by activating R/S beliefs, which most likely contain the maxim of helping others. This interpretation received support in a recent set of priming studies showing that R/S primes caused more magnanimous behaviors only among people who held R/S beliefs that emphasized magnanimous ideas (Schumann et al., 2014).

The above findings suggest for the most part that R/S may promote a prosocial identity and concerns with prosociality, and that R/S primes may prompt helping behavior by those with R/S beliefs that emphasize prosociality. However, these findings are qualified by behavioral evidence that R/S prosociality may not extend into situations that tend to prompt vengeful or retaliatory behavior, or when the target of helping is from an R/S outgroup.

PREJUDICE

Prejudice may be defined as negative evaluations and treatments of a person or group, as well as withholding positivity (Hunsberger & Jackson, 2005). Allport (1954) is credited with recognizing the contradiction that aspects of R/S may be tied to higher levels of prejudice as well as to higher levels of morality and prosociality. Researchers have struggled to reconcile these opposing realities, and prior reviews have dealt with the topic extensively and thoughtfully (Batson & Burris, 1994; Hood et al., 2018; Rowatt et al., 2014). We therefore discuss some general findings in this area and highlight some more recent developments.

Meta-analytic findings showed relations between different dimensions of R/S and different types of prejudice. Black-White racial prejudice showed small, positive associations with extrinsic R/S and fundamentalism, and small, negative associations with intrinsic R/S and a Quest R/S orientation (Hall, Matz, & Wood, 2010; Whitley Jr, 2009). Antihomosexual attitudes showed small, positive associations with broad R/S measures and intrinsic R/S, and small, negative associations with Quest orientation (Whitley Jr, 2009). The most consistent meta-analytic findings are the strong, positive associations between antihomosexual attitudes and fundamentalism, and the strong, negative associations between antihomosexual attitudes and quest orientation (McClellan et al., 2011; Whitley Jr, 2009).

The previous version of this chapter focused on relations between prejudice and intrinsic/extrinsic orientations, yet there has not been much recent research on these topics. Thus, our current discussion centered on more recent research looking at fundamentalism and Quest as predictors of prejudice. See Rowatt et al. (2014) for an extensive consideration of different theoretical frameworks relating prejudice to R/S.

It has been proposed that fundamentalism is linked to traits (e.g., low openness to experience), cognitive styles (e.g., high need for closure), and values (e.g., traditionalism and right-wing authoritarianism) that are associated with higher levels of intolerance for dissimilar others (for a review, see Brandt & Van Tongeren, 2017). This is termed the “selective prejudice model of fundamentalism”: This model predicts that people with highly fundamentalist belief systems will hold negative views toward dissimilar others and favorable views toward similar others, whereas it predicts that people scoring low on fundamentalism should show more moderate views toward both similar and dissimilar others (e.g., Blogowska & Saroglou, 2011). This model was tested against a new model, termed the “religious values conflict model,” which predicts that both high and low fundamentalists should hold negative views toward others with dissimilar R/S beliefs and values (Brandt & Van Tongeren, 2017). Across a set of experimental studies, findings supported the religious values conflict model, as both high and low fundamentalists held negative attitudes toward dissimilar others.

Meta-analytic results suggest that Quest seems to work in the opposite fashion of fundamentalism, potentially because the open-mindedness characterizing the Quest orientation to R/S matters may extend to views about dissimilar others (Rose & Exline, 2012). Findings from recent studies suggested that people with high levels of Quest may even prefer members of R/S outgroups to R/S ingroups (Van Tongeren et al., 2016). The authors gave a number of explanations for these results. One possibility is that learning about people from other R/S traditions may provide meaning and enjoyment, which leads to higher levels of liking. Other possibilities are based on the idea that people with high levels of Quest dislike members of their R/S ingroup. People with high levels of Quest may feel judged by R/S ingroup members for espousing beliefs and values inconsistent with traditional R/S teachings, or they may dislike members of their R/S ingroups who they perceive as adhering rigidly to dogmatic beliefs.

The world is rife with examples of various types of prejudice stemming from R/S beliefs, and so we expect that prejudice will continue to be a hot topic among R/S researchers. More nuanced understanding of extensively researched topics such as fundamentalism may continue to emerge, and we encourage more research on Quest due to its potentially positive effects on tolerance. Other areas that are attracting growing interest are prejudice against members of the transgender and gender-variant communities (Campbell et al., 2019) and prejudice against immigrants and refugees (Deslandes & Anderson, 2019). Both reviews cited give nuanced pictures of the relations between R/S and prejudice toward those groups. Given the current global political climate, it is hard to overstate the importance of this research.

Narrative Identity

R/S is a prominent source of meaning for many people (for a review, see Park, 2013). People may look to R/S teachings to gain a better understanding of how they fit in the grand scheme of existence, and they may use R/S to organize their goals and behaviors and to gain insight into their relationships with other agents, both human and supernatural. Put simply, people may derive a sense of who they are, or their identity, from R/S.

Where meaning and identity are concerned, there is a story, or a narrative. People use narrative ways of thinking to make sense of their lives; narrative thought organizes events, situations, and behaviors through story devices such as plot, themes, scripts, characters, structures, and various other characteristics of narration (Bruner, 2004; McAdams, 1993). A person's autobiographical narratives, or life stories, bring together the remembered past with the experienced present and anticipated future into a coherent narrative identity that theoretically provides meaning, unity, and coherence to life (McAdams, 2003).

Narrative identity is a layer of personality related to but distinct from traits and characteristic adaptations (McAdams & Pals, 2006). Personality research on narrative identity has taken off over the past two decades or so (Adler, 2019). It seems that narrative identity and R/S would be a natural research fit due to their central concern with meaning-making and because narrative measures may capture the idiosyncratic and complex nature of R/S life better than traditional survey measures (E. Hill et al., 2015; Laird et al., 2017). Yet such work has only just begun to take shape. Because there have been few narrative studies, we review findings from individual studies using quantitative and qualitative methods in considerable detail.

Quantitative Methods

Narrative identity research in personality is typically conducted by asking participants to generate descriptions of scenes or events in their lives (McAdams & Manczak, 2015). Prompts are given to elicit descriptions of central characters, psychological experiences (i.e., ABCDs) during the event, and the meaning of the event in the greater context of a person's life. Narrative researchers have developed many reliable and valid methods to

quantify aspects of life stories, such as narrative coherence and complexity, emergent themes, affect, and values (Adler et al., 2017). Typically, coders rate narratives on such dimensions independently using the same set of objective criteria; for example, narrative coherence may be rated on a scale from 1 to 4, with higher numbers reflecting more coherence. Coders' quantitative ratings are compared to establish reliability, and the ratings may be correlated with theoretically relevant variables to establish predictive validity.

A couple of studies applied quantitative methods to examine relations between R/S and politics in the life narratives of 128 midlife, American adults (Hanek et al., 2011; McAdams & Albaugh, 2008). Christian political conservatives imagined a world in which they did not believe in God or become involved with faith as being chaotic, lacking order, and governed by impulses (e.g., sexual, addictive) that would be destructive to social order. Conservatives emphasized praise and thanksgiving in their prayers and asked God for guidance and forgiveness. In contrast, Christian political liberals imagined a world without God or faith as empty, barren, and lacking in meaning, and their prayers were characterized by asking God to provide for others in need. These findings suggest that American Christian conservatives see God as helping to maintain peace and control, whereas their liberal counterparts see God as a provider, both psychologically and materially, for themselves and others.

Qualitative Methods

Qualitative methods have been used to identify, describe, and interpret emergent narrative themes. Initial qualitative studies have typically included small sample sizes (less than 30 participants), likely due to the time-intensive coding processes involved.

A couple of studies have examined general R/S themes in specific populations. A study of 18 Christian emerging adults examined themes occurring in interviews that included questions about conversion to Christianity, perceived R/S experiences with God, attachment to God, and R/S practices (Bailey et al., 2016). People talked about R/S as being both positive (e.g., inspiring authenticity and maturation) and negative (e.g., fluctuating and insecure attachment patterns). Some participants, labeled spiritual exemplars, conveyed narratives with high degrees of ownership of their R/S faith, connection to others in R/S communities, and courage to face pain in their R/S lives. One study identified general R/S themes present in interviews with 20 people one year after they received a cancer diagnosis (Uwland-Sikkema et al., 2018). Some people talked about R/S spontaneously throughout responses to the interview questions. Others talked about R/S only when prompted, and still others denied making R/S meanings. These findings suggested that R/S meaning-making is present to different degrees in people's life stories pertaining to living with cancer.

Other qualitative studies have gone beyond identifying R/S themes to look at patterns of R/S changes. One study conducted interviews with 10 Christian women who had

experienced traumas (de Castella & Simmonds, 2013). Questions prompted for various topics such as changes in R/S overall, changes in R/S practices, how R/S potentially contributed to recovery, and R/S growth. Findings suggested that participants perceived that their distress initiated a meaning-making process characterized by themes of personal and R/S growth, strengthening of R/S beliefs, and healing. A study of 27 Israeli adults reporting R/S changes outside the context of institutionalized religions used an interview to ask several questions about the process of change (Russo-Netzer, 2017). Findings showed that people use both internal resources (e.g., awareness, choice, and courage) and external resources (R/S peers, teachers, and perceived supernatural experiences) to support their R/S changes.

Cross-Cultural Research: A Vision for the Future

The cultural effects on narrative identity are perhaps more profound and pervasive than cultural effects on traits and characteristic adaptations (see McAdams & Guo, 2017). Culture, as a shared meaning system including norms for behavior, belief, ways of thinking, and life patterns, both presents options for the kinds of stories that can be told and potentially sets guidelines for the ways that life can be imagined. Is the story in accord with prevailing trends, or does it step outside conventions? Is the story “good” or “bad”? It is within the context of culture that one’s life story is evaluated.

Cross-cultural research on narrative identity is thriving (see McAdams & Guo, 2017), as is cross-cultural work on R/S (see K. A. Johnson & Cohen, 2014), but these topics have not yet converged. Pioneering work may examine the following questions (with examples provided to make the ideas more concrete). Do R/S life-stories emphasize different themes across cultures? For example, a study may examine differences between themes in Indian Hindus’ stories about one’s relationship with the divine as compared to the stories of American Hindus. How central is R/S to narrative identity in different cultures? For example, a study may explore the prevalence of R/S themes in the life stories of people from more secular as compared to more R/S countries. Do immigrants’ life stories about R/S change over time to more closely resemble the R/S narratives of people from their new culture, and do differences in the cultural assimilation of R/S narrative identity have important implications? For example, research could examine whether Chinese Christians who immigrated to the United States begin telling R/S life stories that are similar to people in their new churches. If they do, does that predict stronger feelings of social connectedness? And if not, could feelings of isolation result? These are just illustrative examples of some of the basic questions that could provide a foundation for cross-cultural research on narrative identity and R/S. Studies pertaining to these and other questions may contribute vital information regarding how people from different cultures and faith traditions incorporate R/S into identity.

Summary

People use R/S to make meaning and perhaps find a sense of ultimate meaning, in their lives. Narrative identity research has the potential to provide unique understanding of these processes, and nascent research has already revealed some intriguing findings across diverse samples. Though this work is inherently time-intensive, we hope that this is factor does not prohibit studies from using mixed methods (combining quantitative and qualitative methods), larger sample sizes, and cross-cultural samples to answer interesting and important questions.

Future Directions

The future of research on personality and R/S is bright. We have little doubt that studies will continue to make incremental progress on existing topics. A few novel areas are ripe for empirical study.

First, studies may examine dynamic personality and R/S processes. Most personality research on dispositional traits obtains global assessments at one time only and examines between-person covariation of traits and other variables. In contrast, dynamic personality approaches obtain ratings of personality states (e.g., Big Five states), which are manifested in more contextualized circumstances or situations over relatively shorter time frames, such as minutes, hours, and days (Fleeson, 2001). By assessing states many times over the span of weeks or months, researchers are able to assess within-person covariation. R/S research has just started to employ dynamic approaches (Hardy et al., 2014; Kashdan & Nezlek, 2012). A dynamic approach to personality and R/S may relate personality states to R/S states within people. For example, studies could examine whether the between-person relationship characterizing openness to experience and spirituality exists at the within-person level; that is, do more open states relate to more spiritual experiences within individuals? Such studies may be able to yield insights on how personality and R/S function over time at the level of the individual.

Second, research may extend the work on R/S struggles beyond the level of dispositional traits. Studies may examine relations between R/S struggles and various characteristic adaptations or assess R/S struggles at the level of narrative identity. At the level of characteristic adaptations, we believe that values may have clear links to R/S struggle dimensions. For example, R/S individuals who hold values that are in contrast with those emphasized by their faith traditions may be more likely to experience interpersonal struggles with other R/S individuals or institutions. People who have extremely high value standards might be more likely to experience moral struggles due to difficulties adhering to rigid behavioral standards. For narrative identity, we think it would be interesting to have participants convey narratives regarding their R/S struggles, how they developed over time, and their potential resolution. Researchers could code aspects of narratives using quantitative methods and see whether such aspects predict important variables above and beyond self-report measures of R/S struggles. Qualitative methods

could generate rich, descriptive portraits of how people incorporate R/S struggles into their narrative identities.

Third, and relatedly, research may continue to make progress on studying R/S in narrative identity more generally. There are large bodies of research looking at relations between R/S aspects with traits and characteristic adaptations, but we know very little about how people make sense of R/S in their life stories. Individual differences in R/S narrative identity may have important implications, as research in personality has yielded a robust body of work showing how narrative characteristics predict well-being above and beyond other personality variables (Adler et al., 2016).

Conclusions

R/S are integral parts of individuals' lives, and so understanding individual differences in R/S ABCDs should be a central aim of personality psychology. This chapter has covered a tremendous amount of ground, which we believe is a testament not only to the vastness of the fields of personality psychology and the psychology of R/S but also to the growing amount of interest in examining connections between these areas. Indeed, some of the future directions we imagined in the first version of this chapter have been realized. These include studies examining mediators of genetic effects (e.g., Kandler & Riemann, 2013), aspect-level research on traits and R/S (e.g., Chang et al., 2015), and research characterizing R/S motives and goals (e.g., Schnitker & Emmons, 2013). New areas of inquiry have sprung up over the past decade, such as behavioral genetic research on R/S changes, research on traits and struggles, and narrative identity work. The breadth of research may seem to resist neat and simple summarization, yet we believe that the framework provided by McAdams and Pals (2006) presents a way to coherently organize the different strands of work around a parsimonious set of unifying principles.

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Notes

1. Bradshaw and Ellison (2008) provide an excellent summary of behavior genetics methodology. D'Onofrio et al. (1999) discuss assortative mating and the challenges it presents to the behavior genetic study of religion.
2. Narcissism may be viewed as residing at the negative pole of the honesty-humility dimension, and studies have shown that narcissism relates negatively to intrinsic R/S but positively to extrinsic R/S (see Daghigh et al., 2019). These findings suggest that more narcissistic individuals may be motivated to engage in R/S more for reasons related to external gain (e.g., status and influence) than for inherently R/S reasons (e.g., getting closer to God).
3. Traits may also be studied at a broader level than the Big Five (or Big Six), with psychometric work revealing two higher-order factors: The first factor (referred to by names such as alpha, communion, and stability) is marked by the shared variance of agreeableness, conscientiousness, and emotional stability; the second factor (referred to as beta, agency, or plasticity) is marked by the shared variance of extraversion and openness

(De Raad, 2009; DeYoung, 2006; Digman, 1997). One study of nearly 200,000 people across 11 different countries found that communion predicts R/S more strongly in countries with higher levels of R/S, whereas agency predicts R/S more strongly in countries with lower levels of R/S (Gebauer et al., 2013). The authors hypothesized that more communal individuals meet needs for assimilation through R/S, whereas more agentic individuals meet needs for differentiation through R/S.

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The Numinous Motivation Inventory: A Second-Generation Measure of Spirituality

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Abstract

Over the past 25 years, I have been engaged in a program of research aimed at determining whether an empirically sustainable definition of the numinous could be obtained. The first step in this process was the development of an empirical model for establishing the viability of a numinous construct. From there, this epistemology was developed in light of an ontological model I created which outlined the theoretical origins, function, and expression of numinous constructs in our mental life. This ontological model gives direction and focus to the development of explicit measures of the numinous. The Numinous Motivation Inventory (NMI) benefits from these two developments and represents a second-generation measure of numinous functioning. The purpose of this chapter is to present the conceptual foundations and empirical development of the NMI. Its psychometric integrity and empirical predictiveness demonstrates its value over a previous generation measure. The value of the numinous, as operationalized through the NMI, is outlined and its potential for expanding the field discussed.

Key Words: spiritual assessment, psychology of religion and spirituality, Big 5 and spirituality, the numinous, mental health

Measurement is an essential aspect of all scientific endeavors. Being able to accurately assess the phenomenon of interest is foundational to the testing of relevant models, assessment of the trait in individuals, and documenting the ultimate utility of the construct in the mental life of people. Measures operationalize and quantify constructs and provide the venue through which the scientific process can move forward. The psychology of religion and spirituality (PRS) has never suffered from a lack of measures (see Hill & Hood, 1999), and the plethora of instruments is a testimony to the interest assigned to this area by researchers. However, the field has its share of issues and limitations, including a lack of an organizing definition that can integrate findings across studies and measures (Gorsuch, 1984) and weaknesses in construction techniques (Kapuscinski & Masters, 2010). Nonetheless, the diversity of scales supports a wide-ranging scientific enterprise. The purpose of this chapter is to introduce the Numinous Motivation Inventory (NMI), a new instrument that capitalizes

on recent theoretical and empirical developments in the field. Rather than just another measure in a broad inventory of scales, the NMI is considered to be a second-generation scale, one that builds on advances already made in the field.

This chapter will accomplish three things. First, it will overview research using the Assessment of Spirituality and Religious Sentiments (ASPIRES; Piedmont 2010, 2012) scale, a trait-based measure of religious and spiritual motivations based off of the Five-Factor Model (FFM) of personality (Digman, 1990; McCrae, 2010; McCrae & Costa, 1997; McCrae & John, 1992). The ASPIRES represents the first-generation measure of the numinous. Second, working from the results of this research, an ontological model detailing the psychological origins, importance, and motivations inherent to spiritual functioning is presented. Finally, the NMI's development and validation data are presented to document how and why this measure represents a second-generation scale. The excitement around this measure is that it begins to demonstrate a unified empirical direction the field can move toward in order to create a cumulative database of findings.

Overview

Building on more than 25 years of research experience with the ASPIRES scale (Piedmont, 2010), much has been learned about the psychological nature of spiritual and religious motivations (or what I will refer to as the numinous). Originally, the ASPIRES was developed to assess numinous qualities as trait-based motivational constructs (see Piedmont, 2010, for an overview of the development of this scale). This approach identified several important empirical requirements about what a spirituality scale would need to represent in order to be considered a viable, distinct psychological construct. These requirements included (see Piedmont & Wilkins, 2020, for a review of all nine empirical criteria):

1. Spirituality would need to be understood as completely psychological in nature, so it would be independent of any theological/spiritual/denominational influence.
2. Spirituality would be understood as a universal, individual-differences construct appropriate for understanding all individuals, regardless of faith status, denominational membership, and cultural worldview.
3. Spirituality would be a trait-based construct that could be examined, understood, and validated in a manner consistent with other trait-based constructs
4. Spirituality is understood as an intrinsic motivation that drives, directs, and selects behavior. As such it would be measurable across different information sources (e.g., self-report and observer ratings) and predict a wide range of life outcomes.
5. Spirituality would represent a unique, independent dimension of personality that does not overlap with the domains of the FFM of personality and thus would provide incremental validity in predicting relevant outcomes.

6. As a basic source of motivation, Spirituality would evidence a causal predictive influence on psychosocial outcomes that is independent of other personality motivations.

A large literature has accrued that supports the validity of these assumptions (e.g., Fox & Piedmont, 2020; Piedmont et al., 2020; Piedmont & Wilkins, 2020). The ASPIRES was found to be independent of the FFM domains; generalizes across cultures, languages, and religious denominations; evidences cross-observer convergence; incrementally predicts, over the FFM, a wide range of salient psychosocial outcomes; and has been shown to have a causal influence on one's psychological system (Piedmont et al., 2009).

The empirical robustness of the ASPIRES scales is one reason for its tremendous success in both research and clinical contexts. It is the only scale with a validated observer rater form, and both long and short versions. One of the important contributions of the ASPIRES is its representation of spirituality as a sixth dimension of personality. By being a well-defined empirical construct, the dimensions of the ASPIRES clearly outlined what qualities can be considered "spiritual" and which qualities should not be considered "spiritual" in nature. Such empirical parsing provides greater clarity and interpretative depth to the domain of numinous motivations. A focused, clearly defined understanding of what the numinous is allows for greater predictive precision and enhanced clinical insight. Research using the ASPIRES has demonstrated its value in accomplishing these tasks, which in turn has moved the field forward (e.g., Griffiths et al., 2006; Piedmont, 2004).

The NMI stands on the shoulders of the empirical accomplishments of the ASPIRES and aims to enhance the field's ability to accurately assess the essential numinous motivations of the individual. The NMI takes a more proactive approach to identifying and measuring important numinous dimensions. The instrument developed out of a psychological ontology of spirituality that I developed (Piedmont, 2015; Piedmont & Wilkins, 2020). The ASPIRES project was inherently exploratory, attempting to identify and empirically bootstrap a numinous dimension that would generalize across denominations. Based on what was learned, the NMI project was more confirmatory in nature; it sought to confirm the value of predefined numinous constructs, identified by the results from the ASPIRES and enhanced by theoretical considerations from philosophers and theologians. The goal was to identify a set of higher-order numinous constructs that would evidence better predictive validity over the ASPIRES scales. Ultimately, the results from the NMI will be used to upgrade and improve the ASPIRES scales.

Background of NMI Project

The development of the ASPIRES represented an effort to determine if spiritual and religious constructs could be developed from a trait perspective. The big question to be answered at that time was, "what spiritual and religious constructs should be assessed?" Given the assumptions guiding the development of the ASPIRES (as indicated above), it

was important that all constructs would need to be independent of any specific theological or denominational perspective and also provide predictive value over and above the personality factors in the FFM. With little consensus at the time regarding how to define spirituality, care needed to be exercised in selecting potential dimensions. Also, it was clear that theological and metaphysical concepts permeated many discussions, even scientific ones, about the nature and role of spirituality. This was evidenced by critiques of assessment scales of the time: many reflected a main-line Protestant orientation in their items (Gorsuch, 1984). While such a bias created many significant limitations in the applicability of such scales to various populations, it could not be denied that religious perspectives were important and should be considered if one was interested in identifying an ecologically valid spiritual perspective. Religion and the many Wisdom Traditions provide very rich and engaging expressions of transcendence and humanity's ultimate nature. These insights and perspectives contrasted starkly with the drive-reduction, mechanistic models that dominate the social sciences.

The original research with the ASPIRES needed to walk a fine line. On the one hand, it wished to engage the Wisdom Traditions and explore the insights and understandings that they have acquired. But, the final goal was to harvest these ideas in a manner that stripped them of their metaphysical qualities and stressed their empirical properties. The major concern was whether such a transformation would render the resulting constructs useless and of little value. When removing the role of "grace," "spirit," "God," and "soul," among other concepts, from an understanding of what spirituality represents, would what was left be devoid of any useful psychological value? While it was clear that such a processed spiritual construct may have little relevance for theologians, it was hoped that there would still be something of psychological value. Given the focus on empirical methods, such a determination would be easily accomplished. As a result, our fundamental question has always been, "What are those internal psychological qualities that make religion and spirituality so important to us?"

A second issue related to the selection of the relevant spiritual constructs. Which ones should be employed? How should they be identified? What criteria should be used? Given the heavy Christian bias and the need to generate universal constructs, it was clear that a direct appeal to any one theological or denominational tradition would be insufficient. In order to overcome this problem, the decision was made to create a multifaith group of theological experts from a variety of religious traditions (Piedmont & Wilkins, 2020, provides a more detailed exposition of this process). A group of 10 individuals representing a variety of Christian backgrounds (e.g., Catholic, Lutheran, Baptist, and Quaker), Judaism, and Hinduism, both clergy and lay, were gathered to discuss spirituality. The aim of the focus group was to have the participants identify those spiritual qualities that are held in common across their various religious and theological traditions. Once the group began to identify these seemingly "universal" qualities, they were asked to write statements that could be used to assess these qualities in others. At the end of the session,

several dimensions were identified, and items acquired to assess them. These items, along with others I developed, were then given to a large sample along with measures of the FFM (Piedmont, 1999). Each of these items was examined using a predetermined empirical procedure that accepted items only if they were found to be independent of the FFM domains. These items were then factor-analyzed and three correlated dimensions emerged: *prayer fulfillment* represented the ability of an individual to create an internal, personal space that allowed them to connect with some larger, transcendent reality; *universality* reflected an understanding that life was unfolding in a meaningful, logical way and that all of life is bound together in this process; and *Connectedness* assessed the extent to which an individual created and maintained relationships with others (living and dead) across communities both close (e.g., family) and far (e.g., humanity). These three factors could be contained by a single, larger dimension that was labeled *spiritual transcendence* (see Piedmont, 2010, 2012).

As the research literature on the ASPIRES shows, this was a successful methodology for identifying a universal trait dimension. But, ultimately, this project was only exploratory in nature. It sought out a theologically diverse pool of individuals to provide guidance and direction to the ultimate selection of qualities to be assessed. There were no a priori assumptions or expectations to include any type of content. What emerged was simply a consequence of statistical analyses. Spiritual transcendence (ST) proved to be a useful construct and helped bring order to a broad, not-well-organized field.

The essential take-away result of research with the ASPIRES was that spirituality can be conceptualized as a psychological construct independent of existing personality dimensions and does have significant predictive value for the social sciences. While the three facets of ST should not be considered exhaustive of all spiritual constructs, the ASPIRES was useful in identifying constructs that are and *are not* spiritual (e.g., Piedmont et al., 2006). This is, perhaps, the most important outcome of work with the ASPIRES: it provided a focus and direction for working with numinous constructs. It, in a way, mapped out the personological boundaries that define what is spiritual. Such a framing provided a useful rubric for linking together a wide range of theory and data across diverse areas. It quickly became clear that aspects of Terror Management Theory and fear of death, meaning-making and resilience, and existential crisis all shared features in common: They all addressed issues that defined a personological area that was linked to ST. The ASPIRES was a lens that focused and clarified our view of the numinous. Would the clarity provided by this measure enable us to delve deeper into this content area? The answer is “yes” and the NMI is the result of our efforts to do exactly this.

Note on terminology: our efforts in this entire research process was to create a psychological measure of spirituality. The goal of this research was not to prove any theological or denominational perspective. Rather, the intent was to identify a new dimension of personality functioning that would expand the social sciences’ view and understanding of

our mental lives. This endeavor has been, and is, all about psychology. As noted above, spirituality and theology are strongly intertwined concepts. It is difficult to separate the two because so much of how spirituality is understood has been shaped and defined by theology. This helps explain why so many scales are contaminated by specific theological perspectives. In fact, some (e.g., Moberg, 2002) have argued that the only effective means of understanding spirituality is to do so from the perspective of each religious denomination. There is no one single spiritual motivation; rather a plethora of spiritualities exist, each with its own nuances and dynamics. Clearly, this is not my approach. I believe that in order to help distinguish between psychology and theology, new terms need to be used that are meaningful for the social sciences and do not lend themselves to theological parochialism.

When discussing the psychological aspects of spirituality, I prefer to use the term “the numinous.” It is a useful term that has many advantages over current usage. First, the term has clear religious value. It was originally used by Otto (1958) to reflect aspects of the mystical experience: the awe, wonder, emotional integration, and essential ineffability of encountering a divine reality. Second, it is a term that has been used psychologically by Erik Erikson. The numinous represents one of the positive outcomes experienced at the first stage of psychosocial development: trust vs mistrust. For Erikson, a child develops feelings of the numinous (awesome, hallowed) as a result of a mother’s care and reliable concern for the needs of her child. She promotes and supports her child’s beginning sense of self-identity while also supporting the child’s ability to transcend their fears of aloneness and separateness (Erikson, 1977). This usage of the term reveals that our spirituality has its roots in the very beginning of our psychological lives and its presence influences all future development. Finally, the term includes many different elements to it and underscores the reality that there are many different parts to our “spirituality.” Therefore, the numinous represents a useful descriptive term for the domain of spiritual functioning; there are elements of transcendence, spirituality, religiousness (e.g., the prayers we say and the rituals we perform), and mysticism, among others, and the NMI will add another three qualities to this domain. The psychological pedigree of the term makes it more amenable to social scientists and does not, in such an obvious manner, involve any specific theological or metaphysical concepts. Relying only on the terms “religiousness” and “spirituality” is too limiting and restrictive and does not do justice to the large literature that has identified so many numinous constructs (e.g., Harris et al., 2018). As such, this term will be used to refer to all things spiritual.

Developing the Ontological Model Underlying the NMI

One of the most daunting challenges for the field has been to identify a consensual definition of what the numinous represents. This process has not produced any such concordance in the field (e.g., Harris et al., 2018), and some even argue that this is an unattainable, and unnecessary, goal (e.g., Barrett, 2017; Oman, 2013; Paloutzian & Park, 2021). I have

argued that this is a truly tragic reality for the field (Piedmont, 2014). For if we cannot agree on what the object of our efforts is, how can we create a unified, cumulative database for the field (see Hill et al., 2000)? One reason for the elusiveness of this goal is that the field has not developed a useful psychological ontology for spiritual dynamics. An ontology is a conceptual framework that outlines the origins, processes, and dynamics that surround the development and expression of numinous motivations. Although spirituality is most commonly associated with religious traditions and theological models, very little has been done to discuss and outline the psychological underpinnings of these dynamics. Where does the numinous find its origins within our mental system? Is it an intrinsic quality that motivates us to seek broad, transcendent goals? Is it an acquired sentiment, learned from our cultural heritage and upbringing? Is the numinous a cultural script or does it represent a core sense of self that drives us through life? These are important questions for understanding the numinous. Having such a model(s) helps to direct the scientific enterprise in this area.

By having an ontological model, the field can have a direction for addressing key questions, such as why do we wish to study the numinous in the first place? What is its unique role in the psychic system? How does the numinous intersect with other aspects of our psychological world? Answers to these questions provide the foundation for creating measures to capture these qualities. After all, without knowing why the numinous is important and what role it plays in our lives, then efforts at developing measures to assess these qualities becomes, at best, a hit-or-miss undertaking. The ASPIRES was very useful in showing that the numinous could be understood as an organismic, motivational construct that drives, directs, and selects behavior. Work with the ASPIRES demonstrated that the numinous can be considered an independent dimension of personality, with useful incremental predictive validity. Further, the numinous was shown to be strictly psychological in nature because scores on the ASPIRES were found to be reliable and valid across, religious denominations (e.g., Piedmont & Leach, 2002; Joshanloo, 2012), cultures (e.g., Rican & Janosova, 2010), and languages (e.g., Piotrowski et al., 2021). Clearly, the numinous is a universal motivation.

With these data in hand, there was a need was for an ontological model that reflected these findings and also developed theoretical perspectives on the role and value of the numinous psychologically. As a result, I developed an ontological model that attempts to flesh out the value of the numinous for psychological work (Piedmont, 2015; Piedmont & Wilkins, 2020). At the heart of my efforts was the work of Paul Tillich (1952), a theologian who takes a very psychological perspective to his work. In describing the ability of human beings to assert themselves and find personal resilience in a life that is known from the start to be finite and fleeting, Tillich identified three important, inherent qualities that define our being: infinitude, worthiness, and meaning. To become fully human, we need to address these issues and concerns and find some type of accommodation with them. Humans are the only species that knows from the beginning of our lives that we will someday die. Knowing this, our spirituality can be found in our efforts to create meaning, coherence, and depth to the life we are leading. These three qualities are the issues we all

need to address in order to find that sense of wholeness and value. Our efforts in these areas can lead to successful outcomes which provide us with a sense of resilience, emotional integration, and personal well-being. Less successful outcomes can serve to impair significantly our ability to relate to others, our communities, and ourselves.

From the perspective of the NMI, the qualities of infinitude, meaning, and worthiness were viewed as essential motivational elements of our psychological world. It was hypothesized that these qualities were uniquely human motivations that define us as a species (Piedmont, 2015; Piedmont & Wilkins, 2020). We are all concerned with the need to find personal durability for our own efforts (infinitude). We need to find ways to extend our lives beyond our lifetimes. Whether this is through having children, being productive in our work (e.g., writing, creating, and inventing), or making other contributions (e.g., philanthropy and creating personal/financial legacies), the goal is to create a lasting presence for ourselves in this world. Meaning is another obvious aspect of who we are. We are a species that looks for and responds to patterns in nature. But more than this, we seek to create for ourselves a larger understanding of the universe and our place in it. We need to feel useful and productive, and we accomplish this by identifying a purpose, role, or value to our actions. Finally, because of our need to create ultimate meaning, do we feel affirmation and support for the work we do, the lives we lead, from the universe as we understand it (worthiness)? Despite our limitations, are we deemed acceptable and worthy? Negotiating these motivations is at the heart of our humanity for Tillich, and as such form the basis of our numinous lives.

These three qualities are at the heart of the NMI. I saw these as essential motivations that drive our spiritual and religious actions. They also were portrayed as having the essential characteristics of a numinous variables: (a) they were universal to all people; (b) they defined our ultimate, human nature; (c) they represented the highest level of human motivation, unattached to the other dimensions of personality (e.g., FFM). Given what was learned from the ASPIRES, I developed definitions of these concepts that were closely related to the numinous as understood psychologically. These three qualities were defined as follows:

Infinitude vs. Nonbeing

The awareness of our mortality creates within us a drive to give substance and continuity to our lives. We seek to create some type of durability to our efforts; a legacy that will continue to reverberate into the future. We look to immortalize our identity. One way is through immortality, another is through creating security for ourselves—protection from threats to our being. The need to control, direct, and master events, processes, people, and so on gives rise to a sense of durability.

Meaning vs. Chaos

Predictability is important to us. There needs to be patterns that we can rely on, interpret, and exploit to our benefit. We actively seek to create patterns on top of those that already exist. These patterns can be explicit, such as our own personal knowledge and wisdom

of life. They can also be implicit in that when we cannot explain, we hope that there are larger patterns operating that provide a meaning we cannot see. There needs to be purpose and direction to all things. Although doubt is an important mechanism by which we are told to improve our meaning-making abilities, too much doubt can crumble our meaning structures. A life without meaning is a life not worth living.

Worthiness vs. Condemnation

Although we recognize our own imperfections and failings, ultimately each of us assesses our worth and value within the entire universe as we conceive and understand it. This creation of ours exists as its own reality that calls on us to make a statement of our own worth and value. In return, we seek acceptance as being worthy. We seek acceptance from the totality of our entire sense of meaning, despite our own perceived unacceptability. There is security in feeling worthy; there is emptiness in feeling condemned.

There are two very important implications for these motivations. First, these motivations arise from the core of our physical being: our neocortex. Human beings have the most powerful brains on the planet, allowing us to dream and imagine. We are able to learn and create, shaping the planet to our desires and aspirations. Humans are the only animals that are untethered from instinctual scripts. We are able to operate in almost unlimited ways, to move unfettered across environments, act in ways that seem to contradict the animal kingdom's focus on survival. It is this brain power that creates a psychological space within us that is the home of our numinous motivations. Thus, the numinous represents psychological qualities that uniquely define the human condition. These qualities, while working with our other "animal" instincts, are independent from them. The second implication of this ontology is that these qualities are inherent to our existence and orient us to the world we inhabit. As such, this internal space creates a readiness to experience and a willing to seek out transcendent-oriented events. This assumption frames the essential question the social sciences need to ask in studying the numinous, "What are those psychological qualities that make spirituality and religion so important to us?"

Empirical Criteria for a Spirituality Measure

With these definitions in hand, I assembled a group of graduate students who formed what came to be known as the Numinous Assessment Group (NAG). Working from the above definitions and a basic set of items I wrote; the team began to create additional items to reflect each of these qualities. Together, we strove to write both positively and negatively reflected items for each dimension. These items were iteratively tested in sequential subject groups. The following empirical criteria for keeping an item were applied:

1. Items had to have low to zero correlation with markers of the FFM.
2. Items had to have moderate correlations with the ST scales from the ASPIRES.

3. Items that survived the first two criteria were then entered into a joint factor analysis with the ST scale and markers of the FFM. Items had to load either on the dimension containing the ST scales, or on a factor that was independent of both the ST scales and the FFM marker scales.
4. Items remaining were then vetted to ensure that they did not contain any explicit reference to a theological or denominational position or contain language that reflected a more general Western view of the transcendent (e.g., reference to a “god” or specific supreme being).
5. Scales were balanced for acquiescent responding.

Overall, this process took four iterations where new items were written to replace those not meeting the above criteria and/or impeding the recovery of a clear factor structure. A final set of 22 items was obtained that met all the above criteria. These items were then given to a large, nationally representative sample of adults to complete. Also developed was a rater version of these scales. This version used the same items as the self-report with the substitution of the term “He/she” for the term “I.” Individuals in the final validation sample were asked to rate someone they knew on this version of the scale.

The intention behind the development of this scale was to identify numinous variables with greater conceptual precision and empirical predictiveness than those dimensions already contained in the ASPIRES. One characteristic of our research has been always to demonstrate the incremental predictive validity of our numinous constructs over the FFM dimensions. It is important that one can have confidence that the numinous variables are not merely stand-ins for other, already existing psychological constructs. For the NMI, we added another bar to cross: to demonstrate that the NMI dimensions evidence incremental predictive validity over *both* the FFM domains *and* the ST facet scales. Finding such evidence supports the claim that the NMI is a second-generation measure of the numinous. It benefits from the earlier empirical work which led to a better-informed theoretical orientation that culminated in an improved ability to identify, define, and measure the numinous. Because the NMI only measures aspects of spirituality, combining the NMI with the ASPIRES provides a comprehensive assessment of both the spiritual and religious aspects of the numinous.

Psychometric Properties of the NMI

The information presented in this section was obtained from a sample of 1,626 individuals. Participants were MTurk workers (an online, constructed community of individuals who will work on projects for a fee) who volunteered to complete this task and were compensated \$1 for their efforts. These individuals were from all 50 states and ranged in age from 18 to 81 years. These individuals completed several scales as well as the self- and observer rating forms of the NMI. Table 11.1 presents a description of the normative sample. More detailed information can be found in the technical manual (Piedmont, 2017).

Table 11.1 Sample Characteristics for Both the Self-Report and Observer Samples				
Overall Sample:	<i>N</i> = 1626 Ages: 18–81	Men = 659 Mean = 37.08	Women = 959 Mean = 34.00	Missing: 8
Gender by Age:	Age Category 18–25 26–45 46+ Mean Age:	Men 99 426 134 36.12	Women 145 579 235 37.85	Missing 7 1 0 23.00
Ethnicity:	African American: American: Arab: Asian: Caucasian: Hispanic: Hawaiian/Pacific Islander: Multiethnic: Other:	117 12 2 113 1215 98 1 59 9		
Religious Affiliation:	Agnostic: Atheist: Baptist: Buddhist: Catholic: Earth-Based: Episcopal: Evangelical: Hindu Indigenous Jewish	310 (19.1%) 181 (11.1%) 154 (9.5%) 28 (1.7%) 242 (14.9%) 8 (.5%) 14 (.9%) 50 (3.1%) 22 (1.4%) 2 (.1%) 22 (1.4%)	Latter Day Saints: Lutheran: Methodist: Muslim: Pagan: Pentecostal: Presbyterian: Spirit not Religious: Other Christian: Other faith Tradition:	27 (1.7%) 33 (2.0%) 54 (3.3%) 18 (1.1%) 28 (1.7%) 34 (2.1%) 28 (1.7%) 163 (10.0%) 188 (11.6%) 20 (1.2%)
Rater Gender: Rater Age:	Men = 863 Range = 15–90	Women = 756 Mean = 37.85	Missing = 7 Median = 34	
Rater Gender by Age:	Age Category 18–25 26–45 46+ Mean Age:	Men 139 534 187 36.00	Women 127 410 212 38.33	Missing 3 4 0 33.86
Time Known Subject (Months):	Range = 2 - 6000		Mean = 152.12 (12.68 years)	
How Well Known:	1 “not at all”; 7 “very well”		Mean = 6.17	

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As can be seen, the average age was approximately 37 years and subjects were predominantly Caucasian. There were a variety of faith traditions, with most participants being Christian. Interestingly, the most numerous categories were for the Atheist and Agnostic groups, comprising close to 30% of the sample. Participants were drawn from all

50 states. Concerning their ratings, most knew their targets well (mean familiarity rating of 6.17 on a 7-point scale) and for a long period of time ($M = 12.68$ years).

Normative Data

The NMI measures three correlated facets: Infinitude, Meaning, and Worthiness. There are eight items on the Infinitude scale (e.g., When I die, everything that I am will cease to exist (R), I believe this life is only one stage in a larger, eternal process), nine items on the Worthiness scale (e.g., I value myself, I am unlovable (R)), and five items on the Meaning scale (e.g., I am guided by my personal philosophy and/or faith, As a human being I am the pinnacle of creation). Detailed information concerning item content, normative values, and psychometric information can be obtained from the technical and interpretative manual (Piedmont, 2017). Items are rated from 1 “*strongly disagree*” to 5 “*strongly agree*.” Items are counterbalanced to control for the effects of acquiescence.

A 2(gender) by 3(age group: 18–25, 26–45, 46+) multivariate analysis of variance (MANOVA) was conducted using the three facet scales of the NMI as the dependent variables. A significant age effect (Wilks Lambda = 0.952, multivariate $F(6, 3220) = 13.40$, $p < 0.001$) was found. Univariate analyses indicated significant effects for all three of the NMI scales. Post hoc (LSD) tests noted that scores significantly increased with age: each of the three age groups were significantly different from each other. An inspection of the group means also indicated rising mean scores from the younger to older group.

A significant gender effect was also observed (Wilks Lambda = 0.977, multivariate $F(3, 1610) = 12.88$, $p < 0.001$). Univariate analyses indicated significant effects for the Infinitude and Worthiness scales. An inspection of the group means indicated that women scored significantly higher than men in each instance. Although not statistically significant, a similar mean-level pattern was found for Meaning. No significant age by gender effects were noted.

Similar findings were obtained when the NMI total score was examined. Significant age and gender effects emerged with scores significantly increasing with age and women scoring significantly higher than men. The presence of these significant age and gender effects demands that when scoring the NMI scales, it is necessary to compare scores by gender and age. It is recommended that the normative data provided in the manual be used to calculate T-scores. Such a transformation can help one to determine how similar obtained scores are to those in this normative data set.

It should be noted that the NMI also has an observer rating form. The need for such a version was supported by research using the ASPIRES and based on the working assumption that numinous constructs represent broad-based aspects of personality that find clear expression in daily behavior. These constructs are sufficiently distinct and salient that observers can readily identify them. Research has strongly supported this contention by demonstrating significant correlations between self-rated ASPIRES scores and scores obtained from observers (Piedmont, 1999; 2010). The magnitude of such convergence is like that found with the major personality dimensions of the FFM.

As such, observer ratings can provide useful information about the numinous aspects of individuals. Observer ratings can be utilized when working with couples, either for premarital evaluations or for marital therapy (see Piedmont & Rodgereson, 2017, for techniques for comparing self- and observer-ratings with couples). Ratings would also be useful in medical contexts where individuals may not be able to provide their own assessment either due to age or physical debilitation.

The manual provides normative information based on responses obtained from the rater data (Piedmont, 2017). As with the self-report data, scores obtained from the rater version should be compared to normative values, with respect to age and gender *of the person being rated*. Analyses of rating scores by age and gender revealed the same pattern of effects as observed with the self-report scores. Thus, it is important that these scores be standardized as well. Note that the normative values for the observer ratings are different from those obtained with self-reports. Different types of raters will generate different types of score distributions. One should *not* use self-rated normative data for evaluating observer ratings.

There are two important reasons that support the use of normed T-scores with NMI scales. First, examining overall mean level scores in a sample can indicate the extent to which that sample is consistent with the normative group's standing on these same dimensions. This can give the user a sense of the representativeness of his/her own sample. Second, the use of T-scores enables direct comparisons across self and observer data. Because scores are based on their own normative values, T-scores can be directly compared to one another. Thus, it can be determined whether raters observe the same *mean level* of numinous drive in targets as the targets themselves. The absolute value of the difference between the scores can be an index of interobserver agreement, with smaller differences indicating more convergence. T-score differences of 15 or more points will indicate a significant difference in ratings. The level of agreement does have interpretative significance.

Factor Structure

Self-reported scores from the 22 items of the NMI were subjected to a principal components analysis. Three factors were expected to emerge from the data and the scree plot indicated that three factors were appropriate. Three factors were extracted and obliquely rotated. Table 11.2 presents the results. As can be seen, all items loaded on their intended dimensions, with no significant secondary loadings. An examination of the factor correlation matrix indicated that only Factors 1 (Infinitude) and 3 (Meaning) were significantly correlated ($r = 0.52$). Thus, the NMI items evidenced the expected putative structure.

A similar analysis was also performed using the observer scores from the NMI. In this analysis, the 22 items were subjected to a principal components analysis and three factors were extracted and obliquely rotated. In order to determine whether the above normative structure could be recovered, these results were then rotated using an orthogonal Procrustean rotation. The above factor loadings were used as the target structure. Then, congruence coefficients were obtained to determine the extent to which the observer

Table 11.2 Principal Components Analysis Using an Oblique Rotation of the NMI Self-Report Items

NMI	I	W	M
I1	0.89	0.04	−0.16
I2	0.91	0.04	−0.01
I3	0.84	0.17	−0.04
I4	0.92	0.04	−0.06
I5	0.80	−0.05	0.18
I6	0.75	−0.08	0.16
I7	0.71	−0.05	0.23
I8	0.59	−0.07	0.31
W1	0.13	0.78	−0.11
W2	0.01	0.81	0.01
W3	0.08	0.81	−0.03
W4	−0.04	0.83	−0.01
W5	0.04	0.77	−0.06
W6	0.01	0.82	−0.00
W7	−0.04	0.78	0.06
W8	0.04	0.80	0.03
W9	−0.13	0.77	0.20
M1	−0.03	0.08	0.81
M2	0.03	0.02	0.86
M3	0.05	−0.13	0.81
M4	0.07	0.06	0.75
M5	0.08	0.07	0.54

Note. $N = 1626$. I = Infinitude; W = Worthiness; M = Meaning. Loadings above 0.40 are in boldface.

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structure mirrored the above normative structure. The factor structure of the observer rating version converged significantly with that found with self-reports; congruence coefficients were very high (0.96, 1.00, 0.93, and 0.97, for Infinitude, Worthiness, Meaning, and overall fit, respectively).

Internal Consistency

Alpha reliability coefficients were calculated for scores obtained for each NMI scale in both the self- and observer-ratings. Table 11.3 presents these values. As can be seen, all scales evidence high levels of internal consistency. These values indicate that items are capturing related concepts and with high-level precision.

Table 11.3 Alpha Reliabilities for the Self- and Observer Versions of the NMI

Scale	Self-Report α	Observer Report α
Infinitude	0.94	0.91
Worthiness	0.93	0.88
Meaning	0.85	0.81
Total Score	0.92	0.90

$N = 1626$.

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Validity Information

There are two important validity issues that need to be considered in evaluating the NMI. The first is to demonstrate that while the constructs captured by the NMI scales represent numinous/existential issues (convergent validity), that these dimensions are not redundant with qualities already identified within the FFM personality domains (discriminant validity). The second issue is of greater value: to demonstrate that scores from the NMI predict important psychosocial outcomes over and above any associations with the five major personality dimensions (incremental validity). To be useful, it needs to be shown that information from the NMI will increase our predictive abilities over existing constructs.

CONSTRUCT VALIDITY

One manner of documenting the validity of a scale is to demonstrate that scores correlate with scores from other measures that assess similar constructs. As noted earlier, the numinous represents a broad content domain containing a variety of constructs. As such, NMI self-report scores should converge with scores obtained from other related measures. In this sample, participants completed several measures of spirituality and religiousness: the ASPIRES, the Mysticism Scale, and the Brief Religious Coping Scale. NMI self-report scores were also correlated with measures of the FFM domains in an effort to examine discriminant validity. As noted earlier, numinous constructs represent personality dimensions that are independent of the FFM domains. Table 11.4 presents patterns of association.

As can be seen, the NMI scales of Infinitude and Meaning correlate strongly with the Mysticism, ASPIRES, and Brief Religious Cope scales, with values ranging from $r = 0.20$ to $r = 0.74$. Exceptions to this pattern are found with the Negative Coping Scale and the Religious Crisis scale. Values here are much lower. The Worthiness scale has lower correlations with these outcome measures. However, Worthiness has its largest associations with the Negative Religious Coping and Religious Crisis scales. Clearly, these measures are reflecting aspects of spiritual/religious distress. These associations do provide evidence of convergent validity.

Table 11.4 Zero-Order Correlations between the NMI Self-Report Scales and the ASPIRES, Mysticism, Brief Religious Coping Scale, and Markers of the FFM Personality Domains

Outcome Measure	NMI Scale		
	Infinitude	Worthiness	Meaning
Mysticism	0.46***	0.12***	0.33***
Brief RCOPE-Positive	0.59***	0.10***	0.67***
Brief RCOPE-Negative	0.09***	-0.31***	0.13***
ASPIRES			
Prayer Fulfillment	0.74***	0.21***	0.71***
Universality	0.60***	0.31***	0.40***
Connectedness	0.29***	0.16***	0.20***
Total STS	0.74***	0.28***	0.63***
Religious Involvement	0.63***	0.17***	0.72***
Religious Crisis	-0.15***	-0.43***	-0.19***
FFM Personality			
Emotional Stability	0.10***	0.55***	0.12***
Extraversion	0.10***	0.32***	0.11***
Openness	0.12***	0.30***	-0.01
Agreeableness	0.26***	0.43***	0.18***
Conscientiousness	0.10***	0.38***	0.13***

N = 1618.

*** *p* < 0.001.

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Correlations with the FFM marker scales provide evidence of discriminant validity. Correlations between the Infinitude and Meaning scales all have associations less than $r = 0.30$, indicating that these aspects of numinous functioning can be considered independent of the FFM personality domains (see Piedmont, 1999). The Worthiness scale evidences stronger associations with the FFM scales, especially the Emotional Stability ($r = 0.55$) and Agreeable ($r = 0.43$) domains. The magnitude of these associations indicates the possibility of some substantive overlap between the two sets of constructs. Worthiness does attempt to capture higher-level, existential distress in a manner that is not associated with personal feelings of negative affect. The current set of items does not crisply capture this distinction. It is therefore necessary to examine the incremental validity of this scale in predicting outcomes over and above these FFM personality dimensions. Failure to demonstrate incremental predictiveness would render the scale useless for current purposes. However, if the Worthiness scale can demonstrate significant predictive power over both the FFM and ASPIRES ST scales, then it would indicate that despite a lack of clear distinctiveness with negative affect, the scale does contain content that addresses aspects of existential dread that exist above and beyond an individual's personal feelings of inadequacy and emotional vulnerability.

INCREMENTAL VALIDITY

Participants in the normative sample completed a number of relevant psychosocial measures: a Work Satisfaction rating (based on a single Likert-type rating); Resilience (the Brief Resilience Scale, developed by Smith et al. [2008]); Self-Compassion (developed by Neff [2003]); Symptom Experience (the Depression Anxiety Stress Scale 21, developed by Lovibond and Lovibond [1995]); the Affect Balance Scale (ABS; Bradburn, 1969); and the single item rating of the Delighted-Terrible Scale (Andrews & Withey, 1976). Finally, the Religious Crisis scale from the ASPIRES was used which captures aspects of existential dread and a the belief by individuals that God has rejected them as worthy people. This scale has been shown to represent an independent predictor of psychopathology (Fox & Piedmont, 2020; Piedmont et al., 2007).

Each of the above scales served as the outcome variable in a series of hierarchical multiple regression analyses. At step 1 of each analysis, gender and age were entered. This was done because raw scores for the NMI scales were included and, as discussed earlier, these variables need to be controlled for when examining the effects of the NMI scales. At step 2 the FFM personality dimensions were entered as a block. At step 3 the ST facet scales were entered simultaneously. Finally, at step 4 the NMI scales were entered using a forward entry method. Partial *F*-tests were conducted to determine whether a given block added a significant amount of additional explanatory variance in the outcomes measured. Table 11.5 presents the results of these analyses.

Outcome	Demographic R ²	FFM ΔR ²	ASPIRES ΔΔR ²	NMI ΔΔΔR ²	NMI Predictors
DASS					
Depression	0.04**	0.43**	0.01**	0.11**	W
Anxiety	0.05**	0.29**	0.01**	0.04**	W
Stress	0.05**	0.47**	0.01**	0.03**	W
ABS			0.01**	0.01**	W/I
Negative Affect	0.04**	0.31**			
Positive Affect	0.01**	0.16**	0.02**	0.04**	W
Resilience	0.01**	0.32**	0.00	0.01**	W
Self-Compassion	0.03**	0.49**	0.01**	0.02**	W/I
Delighted-Terrible	0.00	0.33**	0.02**	0.08**	W
Work Satisfaction	0.01**	0.13**	0.01**	0.02**	W/M
Religious Crisis	0.00	0.14**	0.02**	0.07**	W/M/I

Note. DASS: Depression/Anxiety/Stress Scale; ABS: Affect Balance Scale. W = Worthiness, I = Infinitude, M = Meaning.

** $p < 0.01$.

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Several points of interest emerge from table 11.5. First, the FFM dimensions were the single strongest predictors of each outcome. Nevertheless, the numinous constructs provided significant incremental predictive power in every instance. Second, the NMI scales were significant, unique predictors of every outcome variable. Like the ASPIRES, numinous aspects of personality captured by the NMI have a broad range of predictive appeal. As a single domain, it is exciting to see that this construct relates to both negative aspects of functioning (e.g., stress and anxiety) and positive elements (e.g., resilience and compassion). These findings demonstrate that the Numinous cannot be considered as simply the religification of existing psychological constructs (e.g., Buss, 2002; Van Wicklin, 1990). Third, in this set of outcome variables, Worthiness emerged as the most robust predictor, being relevant to all of these outcomes. Despite the rather strong levels of overlap noted with the FFM scales in table 11.4, the scale continues to predict these outcomes even after its associations with the FFM domains is removed.

Fourth, elements of Meaning and Infinitude had a more selective association with these outcomes. This may be a function of the outcome measures selected for this study. Future research will need to examine their utility with other outcomes. Nonetheless, the involvement of these other NMI scales does make conceptual sense. Meaning emerged with the Work Satisfaction variable, indicating that feeling satisfied with one's vocational involvements is related to a sense of our own existential worthiness but also a function of our ability to create a larger sense of personal meaning. Infinitude's involvement is very interesting. For Negative Affect and Religious Crisis, Infinitude has a positive predictive relationship, while for Self-Compassion it is negatively related. This suggests that taking an eternal perspective on our lives and work may place additional stress on our personal sense of self. Only when we back away from such a perspective are we able to be self-nurturing and accepting. Clearly, future research will need to focus on unpacking the meanings behind this pattern of associations. Aspects of our numinous functioning seem to carry both positive and negative implications for our overall sense of well-being.

Finally, it is important to note that not only were the NMI scales incrementally significant over the ASPIRES ST scales, but the magnitude of contribution for the NMI scales was larger than the ASPIRES's contribution in every instance. These findings support the contention that the NMI is a second-generation measure of the numinous. Building on the research findings from the ASPIRES, we have been successful in developing a measure that more clearly assesses numinous functioning, resulting in a measure that more strongly predicts important psychosocial outcomes. It is hoped that the NMI will provide a more persuasive empirical demonstration of the value and importance of numinous constructs for understanding psychological functioning.

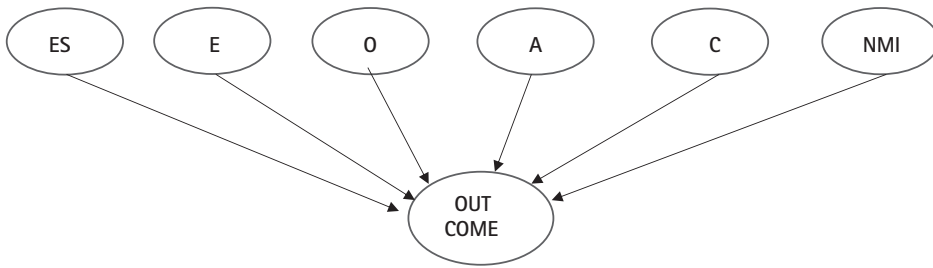
Causal Role in Psychological Functioning

The most important question to consider regarding the numinous is the role it plays in directing psychological functioning (Piedmont, 2014; Piedmont & Wilkins, 2020).

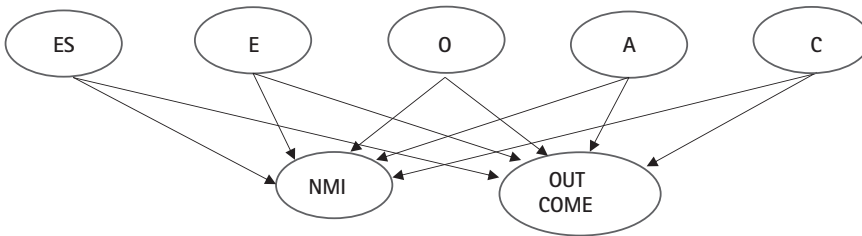
There are two possible roles. The first, which is the least interesting, is that the numinous is an outcome from other psychological processes. For example, an individual may have a negative view of God, believing that God is punishing him or her, or that God is just not interested in the person. Such a negative view may be a consequence of the person being depressed. A depressed person has a rather dark view of the world, the glass is just “half empty,” and the person feels worthless and of little value. The negative image of God fits cleanly into this larger dysphoric pattern. After receiving treatment for the depression, the person feels better emotionally, has a more upbeat attitude toward life, and also now sees God in a more positive manner. Obviously, how the person perceived God was a consequence of their internal emotional state. As an outcome, numinous variables hold little value or interest for psychology. After all, the field is ultimately interested in identifying the antecedents of behavior. Outcomes may be catalogued but only for their potential diagnostic value.

The second answer to this question is of greater importance: numinous variables serve as *inputs* into our psychological system. In this model, the numinous represents a core set of motivations that directly impact our engagement with the world. The quality of our relationship to a transcendent reality has direct consequences for our psychological status. In a longitudinal study examining psychotherapeutic outcome among outpatient clients, Cheston et al. (2003) demonstrated that changes in clients’ images of God were associated with counselor ratings of symptom experience. Piedmont et al. (2007) demonstrated that the ASPIRES scale of Religious Crisis (RC; a measure of Worthiness) was a unique predictor of characterological impairment and that its impact on symptom experience was causally based. Fox and Piedmont (2020) demonstrated that RC represented a unique, causal predictor of emotional dysphoria independent of the predictive effects of Neuroticism. While very few studies attempt to address this most important of questions, extant data do support the assumption that the quality of one’s relationship to a higher reality has important implications for symptom experience (see also Piedmont, Town, & Hollwitz, 2023).

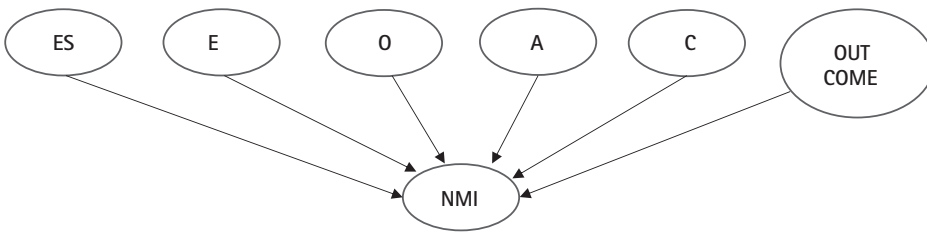
As such, an evaluation of how the NMI’s scales relate to various psychosocial and symptom experience measures seems warranted. Does the NMI evidence causal precedence on directing psychological functioning? Structural Equation Modeling (SEM) provides a useful analytical approach to answering this question. There are two values to this approach. First, SEM allows for the a priori specification of a variety of complex models that postulate the contribution of multiple variables on selected outcomes. These proposed models present the causal role of the numinous from difference perspectives (e.g., as an input into functioning or as a consequence of other processes). The value of each model can be evaluated. The second approach, and perhaps most valuable role of SEM, is the ability to compare the merits of these different models to each other. So, it is possible to determine whether the model postulating the numinous as a causal input better fits the data than models that specify it as a consequence of other variables. Showing that



Model 1: NMI as Unique Predictor of DASS



Model 2: NMI and DASS as Outputs of Personality



Model 3: NMI as an Output of Personality and DASS

Figure 11.1 Proposed Structural Models Linking the Four NMI Scales, Personality, and Psychological Outcomes *Note.* ES – Emotional Stability; E – Extraversion; O – Openness; A – Agreeableness; C – Conscientiousness; NMI – Numinous Motivation Inventory. See text for names of the outcome variables.

models that specify the numinous as causal predictors are superior to models that describe the numinous as outcomes provides support for the significance of the numinous for psychological functioning.

Figure 11.1 outlines three causal models containing differing perspectives on the causal nature of the numinous. Model 1 presents the numinous as a causal predictor of psychosocial outcomes independent of any contribution of the FFM personality domains. This is the preferred model because it shows the numinous as directly impacting functioning. Model 2 specifies the numinous as an outcome of the FFM personality domains,

being influenced in a manner similar to that found for the FFM’s impact on the other outcome variables. In this model, the correlation of the numinous with these other psychosocial outcomes is due to the fact that both constructs are consequences of the FFM personality domains. Finally, Model 3 sees the numinous as a consequence of both the FFM personality domains and the other psychosocial variables (labeled “Outcome”). Here the numinous is merely the outcome of other psychological processes. The numinous correlates with the outcomes because it is a consequent of their actions.

Four SEM analyses were examined, using a set of four outcomes capturing diverse psychosocial constructs: Work Satisfaction, Resilience; Self-Compassion; and Symptom Experience (the DASS). For each of these outcomes, SEM analyses were conducted testing the three models presented in figure 11.1. Table 11.6 presents the results.

Table 11.6 presents two important pieces of information. First, Model 3, which postulates the numinous as an outcome from all other variables provides the least fitting model across all the outcome variables. Clearly, the numinous cannot be seen as merely an outcome from other psychological systems. Second, although the remaining two models evidence some level of fit to the data, Model 1, which hypothesizes the numinous as an independent causal force, evidences the best fit across all outcome variables. The superiority of this model is found across all the fit indices. It is clear that our numinous motivations impact our enjoyment and satisfaction with work involvements, a personal sense of resilience to stressful events, and an ability to be compassionate with ourselves and others.

Table 11.6 Results of the SEM Analyses Examining the Three Putative Causal Models for Each of the Four Outcome Variables								
Model	χ^2	<i>df</i>	χ^2/N	RMSEA	SRMR	IFI	CFI	AIC
Work								
1.	134.81	10	13.48	0.082	0.036	0.98	0.98	204.81
2.	161.22	11	14.65	0.085	0.041	0.97	0.97	229.22
3.	770.17	15	51.34	0.160	0.130	0.85	0.85	830.17
Resilience								
1.	124.56	10	12.46	0.078	0.034	0.98	0.98	194.56
2.	141.51	11	12.86	0.080	0.035	0.98	0.98	209.51
3.	675.96	15	45.06	0.150	0.120	0.89	0.89	735.96
Compassion								
1.	123.88	10	12.39	0.079	0.034	0.98	0.98	193.88
2.	213.11	11	19.37	0.100	0.038	0.97	0.97	281.11
3.	488.95	15	32.60	0.130	0.087	0.93	0.93	548.95
Symptoms								
1.	423.98	25	16.96	0.092	0.040	0.97	0.97	505.98
2.	654.38	30	21.81	0.100	0.060	0.95	0.95	726.38
3.	675.41	26	25.98	0.110	0.054	0.95	0.95	755.41

Note. RMSEA – Root Mean Square Error of Approximation; SRMR – Standardized Root Mean Square Residual; IFI – Incremental Fit Index; CFI – Comparative Fit Index; AIC – Akaike Information Criterion.

Of particular interest are the findings with symptom experience. In this model, unlike the others, only the NMI Worthiness scale was used (because only this scale emerged as a significant, incremental predictor over personality and the ASPIRES). What is significant about this finding is that it demonstrates that there may be a second psychological pathway that leads to emotional distress (see also Piedmont et al., 2020 for another replication of this finding). It has already been shown in the research literature that the personality dimension of Neuroticism (N) underlies the experience of most of the categories of distress that are represented in the current diagnostic manuals. Syndromes related to trauma and stress, phobias, impulse disorders, and the personality disorders, among others, have been shown to be linked to high levels of this domain (Miller et al., 2001; Zonderman et al., 1993). It is easy to see the connection between affective lability and impaired psychological functioning. However, Worthiness is independent of N yet is also significantly related to psychological impairment. Future work needs to identify the underlying pathways by which this quality either creates fundamental vulnerabilities to experience impairment or serves as a direct predictor of pathology. How does Worthiness operate in tandem with N in the expression of current psychological disorders? Does the numinous underlie its own, unique domain of mental impairment that is currently uncharted?

The numinous represents an aspect of psychological functioning not well studied by the social sciences. These qualities, as assessed by the NMI, represent qualities that are independent of the already existing personality dimensions of the FFM. Thus, the possibility exists for an expansion of our understandings of human functioning. Relatedly, now that this numinous quality can be assessed, there is the need to examine how this dimension may be contributing to emotional distress in some already existing disorders. For example, a large majority of military personnel have seen combat and are experiencing negative emotional consequences. While posttraumatic stress disorder (PTSD) is a common diagnosis for many military personnel, not all seem to respond to established treatments for the disorder. Efforts at identifying potential mediating variables have identified some veterans as experiencing *moral injury*, a condition that phenotypically resembles PTSD symptomologically but with different underlying dynamics (see Hodgson & Carey, 2017). Feeling that one has compromised ultimate ethical and moral values as a consequence of his/her military involvements creates a larger existential dread within these sufferers as opposed to those with PTSD. Perhaps a consideration of numinous dimensions may open up another modality for viewing and understanding individuals with moral injury. Perhaps the high level of existential conflict and dread stems from a battle between one's actions in the line of duty with one's higher-order, transcendent-oriented motivations that drive us to find connection, nurturance, and constructive engagement with others. Identifying the role of Worthiness

may open the door to identifying new dynamics that may help to define better the nosological issues involved in this disorder.

Aside from new areas of potential vulnerability, there is also the potential for the development of new intervention strategies that capture these qualities that may serve as useful approaches for therapy. Piedmont and Wilkins (2020) outline in more detail the numinous processes underlying Infinitude, Worthiness, and Meaning and their role in the larger mental system. Like any other personality dimension, these qualities have their positive and negative sides. When numinous motivations are not appropriately gratified, the results can be deep, existential crises that affect individuals at the core of their selfhood. As in the case of moral injury, effective treatment will need to address these motivations and attempt to create more positive outcomes for them. The development of techniques that can accomplish this will provide the field with a new set of tools for use in treating mental issues that seem to be unresponsive to current methods.

Final Comments

Over the past 25 years, I have been involved in a program of research that focused on the development of an empirically sustainable definition of the numinous. At the heart of this approach was the FFM of personality, which provided the scaffolding necessary for identifying those personological qualities that were independent from already established constructs. This approach was selected for several reasons, including the fact that by embedding scale development within established psychological models we would avoid unnecessary content from theological and denomination-specific models to contaminate the process. It would also help to set appropriate boundaries around the new construct, determining what is and is not a numinous quality. The initial result from this process was the ASPIRES (Piedmont, 2010, 2012). This scale successfully operationalized a dimension that was universal and empirically relevant. The ASPIRES provides a useful conceptualization of the numinous and its operating properties. Further, the methods used to develop the scale can be very useful for the development of new numinous variables/scales (e.g., MacDonald, 2000).

While an important advancement for the field, there was still more work to be done. Given the success of the ASPIRES, the need existed for developing a more elaborate model for understanding how this motivational source arose in the mental life of people and for outlining in more detail how it effects psychosocial functioning. Such an ontological model helps to conceptually define the numinous and its inherent properties. This is important information for use in interpreting scores for numinous measures. The developed ontology briefly presented here (see Piedmont & Wilkins, 2020, for a more detailed overview) provides a statement of the underlying structure of these motivations and the source of their origins. The ontological model tells us why

the study of the numinous is important and the value it provides for expanding our psychological models of the mind.

This ontology has two very important insights for professionals in this area. First, it is clear that religiousness and spirituality are qualities that are universal and unique to the human species. The numinous arises out of those neurological processes that bring us self-awareness and fuels our abilities to think in such broadly abstract and creative ways. This model argues that, unlike most other human characteristics studied by psychology, the numinous represents those psychological qualities that are defining of the human species (Albright & Ashbrook, 2001). The great significance of the numinous is that it represents the essential qualities of our humanity. As such, these dimensions play a foundational, core role in human development. As we noted at the beginning of this chapter, the numinous is with us from birth and operates even in the first months of life. Its impact grows and becomes more salient as we age. The numinous holds our entire sense of selfhood and its place in the universe, as we construe it to be. As such, difficulties within the numinous motivations can create psychological problems that impair individuals at the very core of their sense of personhood.

Second, although the ontological model for the numinous provides great interpretive depth to our understanding of numinous constructs, it also provides the lens through which the field can focus its efforts for moving forward. The ontological model makes clear the basic question the social sciences needs to ask, “What are those psychological qualities that make religion and spirituality important to us?” Although there is value in cataloguing the values and liabilities that membership in various religions or adherence to theological models may hold for people, ultimately, the interest should be directed toward understanding these basic, *uniquely human* qualities and how they are expressed in all areas of functioning. The model also outlines the underlying qualities associated with the various numinous motivations, making it easier to determine what is and what is not numinous in nature. This enables the creation of very specific boundaries for these constructs, ultimately promoting the development of more sophisticated and useful measures.

The NMI benefits from the ontological model presented here. It was these definitions that served as the conceptual ground for the development of the scale itself. Item development was focused and efficient. Unlike the development of the ASPIRES, which was more of an exploratory process aimed at determining whether an independent numinous construct could be developed, the NMI represents a more confirmatory approach. Knowing what the numinous represents, it is easier to identify items that seem to capture specifically those qualities. Complementing this conceptual foundation is the formalization of an epistemological process for empirically developing, testing, and applying numinous variables. The criteria listed above provide the goals that need to be attained empirically in order to justify the value of any putatively numinous construct. Piedmont and Wilkins (2020) provide step-by-step instructions for developing

scales and give examples of the empirical criteria to be met. The NMI benefited from the development of these ideas.

What the NMI shows is that the scale construction process can take on more focus and clarity in its efforts. Gorsuch (1984, 1990) noted that although there are many different measures of spirituality and religiousness, they lack any useful organization; there was little sense of how these different measures all related to one another as well as to other psychological models. The NMI stands in stark contrast to most other measures in the field given both its conceptual and empirical pedigrees. While a relatively new instrument, it holds great promise for moving the field forward. This measure can be used as a reference point in the development of new scales; any measure that correlates with it and is independent of the domains of the FFM can be seen as a potentially useful measure. Scales that do not meet this simple threshold should be avoided. The NMI can serve as a useful organizing praxis for scale development and evaluation.

Showing that scores on the NMI are universally relevant underscores the value of the numinous as an important psychological construct that addresses core psychological states. Such a construct must be studied by psychology because its presence will ensure that a comprehensive assessment of functioning is attained. Omitting the numinous leaves blank a very key element of our nature. The causal linkage of numinous constructs to important psychosocial outcomes demonstrates the value of this domain for understanding well-being and distress. It also outlines potentially new intervention strategies that may help improve therapeutic outcomes.

The information presented here on the NMI should be interpreted as a first step in the process of creating cumulativeness in our field. The ontological model provides a foundation for understanding the numinous and for focusing our endeavors. It is a point of departure for future dialogues that seek to further develop and catalogue numinous motivations. The empirical criteria outlined in this chapter can provide the necessary scientific structure to research that will easily integrate findings within larger psychological models. This empirical foundation should give professionals confidence in the robustness of our constructs, showing them to be truly scientific and devoid of the types of metaphysical concepts and ideas that undermine our ability to widely permeate the field. Having a second-generation measure of the numinous brings much value to the field as well as an anticipatory excitement about what the third generation will hold.

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Religion, Altruism, and Prosocial Behavior: Conceptual and Empirical Approaches

Elizabeth Midlarsky and Tanya Malik

Abstract

Altruism and religiousness are two important facets of human functioning. This chapter takes a chronological perspective on their development, from philosophical and rhetorically based discourse that discusses the link between these two phenomena to analyzing the definitions, and then offers a review of the empirical research. The chapter is structured in a way that provides readers with an overview of both these phenomena and the associated empirical research independently, and ultimately a symphony of the two. This platform addresses the question, “What empirical evidence exists about the manifestations of these phenomena and the extent to which they are related to one another?” To answer this, we acknowledge the compound, multifaceted nature of both altruism and religion and argue that exercising cross-disciplinary approaches is pertinent for progress to be made. Simultaneously, the chapter concludes that both altruism and religion are powerful enough to have both salutary and noxious effects that make it critical that they be the focus of research efforts. Suggestions for future research are then offered.

Key Words: altruism, religion, religiosity, prosocial behavior, sociobiology

Introduction

In some respects, the concepts of altruism and religion are intertwined. Altruism—motivated by the desire to do good deeds or help others, without expectation of reward, reciprocation, or recognition—is significant for essentially all the world religions (Neusner & Chilton, 2005). In Judaism, Rabbi Akiva, the Talmudic sage and scholar, asserted that “love thy neighbor” (Leviticus 19:18) is a fundamental value. Rabbi Abraham Isaac Kook taught that altruism toward humanity leads to altruism expressed to the force behind all giving—the Creator—and is thus the ultimate goal of creation (Bokser, 1978). In Christianity, altruism is central to the teachings of Jesus, especially in the Sermon on the Mount and the Sermon on the Plain. Indeed, the day before his assassination, speaking in support of a strike by sanitation workers, Martin Luther King Jr. enjoined his audience to follow Jesus’s lesson of the Good Samaritan. He said, “The question is not, ‘If I stop

to help this man in need, what will happen to me?’ If I do not stop to help the sanitation workers, what will happen to them?” (Yarbrough & Eidenmuller, 2010).

Daoism, a complex psychological and philosophical belief has altruism as one of the facets in its big-five Daoist/Taoist model of “wateristic” (along with modesty/humility (or humbleness), flexibility, transparency and honesty, and gentleness with perseverance) (Lee, 2003). This fundamental Chinese religious and philosophical ideology developed out of shamanism and thus affected behavior and thinking on an almost daily basis for thousands of years (Chen & Lee, 2008). The religion calls for Daoistic individuals to be as altruistic and helpful as water—without which no one can survive. In the words of Lao-Tze:

The highest value (or the best) is like water,
The value in water benefits All Things
And yet it does not contend,
It stays in places that others despise,
And therefore is close to Dao

In Sufism one must engage in I’tihar (altruism) by forgetting one’s own concerns and devoting oneself to the other (Gulen, 2004); in Islam, I’tihar is the highest form of nobility (Singer, 2008). Altruism, in the form of love (increasing joy in others) and compassion (relieving suffering in others), is the key factor in all forms of Buddhism, and one’s own happiness is the natural consequence of altruism (Harvey, 2000).

In all these religions, altruism is an important and even central goal. The expectation is that religion should help each sincerely religious individual to achieve altruism. The difficulty lies in the rather nonhumanistic concept of original sin, particularly as found in Judaism and Christianity (and echoed in Sigmund Freud’s concept of the “id”), which must be overcome by the intrinsically egoistic individual.

The term “altruism” itself was coined in the French (altruisme) by Auguste Comte (1852/1966), champion of a positivistic, science-based social system. In contrast to the religious view that human beings are innately selfish (tainted by original sin), Comte’s “scientific” view was that people are innately altruistic. There must, Comte believed, be a new, scientific religion—the “Religion of Humanity”—whose goal would be to subsume oneself to “the Great Being” in which the goal was to live for others (*vivre pour autrui*).

The Golden Rule is the principle of treating others as one would wish to be treated and is a maxim that is found in numerous religions and cultures (Flew, 1984). Some philosophers, most remarkably Derek Parfit (2011), present that this prescribes the pro-social behavior of “unconditional altruism.” Gintis et al. (2005) argue that persons who practice unconditional altruism will eventually evolutionarily be overcome by those who instead practice “strong reciprocity,” or the practice of benefiting only those whom we believe observe the cultural norms of cooperation. This is because such behavior helps

prevent being taken advantage of by others, as well as increasing odds that social circles will consist only of similarly prosocial individuals. This principle has been hypothesized to overwhelmingly succeed Trivers's (1971) of reciprocal altruism, which suggests that benevolent behavior tends to be favored over egoism based on evolutionary factors.

Altruria, a short-lived Utopian community in Sonoma, California, was formed on the basis of altruistic and Christian religious ideals in 1894. The experiment was, however, abandoned within the year because of unbridgeable financial problems (Budd, 1956).

The emphasis on subsuming individuality to the group in order to achieve the greatest common good has been a theme among the Hutterites, a group of German Christian Anabaptists. This group has been a cooperative and even altruistic one in which members avoid personal gain and work to achieve goals for the collectivity (Bower, 1995). The Israeli kibbutz, designed as an experiment in which all were viewed as equal participants in achieving the common good, worked efficiently as long as its highly idealistic members were motivated by an essentially altruistic ideology. Beginning in about the mid-1980s, as this orientation began to wane, the kibbutz movement went into decline (Don, 1996).

Nevertheless, the idea that religion facilitates altruism has been widely promulgated (Norenzavan & Shariff, 2008). The existence of many dramatic examples of altruism by religious leaders has helped maintain this idea. During the Holocaust, for example, religious figures included Catholic priests (Oliner & Oliner, 1988), several prominent religious figures in the Bulgarian Orthodox Church (Todorov, 1999), and the Protestant minister (Andre Trocme) who inspired and organized the entire population of Le Chambon, a Protestant town in France, to save thousands of Jewish lives (Hallie, 1979; E. Midlarsky et al., 2005). These anecdotal accounts notwithstanding, research on the relationship between altruism and religion has been limited and largely inconclusive. This is not surprising, as both religion and altruism are multidimensional concepts, best understood through a multidisciplinary lens. In psychology alone, a comprehensive understanding requires investigation of the personality, social, developmental, health, mental health, and neuropsychological aspects of altruism.

As many researchers have noted (e.g., Smith, 2003; Spilka et al., , 2003), although often interesting and thought provoking, we cannot rely exclusively on philosophical or theological explanations of the relationship between altruism and religion. Rather, we must adopt an empirical approach to assess the extent to which these two constructs are linked and how. This chapter, then, is a literature review that aims to explore the relationship between religion and altruism. The intention is to provide insight into some of the complexities of the subject and to highlight some areas in need of additional academic attention and expansion. We begin with separate treatments of the definitions and empirical perspectives on religion and altruism. We then consider the relationship between religion and altruism, and we end with suggestions for future work in this domain.

Religion

It is difficult to write about a construct whose definition is elusive. However, while Spilka and his colleagues assert that “more books have been written on this topic than any other in the history of humanity,” they claim that this effort has resulted in neither cohesion, agreement, nor clarity (Spilka et al., 2003, p. 9). In a similar vein, Asad (1993) posited that there can be no universal definition of religion. This is partly due to Asad’s belief that such a definition is embedded in historical discourses on the subject and therefore is difficult to unravel.

Definitions and Theoretical Perspectives

From an etymological perspective, “religion” is derived from *religio*, a Latin word that is typically defined as “obligation.” *The Oxford English Dictionary* (2008) defines religion as an “action or conduct indicating a belief in, reverence for, and desire to please a divine ruling power; the exercise or practice of rites or observances implying this.” Religion is a construct that differs from religiousness or religiosity, a personality trait that, in turn, varies both between and within individuals (Darley & Batson, 1973), and which is often treated as a synonym for religion.

Religion and culture together create a liquid rather than a static social identity instead of static movement. This has been described in work done on Mamala, a village in the Moluccas, Indonesia, where society consists of two embedded identities (religion and culture) to construct social identities. This study, through qualitative data from religious and customary figures and other participants shows that the ritual is regarded as a medium to construct the social identity (religion and culture) (Andries, 2018). The integration of religion and culture in Mamala has proven that the social identity of this society includes religion and culture formed by dialectical processes, namely, adaptation, relations, and negotiations between local traditions coupled with the influence of Javanese traditions.

Religion also differs from spirituality, which is often secular and, as such, is separate from formal religion. People involved with religion tend to accept traditional forms of religious authority and inhabit a space purposefully created for religious worship. People embracing secular spirituality appreciate individual autonomy as an alternative to an external religious authority and create their own spiritual space and experience (Wuthnow, 1998). Spirituality entails recognition by the individual of one’s ultimate connection to a reality outside oneself, with humanity, and with a presence outside the natural world. Those who espouse full commitment to a faith have claimed that true spirituality cannot be experienced by the secular. However, Stetzer and colleagues assert that spirituality exists outside religion whenever human emotions of awe, wonder, and reverence are experienced when observing or studying nature or the universe (Stetzer et al., 2009).

In contrast to the autonomy inherent in spirituality, religion may begin in one person, but it becomes a “communication of a world view, or a created reality, that people develop as a group” (Dow, 2004, p. 2). The universality of religion among human societies appears to be linked to the fact that human beings have the capacity to recognize that personal

existence has a discrete beginning, a finite duration, and ultimately an end. As a result, each human being is faced with questions concerning the meaning and value of life, the relationship of the individual to all of humanity, to creation, and to the Creator. Religion prescribes rituals based on what Stark and Bainbridge (1987) labeled the supernatural premise, or supernatural assumptions. In this chapter, the focus is on formal religion and its individual manifestation—religiosity (or religiousness)—in relationship to altruism. According to Emmons and Paloutzian (2003), the distinction made between religion and spirituality is artificial, and there are as many shared qualities between them as there are qualities that distinguish them. Spirituality simply represents a concept of religion, rather than supplanting it (Hill et al., 2000). Nevertheless, this chapter focuses on altruism and religion, as religion is experienced within an organized community that teaches, preaches, and engages in rituals.

Empirical Perspectives

Operational definitions, mainly in the form of psychological measures administered to individuals, have varied, taking either single or multiple aspects of religious phenomena into account. As these definitions are based on human responses, it is appropriate to note that they are actually definitions of religiosity or religiousness. Among the many examples are the approach taken by Hoge (1972), who validated a scale of intrinsic religious motivation as his operational definition of religion. Both Altemayer and Hunsberger (1992), and Fulton et al. (1999) focused on fundamentalism as their measure and operational definition of religion. Other researchers employed dyadic concepts, such as Allport and Ross (1967), who distinguished between intrinsic and extrinsic religion, and Allen and Spilka (1967), who described committed versus consensual religion. Likewise, Smith (2003) advocated a multidimensional approach. One example of a multidimensional conception is a six-dimension scale, subsumed under three components—cognitive, emotional, and behavioral aspects of religiosity (Cornwall et al., 1986). A second example resulted from factor analyses of religiousness in the Black community, which yielded such components as the private, subjective, nonorganizational, and organizational aspects of religiosity, as well as the intensity of denominational identity (Taylor et al., 2004). A third example is the result of work by Lam and Rotolo (2000), who identified four dimensions of religiosity: participatory, private, affiliative, and theological. Batson (1976), as well as Batson and his collaborators (Batson et al., 2001), distinguish three types of religiosity, based on their antecedents: egoistic (religiousness based on self-interest), intrinsic (based on faith, belief), and quest (the search for meaning by an individual who can tolerate doubt and ambiguity).

Analyses of 40 spirituality measures across India, China, and the United States revealed five invariant factors across countries which the researchers have interpreted as five dimensions of universal spiritual experience (McClintock et al., 2016). They are love (as seen in the fabric of relationships and as a sacred reality), unifying interconnectedness (as a sense of energetic oneness with other beings in the universe), altruism (as a commitment

beyond the self with care and service), contemplative practice (such as meditation, prayer, yoga, or qigong), and finally religious and spiritual reflection and commitment (as a life well examined). They found that religious and spiritual reflection and commitment and contemplative practice were associated with less risk for psychopathologies in India and the United States but associated with greater risk in China.

Numerous others attempted to identify the fundamental elements of religion. Saroglou (2011) has put forward a detailed psychological model of the “Big Four religious dimensions,” thereby providing an elucidating taxonomy of core components of religiosity that integrates numerous previous formulations in the psychology and sociology of religion. In brief, to be religious entails believing (holding a set of beliefs about transcendent entities, e.g., personal gods, impersonal life forces, and karmic principles), bonding (having self-transcendent, emotional experiences, typically through ritual, that connect one to others and to a deeper reality), behaving (subscribing to certain moral norms, and exerting self-control to behave in accordance with these norms), and belonging (identifying and affiliating with a certain community or tradition) (Saroglou, 2011).

James W. Fowler (1981, 1991) delineated faith development in seven stages: namely, Primal or Undifferentiated, Intuitive-Projective, Mythic-Literal, Synthetic-Conventional, Individual-Reflective, Conjunctive, and Universalizing. The “quest” type of religiosity bears some resemblance to the sixth stage of faith development. This stage, usually occurring in midlife, is a “conjunctive” faith that acknowledges paradox. In this stage of development, the individual continues the quest for meaning and for the full comprehension that marks the seventh stage, termed “enlightenment,” which only a few people can attain. Unfortunately, there has been little success in creating and validating an operational definition of Fowler’s complex theory (Barnes & Doyles, 1989; Leak et al., 1999), which limits its utility as a means for studying religion.

Altruism

Altruism, a rare form of prosocial behavior, involves a selfless intention to help others, where the anticipated personal cost, potentially up to death, far surpasses any expected external gain.

Definitions and Theoretical Perspectives

The word “altruism” is often used interchangeably with a host of others, including “aiding,” “helping,” “volunteering,” and “prosocial behavior” (Dovidio et al., 2006; E. Midlarsky, 1991; E. Midlarsky & Kahana, 2007). Nevertheless, altruism is a distinct construct, which can be viewed as a subcategory of prosocial behavior. In prosocial behavior, there is an intention to help the other. In altruism, a relatively rare form of behavior, the intention to help is other-oriented rather than egoistic. Also, the anticipated cost of the behavior to the altruist (up to and including death) far outweighs any expected extrinsic gain (E. Midlarsky, 1968; Piliavin & Charng, 1990). By this definition, the Christian

woman who sheltered a Jewish family during the Holocaust because she was enjoined to do so by a minister whom she feared was acting prosocially but not altruistically. However, the non-Jewish rescuers who voluntarily helped Jews during the Holocaust despite the fact that they anticipated no gain for themselves, and were risking their lives by helping, were behaving altruistically. Research has indicated that these heroic individuals were high in altruistic moral judgment and in empathic concern (Fagin Jones & Midlarsky, 2007; E. Midlarsky et al., 2005).

The use of the term “prosocial behavior” as a default in place of “altruism” appears to be based on a concern that many of the helping behaviors under investigation are not really altruistic. For well over a century, we have lived in a milieu strongly influenced by several lines of thought—reward-based American behaviorism, hedonism within philosophy, Freud’s antihumanistic view of the basic (id) nature of humanity, and certain interpretations of Darwin. Although none of these theories was fully accepted in itself, their confluence has been very influential (E. Midlarsky, 1968). Thus, the general view has been that to be certain that an act is altruistic, one must somehow prove that it is not actually egoistic (e.g., Batson et al., 1988). Or, as was so famously said by Little Buttercup,

Things are seldom what they seem
Skim milk masquerades as cream . . .

—Gilbert & Sullivan (*in HMS Pinafore*)

What is so interesting in all of this is that when psychologists study more negative phenomena, such as greed, selfishness, or violence, there seems to be less of a need to discover whether those phenomena are “really” what they seem to be or instead are obscuring the “truth” of the situation. What we emphasize here is that there should be no need to insist that all prosocial acts are altruistic or that all altruists behave prosocially (M. Midlarsky & Midlarsky, 2003). Altruism is not the same as “agreeableness” (Wiggins, 1996), which includes compliance, a characteristic that may be lacking in at least some of the most courageous altruists (E. Midlarsky et al., 2005). Furthermore, it is unnecessary and even inappropriate to assume that “everyday” altruism occurs to the same degree as it does in the case of the Holocaust heroes, even in people who are genuinely altruistic. Like so many other motives and personality traits, individual differences in altruism should be understood to range along a continuum from low to high, rather than being expressed uniformly across individuals and situations.

Also, as Batson and Shaw (1991) have suggested, we should think in terms of a pluralism of prosocial motives—that we can have altruistic and egoistic motives simultaneously.

Several bodies of theory have been brought to bear in the attempt to comprehend altruism, of which two are evolutionary and psychological. For the sake of completeness, we note that the field of evolutionary psychology remains controversial and has not yet undergone sufficient empirical development to permit evaluation at this time.

The evolutionary and psychological approaches both address the altruistic paradox, first identified in 1883 by Lester Ward, the first president of the American Sociological Association. The altruistic paradox raises the question of why a behavior would be performed when it puts an individual at risk, and when neither the acquisition nor expression of altruism is associated with a reward for the individual. Theorists within psychology have addressed this paradox in several ways. For example, evolutionary theory has largely interpreted Darwin's (1871, 1981) "survival of the fittest" as referring to survival of the fittest individual (but see De Waal, 2008; Kropotkin, 1902/1972), so that the evolutionary biologist Richard Dawkins (1976) could write that in regard to individual generosity, biological human nature had nothing to offer.

To ensure altruism, we would have to teach altruism to inherently selfish organisms, according to Dawkins. The frustration with this interpretation of Darwin led others, such as Wilson (1975), to interpret and expand Darwin's concept to encompass both individual fitness and inclusive fitness. Inclusive fitness indicates that survival may be best insured when individuals have viable offspring (as in individual fitness) and when survival is ensured of those closest to the individual through shared genes, as in kin selection.

Wilson (1975), who has been credited with the development of sociobiology, may have done so largely because of the need to explain altruism. In his seminal volume, Wilson provides numerous examples of what appears to be altruism throughout the animal kingdom. As Stephen Jay Gould (1980, p. 261) wrote: "Why should our nastiness be the baggage of an apish past and our kindness uniquely human? Why should we not seek continuity with other animals for our 'noble' traits as well?"

According to Morrison and Severino (2007), altruism grows from early moral development. It is a dimension of spirituality that appears with the psychological changes in the conscious and the self. Introduction of the concepts of shame, consequences, and guilt in childhood result in the development of remorse and altruism in adolescence. They also believe that the process that creates altruism is a relational process which implies that the individual self is a relational self. What we ask, as well, is why it seems so difficult to acknowledge that human beings can be altruistic that it has become normative to use the term "prosocial" in its place. We seem to have no problem with characterizing acts as violent or passive, for example, without worrying about whether our use of these words somehow obscures their "true nature." Perhaps this tendency to doubt the possibility of the existence of altruism is based on the continued influence of the evolutionary, philosophical (Hedonistic), and psychoanalytic viewpoints enumerated earlier, along with others that have so long shaped the zeitgeist. Perhaps in view of the evidence of violence, of even genocidal proportions (M. Midlarsky, 2005), it has seemed particularly difficult to believe that altruism is a "natural" aspect of human nature. The virtual lack of research on altruism may also be based on what has seemed to be the more urgent desire to learn to prevent negative behaviors, rather than to emphasize the positive aspects of human functioning.

In arguing against biological explanations of altruism, Campbell (1975) notes that, indeed, forms of caring, such as rudimentary forms of mother–child attachment, may be subject to biological explanation. However, the more complex forms observed in human beings may be best explained by the mechanisms of social, rather than biological, evolution. For example, individualistic societies, such as that found preeminently in the United States, value altruism quite differently than do collective societies, like the Hindu (Diener & Suh, 2003; Kitayama et al., 1997). Dān according to Habito and Inaba (2006) is a unique form of gift; it is an unreciprocated sacrifice given by someone to a stranger. It is a form of giving that comes close to notions of altruism. Dān, the Hindu concept of the “pure” or “free” gift or charity exists in practices of mendicancy in which no social obligations occur between the givers and recipients. It, and other forms of nonreciprocal giving, is found in the kinds of salvational religions associated with economic markets and advanced divisions of labor. Illustrations abound of the numerous types of social adaptation that have occurred throughout human societies and cultures, as reflected in doggerel by A. F. J. (1939) in the *Journal of Abnormal and Social Psychology* (cited in S. B. Sells, 1963).

The Arapesh eat a little flesh.
 They live secure but futile. They're not competitive or harsh,
 As are the Kwakiutl.
 Bachiga think that food and drink
 Should come from lone endeavor.
 The Zuni, herding sheep in peace,
 Cooperate forever.
 Samoans feel the great ideal
 Is helping one another
 Ojibwas try to stand alone
 And no one loves his brother.
 The Maori loaned whate'er they owned
 From Kingdom Come til now; But interest rates are very high Among the Ifugao.

Empirical Perspectives

According to evolutionary theory, people are inherently selfish. When prosocial action is observed, it is based on the biological need to insure one's own survival or the survival of those who have the closest genetic link to the recipient. In a series of studies, Japanese and American participants responded to scenarios depicting a “life-threatening” situation or a “trivial” situation, in both of which helping was needed. In both the American and Japanese samples, helping increased as a monotonic function of genetic overlap with the sibling (0.50 overlap) receiving more help than nieces and nephews (0.25 overlap), and then first cousins (0.125). The strength of the relationship was greater in response to the

“life-and-death” scenario. The amount of helping in that situation also decreased as the age of the recipient increased, presumably because of the lesser “fitness” of the older recipients. Interestingly, though, “trivial” helping was directed more at older recipients than to those described as middle aged. Reuter et al. (2010) based their research on past pharmacological studies that showed that the dopaminergic system interacts with oxytocin and vasopressin. In their study, they tested a dopaminergic candidate polymorphism (COMT Val158Met) for altruistic behavior among 101 individuals by assessing the amount of money donated to a poor child in a developing country, following the earning of money from computer tasks. Carriers of at least one allele donated about twice as much money as compared with those participants without the allele. In regard to psychological research on altruism, a great deal of research attention was paid to this phenomenon in the late 1960s through the mid-1980s, especially by social and developmental psychologists. Psychology was beginning to expand beyond the almost unilateral emphasis on violence (including genocidal violence), abuse, and psychopathology to more positive domains, such as altruism, responsibility, morality, and gratitude. In these early attempts to move toward a positive—and thus a more “balanced”—set of perspectives within psychology, altruism has become a popular domain of inquiry.

Enthusiasm for the study of altruism quickly abated, however, when the largely laboratory-based, experimental researchers were confronted with “problems” concerning the motives for the observed prosocial behavior and their measurement. It is relatively simple to come up with examples of prosocial activity—whether helping, donation behavior, emergency intervention, rescue, trivial, or “normative” helping behaviors such as holding an elevator door or picking up dropped pencils. In the early studies, these were typically treated as behavioral manifestations of altruism, in the absence of any evidence or even curiosity about the motives of the helper. In asking the question “why” about these behaviors, a series of well-done studies was conducted on child socialization and on factors such as gender, perceived need, locus of control, similarity to the recipient, and dependency, to name only a few. In this context, it is not surprising that the use of the term “altruism” became a troublesome distraction from the “real” work of making the world a more peaceful place (E. Midlarsky & Kahana, 2007). The spotlight was therefore turned on “prosocial” behavior, in order to avoid the need to confront troubling questions about motivation.

In the research that was concerned with altruism, two possible motives were consistently studied. These were empathy (Davis et al., 1994; Hoffman, 2001) and moral judgment (Kohlberg et al., 1983). The basic premise has been that when a helpful act is performed by a person high in empathy, moral judgment, or both, then that behavior can be considered altruistic. Particularly in the case of what Midlarsky has termed “altruistic moral judgment” (E. Midlarsky et al., 1999) to distinguish it from Kohlberg’s approach (Kohlberg et al., 1983), the good of the recipient is placed above all other considerations; this conception is very close to the cognitive facet of altruism.

Curry et al. (2009) explored the concept of the development of altruism in 34 individuals from a retirement community in order to form the Altruism Development Model (ADM). This model focused on four contributing elements—biological, cognitive, social learning, and religious/spiritual factors. They did not look into the biological basis as they were primarily focused on conducting a qualitative research study. They did, however, report evidence to suggest the presence of the cognitive modesty bias (the perceived costs to the helper compared with the benefits to the person being helped), as well as the influence of social learning theory including role modeling. The contribution of religiosity/spirituality was found to be propagated by canon law, and a way to connect to a higher power.

In a study based on the ADM model from Curry et al. (2009) that looked at the development of altruism as perceived by master's-level counseling students, the researchers observed that although participants perceived various factors contributing to the development of altruism, social learning emerged as the predominant factor. All the participants discussed social learning as a contributing factor; however, the younger group of students emphasized this as having a much larger effect (Swank et al., 2013). The researchers concluded that an individual's stage of development and life experience may influence their perception of the development of altruism. Regarding the contribution of biological factors, some participants described them as establishing a foundation upon which altruism could then be fostered through social learning. This dichotomy corresponds with the kinship hypothesis which supports individuals helping their relatives as it allows them to promote the altruism gene by passing it on to future generations (Dugatkin, 2006).

Becchetti et al. (2013) identified the two sociability variables the two that are related to altruistic behavior—Voluntary and Help to friends. By looking at motivations for such behavior, which are more likely to be other-regarding (because I'm needed, or to contribute to something useful) from the others (to meet friends, to earn money, to use skills or to keep fit). By providing an empirical analysis regarding social activities and their motivations, they found that social activities are significantly and positively correlated to cognitive measures of subjective well-being (life satisfaction).

Similarly, among operational definitions of empathy, the one that has important links to altruism is the Empathic Concern Subscale within the Interpersonal Reactivity Index (IRI; Davis et al., 1994). The IRI has four components: personal distress, fantasy empathy, perspective taking, and empathic concern. Of the four, empathic concern measures altruistic concern for the other. In the other components, particularly personal distress (the potential benefactor's own discomfort), egoism is seen as a more central element.

Social psychologist Daniel Batson has wrestled with the question of whether empathic concern, which is an important explanatory mechanism for altruism, can provide a link with explanations from evolutionary biology. In evolutionary biology, as noted earlier, helpfulness is motivated by inclusive fitness, in order to ensure survival of at least a portion of one's genes; thus, helping strangers is likely to be a rare event. This reasoning finds its

counterpart in research by social psychologists, whose experiments have explored the role of similarity to the recipient as a predictor of helping (Krebs, 1987).

If, indeed, there is an evolutionary basis for altruism, then it should be found in the “maternal instinct,” as expressed in parental nurturance. If empathically motivated altruism is genetically based, then more help should be given to those most similar to the helper. In a study conducted by Batson et al. (2005), college women read a story in which a volunteer helped someone named Kayla, who was a female college junior, an adult dog, a puppy, or a three-year-old child. The women saw themselves as most similar to the college junior, but despite the perceived similarity, empathic concern for Kayla the student was lower than for the other three, all of whom were child-like figures.

Other studies also support a genetic link between empathic concern and altruism. For example, research has been conducted using the methodology of twin studies, which compare the degree of similarity of identical twins who share most of their genes, to fraternal twins, who share a lesser proportion. Results of these studies have indicated that between 50% (Rushton et al., 1986) and 71% (Matthews et al., 1981) of the variation in empathy is heritable. More recent research indicates that when the dimensions of empathy (empathic concern, personal distress, perspective taking, and fantasy empathy) are analyzed separately, empathic concern seems somewhat heritable, but less so than previously found in the studies by Matthews and collaborators, and by Rushton and his collaborators (Davis et al., 1994). Furthermore, work on the development of empathy indicates that socialization can override any genetic influences at as early as 20 months of age (Zahn-Waxler et al., 2001).

In research on the relationship between moral judgment and altruism, researchers have sought to discover whether higher stages of moral cognition predict higher rates of help that is given on the basis of altruistic principles. According to Bar-Tal and Raviv (1982), the stages of cognitive development reflect increasing increments in unselfish motives as the person develops.

In the lower stages, helping is prompted by the anticipation of specific rewards and punishments. With growing maturity, higher stages are reached wherein the cognitions promoting helping are first markedly egoistic (to meet norm-based expectations), then hedonistic (because helping makes one feel better), and next because reciprocation is expected. If the highest altruistic stage is attained, then the moral motive is the intention to help the recipient. In this work, as in research on prosocial moral reasoning by Eisenberg (1982), the question was not whether people at higher stages of moral development help more but rather the extent to which their helping is altruistic rather than egoistic. In work on what has been termed “altruistic moral judgment” (E. Midlarsky et al., 1999), the highest form of moral reasoning was found to distinguish Holocaust rescuers from bystanders (E. Midlarsky et al., 2005). What is important is that although altruism may be based to some extent on genetic predispositions, psychosocial and environmental factors are critical in shaping behavior as complex as altruistic behavior. The two intrinsic

factors that have been cited as predictors of altruism, and which are close to our conceptions of the meaning and nature of altruism, are moral judgment and empathy, both of which can develop through the seasons of life (E. Midlarsky & Kahana, 1994).

In research on genetics, altruism, and religiousness, researchers have found that religiousness was related to antisocial and altruistic behavior through both genetic and shared environmental mechanisms. Using the Minnesota Twin Registry (MTR), Koenig et al. (2007) also showed that most of the genetic effect on altruism was shared with religiousness, but only about half of the shared environmental influence on altruism was shared with religiousness. In the following section we further investigate the possibility that religion, which, like altruism, can transcend the self in its higher stages of development, is related to altruism in important ways.

Religion, Prosocial Behavior, and Altruism

Is there evidence that religion and altruism are associated with one another? There is frequently an assumption that religion is necessary if altruism is to occur. Most if not all of the world religions teach—through exhortations, religious writings, and religious exemplars such as the saints—the importance of doing good deeds for altruistic reasons (Beit-Hallami & Argyle, 1997; McFadden, 1999). And, indeed, Smith (2003) found that church attendance and self-definition as a “strong” member of one’s faith predicted what he termed “altruism.”

There is research evidence both linking religion to prosocial behavior and disputing the strength, or even the existence, of such a link. To begin with, Hood et al. (2009) have written that although prosocial behavior may be associated with religion, it is not the exclusive province of those committed to faith. As they point out, current society offers many opportunities to help in secular as well as in religious settings. Many people, including those who are nonreligious or antireligious, assist others. Thus, even when religion predicts prosocial behavior, as in cases where people make donations during participation in religious services, nonreligious, religiously unaffiliated people may help as much but in other contexts (Spilka et al., 2003).

Bennett and Einolf (2017) believe that in terms of helping strangers, religious norms of altruism may have an effect on nonreligious people; however, people are not likely to be recruited into helping strangers through social networks in the same way that they might be recruited into volunteering or making a charitable donation. On the other hand, higher levels of religious activity in a society may lead to a greater diffusion of prosocial norms that would increase the overall prosocial behavior of all the people within a society, regardless of whether or not they are religious.

In a resource allocation study, religious prosociality was measured to understand if it extends selectively to coreligionists or generalizes regardless of who is receiving it (Everett et al., 2016). They discovered that when religion is more central to the participants’ lives, they were more likely to share their bonus—regardless of whether they were giving to

Christians or atheists. This effect was most clearly related to the acts of “thinking about religious ideas” as compared to simply a belief in God. In another study, the activation of religious context increased the willingness to help, but only the homeless (Saroglou & Pichon, 2009). The tendency for some orthodox religious people to consider the targets responsible for their own problem is an association partially mediated by the belief in a just world for others (Lerner & Lerner, 1981), and it has been replicated in other studies discussed in this chapter (Batson et al., 1993).

Interestingly, seasonal affect has an impact on altruism and generosity—regardless of religious affiliation. Ekstrom (2018) showed that in a dictator game situation with a sample from Sweden, that end-of-year increase in altruism is equivalent to a 32% discount on the cost of giving. The study was conducted to assess the impact of Christmas on donations via payment from recycling—whether to keep the money or to donate it to foreign aid. It follows the quote by Charles Dickens:

“I have always thought of Christmas time, when it has come round, as a good time; a kind, forgiving, charitable time; the only time I know of, in the long calendar of the year, when men and women seem by one consent to open their shut-up hearts freely, and to think of people below them as if they really were fellow passengers to the grave, and not another race of creatures bound on other journeys.”

The explanation for this rise in behavior is in part due to self-signaling, Christmas’s societal emphasis on generosity around December. Batson and his colleagues have argued that being more religious cannot be equated with being more helpful. Furthermore, their review of the empirical literature up to 1993 concluded that religious people show no more active concern for those in need than do people who are less religious; they only present themselves as more concerned (Batson et al., 1993).

Work in 2015 by Fishman et al. explored the crucial intervening factors, namely, religious devotion and altruism on the concern of recruitment to the priesthood. Due to the restrictions the Catholic priesthood commands (i.e., celibacy, acceptance of hierarchy, and the renunciation of common social marker of success), the researchers sought to explore the determining factors that contribute to men joining the canonry. In developing their theoretical approach they borrowed from scholarship on behavioral economics, nonselfish orientations, and religious and economic spheres, resulting in the ideology that the greater the difference between the material rewards provided to the relatively successful and the lot befalling the less successful—the more pronounced the gradient of income inequality—the greater the social (and inner) pressures on individuals to pursue careers likely to satisfy the search for individual material advantage (Fishman et al., 2015).

A large study with a diverse sample of children from the United States, Canada, Jordan, Turkey, South Africa, and China looked at the altruistic and prosocial behavior of children reared in religious families (Decety et al., 2015). They found that children

from households identifying as either of the two major world religions (Christianity and Islam) were less altruistic than children from nonreligious households. Furthermore, the negative relation between religiousness, spirituality, and altruism changes across age, with those children with longer experience of religion in the household exhibiting the greatest amount of negativity in their relations. Another interesting finding from these data is that religiosity affects children's punitive tendencies when evaluating interpersonal harm, and that children from religious households are more likely to be identified by their parents as more empathic and more sensitive to the plight of others. They also believe that interpersonal harm is more "mean" and deserving of harsher punishment than nonreligious children. Thus, children who are raised in religious households frequently appear to be more judgmental of others' actions, while being less altruistic toward another child from the same social environment (Decety et al., 2015).

Saroglou et al. (2005) discussed existing discrepancies between the results of research employing a self-report methodology and research using experimental and quasi-experimental methodologies. In some research, religiousness does predict prosocial behavior. People who report that they view religion as important, and place a high value on it, report that they work more hours and are generally more committed to volunteer activity than are people who do not place a high value on religion (Kupper & Bierhoff, 1999; Penner, 2002). There is a general assumption within social psychology that experimentation is a methodology that is far more rigorous and more likely to lead to valid results than is self-report methodology. Self-report data may be biased by the desire to respond in socially desirable ways. Left out of this, though, is acknowledgment of the biases in experimentation—ranging from the typical use of artificial laboratory settings, and to operational definitions of altruism that entail short-term responses that are usually neither costly nor time-consuming, and demand characteristics, such as a desire to appease the experimenter (E. Midlarsky, 1968; E. Midlarsky & Bryan, 1967). In situations of the kind studied in experiments, the effect of religiosity often has only modest effects. As noted earlier, although volunteering and other forms of prosocial action may be prompted by egoistic and/or altruistic motives, people who report that they see religion as important, and place a high value on it, work more hours and are generally more committed as volunteers, as compared to people who do not place a high value on religion (Kupper & Bierhoff, 1999; Penner, 2002). Huber and MacDonald (2012) in a study with 186 undergraduates from a Catholic-affiliated university showed that individuals with nonreligious spiritual cognitions, low spiritual experience, and less religiousness demonstrate positive relations with both altruism and empathy.

There are indeed instances in which religious people report altruistic tendencies but do not necessarily behave prosocially. However, results of four recent studies have indicated that there is indeed a positive impact of religiousness on actual helping behavior, albeit a modest one. The primary findings suggested that religious young adults tended not to be aggressive when dealing with hypothetical daily hassles, and that although female students' religiosity was associated with willingness to help people described as "close"

in hypothetical situations, this helping tendency was not extended to those unknown to them. On the other hand, religious people not only reported high levels of altruistic behavior and empathy but were also perceived as high in altruism and empathy by peers (friends, siblings, or colleagues). Results also indicated that helping by religious people is not an artifact of gender, social desirability bias, security in attachment, empathy, or honesty (Saroglou et al., 2005).

There are also instances wherein religion is expected to result in behaviors such as willingness to participate in foster care. Indeed, the promotion of foster care in local faith-based congregations is based on the belief that religious people will be the most altruistically motivated. However, a study by Howell-Moroney (2014) showed the two main motivations behind fostering—the desire to obtain household income and also a child to help in the home—was not necessarily the case. Many of the religiously motivated parents were more likely to be altruistic, but not all. Fostering is not provided by altruistic motivations by religious foster parents. Generally, foster parents are motivated by either religious precepts or by altruism.

Although the results of studies on religion and altruism have generally not been strong, much of the work has focused on relatively low-cost, short-term helping—and it is in those situations in which religiosity has had no effect or modest effects. When we examine research on volunteering and other behaviors that occur over a longer time period, college students who are committed to their religion emerge as more involved, and give more time—as relief workers, tutors, and social justice activists, to name just three—than do college students who are not religiously committed (Benson et al., 1980; Hansen et al., 1995). George Gallup (1984) conducted a survey in which he found that among the 12% of Americans who were “highly spiritually committed,” 46% voluntarily helped infirm and poor people, in contrast to the 22% who were rated as “highly uncommitted.” Results of his 1987 survey indicated that people who attended religious services on a weekly basis gave two and a half times more money to charity than did those who never attended religious services. This pattern was confirmed in surveys conducted in 1990 and 1992 (Gallup & Lindsay, 1999). People who have high religiosity are also more inclined toward altruistic acts and prosocial behaviors (Shah & Ali, 2012). Their findings are consistent with numerous other researchers that support the relationship of religiosity with altruism. Similarly, they found religiosity had a significant relationship with belief in just world (BJW), which is also supported by other researchers.

The relationship between religious participation and donations has also been echoed in the relationship between religion and volunteer behavior. Results of the Westat (2001) poll, in which telephone surveys were conducted with 4,216 adults age 21 and above, religious participation was a predictor of volunteering. That is, 54% of those who attended religious services volunteered, in contrast to 32% of nonattenders. These respondents also donated more time to volunteer activities. Also, when Americans giving time and/or money to religious groups were compared with those involved solely in secular charitable

activities, even after controlling for economic resources, they were also more generous in giving to secular charitable appeals and volunteer efforts. In a recently published study looking into Islamophobia and donor support, partial support for discrimination was found. In particular, Christian respondents more likely to donate to charities that predominantly serve Christian populations (Tremblay-Boire & Prakash, 2019).

Research has also indicated that older adults are very generous, over long periods of time, particularly when they are high in religiosity (E. Midlarsky & Kahana, 1994). Among the non-Jewish altruistic rescuers of Jews during the Holocaust, there were higher degrees of religiousness than among the bystanders (Oliner & Oliner, 1988).

Is there evidence, then, that religion and altruism are related? There is frequently an assumption that religion is necessary if altruism is to occur. Most if not all of the world religions teach—through exhortations, religious writings, and religious exemplars, such as the saints—the importance of doing good deeds and becoming truly altruistic (Beit-Hallami & Argyle, 1997; McFadden, 1999).

Jewish law (Halakhah), Muslim law (Sharia), and Christianity have differing views on organ donation, which makes conversation on the topic in countries like Israel an interesting endeavor. Nevertheless, studies have been conducted on the topic to get a feel especially of young college students' attitudes. Khalaila (2013), for example, looked at 563 Israeli students and found that 66% of them stated a willingness to donate organs, but only 18% signed organ donor cards. This large gap has been explained in large part by religious beliefs. They also found that altruistic behavior has the largest positive impact on students' willingness to become organ donors in the future.

In other treatments, intense religious experience of a higher presence or power—first studied by William James (1902)—has been found to deepen commitment to religion. Of those reporting religious experiences, Hays (1990) found that when his research was being conducted, 56% attended church. People reporting religious experiences tend to have more positive feelings toward others and express the desire to help them. In addition to wishing to help others, religious people may engage in altruistic behavior. Among what is admittedly a minuscule number of believers, altruism has led to saintly behavior. Among the courageous, altruistic gentile rescuers of Jews during the Holocaust, who risked their lives in order to save the lives of others, many said that their religious faith guided their behavior. On the other hand there was a similar number who helped for secular reasons (Oliner & Oliner, 1988). In our own research on these Holocaust heroes, several spoke of being prompted to do so for religious reasons, in contrast to none of the bystanders. Nevertheless, despite this qualitative finding, religion was not among the variables discriminating Holocaust rescuers from bystanders (E. Midlarsky et al., 2005).

Although some of the research evidence points to religion as a cause of altruism (though some does not), religion can also have adverse effects. When the highest stage of faith is reached, the individual may be able to transcend their own concerns and experience the connection to the Creator and to all of humanity (Fowler, 1991). However, when

people become religious extremists, there may be adverse effects. Under certain circumstances, those who adhere to a religion that demands courses of action that can lead to great rewards (and when not performed, lead to terrifying punishments) they may become prejudiced, and even violent terrorists (Juergensmeyer, 2000). Religion may block empathy for others who are believed to violate one's religious values (Jackson & Esses, 1997). Research of this kind argues for the need for a universally compassionate religious style, in which people in need are helped regardless of their belief system (Batson et al., 2001).

Conclusions and Future Directions

Research on both altruism and religion has become increasingly well developed. Nevertheless, a great deal remains to be done. Both altruism and religion are multidimensional phenomena, and both require multidisciplinary study if they are to be fully understood. Despite attention paid to religion, no widely accepted definition has emerged. Altruism is a word that has been supplanted in the psychology literature by the term "prosocial," largely because of concern about whether prosocial behavior is "truly" altruistic or, instead, is egoistic. However, just as people who attend religious services may be doing so for multiple reasons—including the need for affiliation, support, and the need to do the "right thing"—generosity may be based on egoistic or altruistic reasons, varying with the potential recipient and the situation. A person whose religious beliefs are grounded in having reached the highest level of faith in the Creator, whether stemming from egoism or altruism, may be just as uncommon as an individual whose acts of assistance are solely driven by selfless motivations.

Thus, we argue that few helpers have only a single motive, and it may be appropriate to recognize that among those who respond to the needs of others with prosocial behavior, few do so out of altruistic motives alone. Even if there is an "altruistic gene," in addition to or in place of a "selfish gene," it is likely that the complex sequences involved in human behavior require extensive psychosocial development as well.

It is also important to note that in contrast to the view that both altruism and religion are "good," both can have adverse outcomes. Religion can prompt violence, prejudice, and terrorism, although it can also lead to lower rates of drug and alcohol addiction and sexual acting out.

Generosity, even when motivated by altruism, can lead to dependency of the recipient. Self-sacrifice on behalf of a victim on the basis of altruistic moral principles or empathic concern can lead to neglect (e.g., of one's own family) or even destruction of others (as in the case of Himmler; M. Midlarsky, 2005; M. Midlarsky & Midlarsky, 2003).

Concerning the relationship between altruism and religion, a great deal of research is needed, if it is to be better understood. Some suggestions for future work in this domain are as follows:

1. Sociobiologists argue that there may be a biological substratum for complex behaviors, including human altruism. Additional research is needed to more firmly establish conceptual and causal links between the biological and the social/behavioral sciences in this domain.
2. More research is needed to develop measures and other operational definitions of both religion and altruism.
3. Spontaneous, low-cost helping and long-term care for others that is costly for the benefactor may have different preconditions, including different religious antecedents. This possibility needs to be investigated.
4. Religious faith and principled altruism may be experienced and expressed more fully as predisposed individuals move through the life course. More work is needed on the dimensions of altruism and religion, and the links between them at developmental stages from childhood through late life.

Finally, this chapter was designed to separately review theoretical and empirical dimensions of altruism and religion and the fledgling research on the relationship between them. Both phenomena are critical in human behavior and interaction. Further research is warranted, and it may well result in an enhanced ability to contribute to the well-being of individuals and of groups.

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Spiritually Sensitive Psychotherapy: An Impending Paradigm Shift in Theory and Practice

Len Sperry

Abstract

Increasingly clients expect that therapists and other mental health professionals will incorporate spiritual issues in their psychotherapy and other mental health services. In addition, the ethics codes and diversity policies of the various mental health professions also expect that therapists will be sensitive to spiritual issues. Such expectations require many of these professionals who may have been indifferent or less sensitive to spirituality and spiritual issues to become more sensitive to them. This chapter reports on the paradigm shift that is currently under way in how spiritually sensitive psychotherapy and other mental health services are conceptualized and practiced by an increasing number of mental health professionals. Six indicators of this shift are described, and their implications are discussed.

Key Words: paradigm shift, postmaterialist perspective, competencies, well-being therapy, positive psychology, mindfulness, spiritual development

Introduction

Today, clients increasingly expect that spiritual issues will be incorporated in psychotherapy (Lesser, 1999; Sperry & Peteet, 2016). Through their ethics codes and diversity policies, the mental health professions also expect that therapists will be sensitive to spiritual issues (Sperry & Stoupas, 2017). Such expectations require many therapists who were indifferent or less sensitive to spirituality to become more sensitive to it. Although a few therapists have endeavored to deal with these issues in the past, only recently have formal approaches to spiritually oriented therapy emerged (Sperry & Shafranske, 2005). Many of these approaches are simply modifications of existing therapeutic systems such as psychoanalysis (Rizzuto, 2005), Jungian psychotherapy (Corbett & Stein, 2005), cognitive-behavioral therapy (Tan & Johnson, 2005), interpersonal psychotherapy (Miller, 2005), and the humanist psychotherapies (Elkins, 2005). Unfortunately, such approaches can have inherent limitations relative to their theoretical and scientific bases that can limit their clinical value, utility, and efficacy.

Table 13.1 Indicators of the Paradigm Shift in Psychotherapy
1. Shift from a materialist to postmaterialist psychology and psychotherapy 2. Shift from a psychologization of spirituality to an integrative, holistic spirituality 3. Shift from a psychopathology focus to a consciousness and spiritual growth focus 4. Recovery of virtue and the influence of positive psychology on psychotherapy 5. Development of new therapies based on positive psychology and well-being models 6. Development of competencies in psychotherapy practice and training

Fortunately, this is a particularly propitious moment for spiritually sensitive psychologists and other psychotherapists to be alive and professionally engaged as a paradigm shift in the theory and practice of spiritually sensitive psychotherapy appears to be under way. In my opinion, this paradigm shift promises to radically alter the way in such therapies are conceptualized and practiced, and presumably the way in which trainees are educated. Table 13.1 lists six indicators of this impending shift. This chapter describes and discusses these indicators. This discussion can provide a broad context in which to read and reflect upon the approaches described in subsequent chapters of this section of the *Handbook*.

The Paradigm Shift in Psychotherapy

Paradigm shift refers to a revolution or significant change in the basic assumptions and practices in a science. Paradigm shift contrasts with “normal science” in which common assumptions remain unchanged and any “developments” in the field are simply evolutions or modifications of existing practices (Kuhn, 1962). While originally directed to the physical sciences, the paradigm shift perspective is also useful in understanding developments in the social sciences. For example, the “cognitive revolution” is considered in to be a paradigm shift in the (Kuhn, 1962, p. 224) science of psychology. It is argued that the cognitive revolution shifted the central focus from a purely behavioral approach to human behavior and toward the acceptance of cognition as necessary for an integrative and fuller understanding of psychological factors influencing human behavior. That shift occurred from the late 1960s through the 1970s and resulted in cognitive-behavioral therapy, which is now the most commonly practiced psychotherapy in the world. However, since the original version of Beck’s cognitive therapy (1976) was based on essentially the same materialist and reductionist assumptions as Wolpe’s behavior therapy (1969), it is questionable whether a paradigm shift technically occurred, at least in the early days. More recently, however, basic assumptions compatible with a postmaterialist perspective are evident in the so-called third wave of cognitive and behavioral therapies (Hayes et al., 2004).

Today, a concomitant paradigm shift is emerging that is influencing the theory and practice of psychotherapy (Sperry, 2011). This shift has and will continue to impact spiritually sensitive psychotherapy. Specific change factors that have been and are operative in this paradigm shift are highlighted. Six indications of this impending change are described here.

Shift From a Materialist to Postmaterialist Psychology and Psychotherapy

From the earliest times, psychology was understood as “the study of the soul.” Since the late 19th century in its quest to become a science (i.e., scientific psychology), psychology sought to free itself from its roots in “value-based” philosophy and become “value free” like physics and the biological sciences. Psychology also adopted a perspective and a method (i.e., the scientific method) that were decidedly materialist. This materialist perspective includes the following premises: Phenomena that exist are measurable. Human life is a material phenomenon, wherein the mind is an expression of matter. Furthermore, God, afterlife, free choice, and other spiritual phenomena are essentially false projections of the mind.

Reductionism and dualism are two philosophical constructs that underlie this materialist perspective. Reductionism is a way of understanding the complex nature of a phenomenon by reducing it to the interactions of its parts, or to simpler or more fundamental phenomena (Nagel, 2012). Reducing grief or spiritual striving to a neuroscience construct such as neurotransmitter activity is an example of reductionism. Like reductionism, dualism is a central tenet of the perspective that posits the dual nature of reality. While Descartes championed the mind–body split, many in psychology separate the mind from the brain (Sperry, 2010).

Although reductionism is an essential construct in the materialist perspective, dualism is not (Stapp, 2005). This is evident in the new unified theory of psychology (Henriques, 2004a). This theory advocates that for psychology to become truly scientific, it must relinquish its adherence to mind–brain dualism and embrace the nondualist theory called scientific naturalism, which posits that all mental process are basically biologically determined and measurable (Rand & Hardi, 2005). Adopting such a theory and its underlying philosophical premises promises that the psychological sciences will experience dramatic scientific developments as well as increased respect within the scientific community (Henriques, 2004b). Although it allows for the scientific study of religion and spirituality, the proposed unified theory is problematic since values considered central to spirituality, such as love and serving others, are incompatible with scientific naturalism. Besides being materialist, the proposed unified theory is reductionist in that it “reduces” phenomena such as spiritual transcendence to neurobiology and biochemistry. More accurately, the unified model represents a biologization of spirituality. Not surprisingly, some have expressed considerable concern about such a unified theory and have called for alternatives (Slife, 2005).

In the materialist reductionism perspective, the universe is considered a mechanical system like a clock (Newton, 1713), the body and brain are localized bits of matter, and every action in this classical view of physics is determined by mechanical forces (i.e., localized causality). Subjective experiences such as human consciousness, intuition, thoughts, and feelings are simply passive bystanders of such a mechanical system and its processes. Furthermore, reductionism and dualism characterize this perspective. By

contrast, postmaterialist perspectives are more holistic instead of reductionist, less characterized by nonlocal causality, and more consistent with quantum physics (Bohm & Hiley, 1993). Accordingly, human consciousness, intuition, thoughts, and feelings are under the control of an individual with free will.

The alternative to reductionism is nonreductionism or holism (Sperry & Mansager, 2004), while an alternative to scientific naturalism is quantum field theory, which is non-dualist. Interestingly, the need for a holistic psychotherapy approach that is sensitive to spiritual issues, particularly spiritual growth and development, is becoming a felt need among an increasing number of therapists today.

Shift From a Psychologization of Spirituality to an Integrative, Holistic Spirituality

A current and troubling concern is the “psychologization” of spirituality (Cortright, 1997). Psychologization refers to the therapeutic influence that modern psychology exerts on understanding the spiritual life. In a psychologized spirituality, spirituality is “reduced” to psychological constructs. Such psychological reductionism involves an overreliance and uncritical adoption of such constructs as “self-fulfillment” and “self-realization.” This is problematic because true spiritual growth involves transformation of self (i.e., self-emptying) rather than self-absorption, which fosters narcissism (Sperry, 2002b). A more recent form of reductionism is the “biologization” of spirituality in which spirituality is reduced to neurology and biochemical processes such as the so-called God gene (Hamer, 2004).

Some therapeutic approaches unwittingly foster such psychologization of spirituality, and understanding the underlying relationship of spirituality to psychology is useful in choosing such an approach. While there is yet to be a consensus definition of spirituality (McSherry & Cash, 2004; Sperry, 2005), it is possible to describe the various ways the relationship of spirituality and psychology has been described or implied in psychological and spiritual theories. If one articulates the relationship between the domains of spirituality and psychology in terms of two sets of factors—whether the domains are the same or different, and which domain has primacy over the other—it is possible to derive five different relationships. These five relationships represent a taxonomy (Sperry & Mansager, 2007), which is briefly described here:

1. Psychology and spirituality are viewed as essentially the same with psychology having primacy. There is little or no need for spiritual interventions or disciplines necessary to effect development. This is the epitome of psychological reductionism, and it is exemplified by the classical psychoanalytic approach (Freud, 1927/1995).
2. Psychology and spirituality are essentially the same, with spirituality having primacy. This view is represented by classical Jungian psychotherapy (Jung,

1963) and a few traditional approaches to spiritual direction and pastoral counseling (May, 1992). This is the epitome of spiritual reductionism.

3. Psychology and spirituality are essentially different, with psychology having primacy. This view is representative of some spiritually oriented psychoanalytic approaches (Shafranske, 2005), as well as some existential-humanist approaches (Elkins, 2005).
4. Psychology and spirituality are essentially different, with spirituality having primacy. In this view, growth in one domain such as the psychological can be reflected in the other but is not inevitable. Thus, one can be saintly but neurotic. This view is representative of a number of the transpersonal approaches to psychotherapy (Cortright, 1997) and spiritually oriented interpersonal psychotherapy (Miller, 2005), as well as spiritually oriented cognitive-behavioral therapy (Tan & Johnson, 2005).
5. Psychology and spirituality are essentially different, with neither having primacy nor being reducible to the other. When client concerns involve symptom or problem resolution, psychotherapeutically oriented strategies are indicated, whereas when concerns involve ultimate questions and answers, spiritually oriented strategies are indicated. This view is representative of the holistic orientation (Sperry & Mansager, 2004).

This taxonomy identifies the first four orientations as being reductionist with the fifth as holistic (i.e., nonreductionist). Reductionist approaches are less likely to be developmentally oriented. On the other hand, holistic approaches are postmaterialist in perspective and more likely to be strengths based and growth oriented.

Growth-oriented, spiritually sensitive psychotherapies tend to emphasize constructing meaning and the transcendent over decreasing symptoms and impairment, that is, an emphasis on meanings more than on observation of facts. Such therapy requires a focused listening to the client's experience to understand their meaning. In short, "(s)piritually sensitive psychotherapists offer a particular kind of listening, a listening that is receptive to the meanings of psychological difficulties within a broad and transcendent context" (Shafranske & Sperry, 2005, p. 25). Not surprisingly, such approaches are based on a postmaterialist perspective.

Shift From a Psychopathology Focus to a Spiritual Growth and Consciousness Focus

Basically, conventional psychotherapy practice is psychopathologically focused (Sperry, 2002a). This means that therapeutic interventions are directed at reducing symptoms and improving functioning. Such a pathological focus is not uncommon in spiritually sensitive psychotherapy, at least for two of the three usual indications for it, that is, coping with a serious stressor, or a crisis of faith or meaning, whereas the third, spiritual growth, is not

(Shafranske & Sperry, 2005; Sperry, 2010). While a focus on spiritual growth may seem more consistent with traditional spiritual direction, today individuals are increasingly seeking out psychotherapists rather than ministers to foster their spiritual as well as psychological development. Others are turning to mindfulness practices and spiritual coaching (Belf, 2003). This is not to suggest that spiritual growth has no place in the first two indications of spiritually sensitive psychotherapy. Instead, it is proposed that spiritual growth should be an expected outcome for all three indications, albeit a secondary outcome for the first two and the primary outcome for the third. This section begins with a description of the three common indications for psychotherapy that is sensitive to spiritual and religious issues and concerns. Then, it discusses consciousness and levels of consciousness as indicators of spiritual development.

There is increasing recognition that spiritual and religious issues are common in and outside therapy. The *Diagnostic and Statistical Manual* (DSM) has responded to this recognition with the V-Code “Religious or Spiritual Problems” (V62.89). It is a diagnostic category for religious or spiritual problems that includes distressing experiencing involving the loss or questioning of one’s faith, problems associated with conversion to a new faith, or of questioning one’s spiritual values (American Psychiatric Association, 2013). This designation primarily reflects the second of the three indications for spiritually integrated psychotherapy.

Coping With a Serious Stressor

Perhaps the most common of the three clinical indications of spiritually integrated psychotherapy involves the use of spiritual resources in coping with serious stressors and tragedies. The range of stressors is quite broad and includes serious health problems, significant personal losses or professional losses, as well as difficult interpersonal and family conflicts. Common religious and spiritual resources for coping with such stressors include prayer, attendance at religious services, emotional support of a faith community, and so on (Pargament, 2001). Spiritually sensitive therapists can assist such distressed clients in identifying and utilizing such spiritual resources to cope more effectively.

Case Example: Patricia is a 34-year-old, single, African American female who sought therapy following the death of her mother. During the brief spiritual assessment of the initial evaluation, Patricia revealed that while she considered herself a deeply spiritual person, she had stopped attending church as an adolescent against her mother’s wishes. Because of a recent job transfer out of town, she had no support from either a faith community or her extended family. In the weeks following her mother’s death, she had become increasingly depressed, anxious, tearful, and guilt ridden. Her constant thought was that her deeply religious mother “begged me not to take that job transfer and look what happened. I should have listened to her.” At some level she knows this thought is “ridiculous but my guilt is crushing me and maybe God is punishing me for leaving my mother.” Her

expectation is that therapy will help her cope better, reduce symptoms, and clarify her issues. While spiritually sensitive psychotherapy can help her meet these expectations, it could also foster her personal and spiritual growth.

Crises of Faith and Meaning

Any number of tragedies and stressors can provoke a crisis of faith or meaning. These can include betrayals, the death of a child, or other losses resulting in a crisis of faith or meaning in life. Such crises are also called spiritual struggles. “Spiritual struggles are signs of spiritual disorientation, tension, and strains. Old roads to the sacred and old understandings of the sacred itself are no longer compelling. In their place, people struggle to reorient themselves and find a new way to the sacred or a new understanding of the sacred” (Pargament, 2011, p. 112). Pargament (2007) identifies three types of spiritual struggles: interpersonal, intrapersonal, and divine. Interpersonal struggles involve family, friends, or congregations about matters such as gossiping, cliquishness, hypocrisy, or disagreement with doctrine. Intrapersonal struggles typically involve uncertainty or doubt about spiritual matters or serious doubts about one’s religious tradition. A third form of struggle involves tensions between an individual and the divine often in the face of critical life events when an individual comes to question or doubt God’s existence or the belief that God is caring and benevolent in the face of adversity. Such questioning and doubts are referred to as crises of faith. These struggles can be temporary expressions of spiritual pain that quickly resolve, or they may be protracted experiences that result in anxiety or depressive conditions with lowered physical and relational functioning and quality of life (Exline & Rose, 2005).

Case Example: Leila is a 47-year-old, married female who complains of worsening anger, confusion, insomnia, and “down moods” of four months’ duration. It appears that her symptoms began soon after a priest in her parish was indicted for sexual misconduct with an adolescent. It appears that although Leila had no such history, her younger brother had been abused by a priest from age 13 to 15. After the indictment, Leila reports that she stopped all church involvement and began questioning her faith in “a God that would let such terrible things happen to kids.” While spiritually sensitive psychotherapy can be directed at resolving this spiritual crisis, presumably it could also foster her personal and spiritual growth.

Spiritual Growth

Spiritual growth refers to the development and formation of the whole person by an intentional focus on increasing the person’s self-aware consciousness, self-transcendence, and transformation (Sperry, 2002b). It involves developing the person’s spiritual and interior life with spiritual practices and disciplines such as prayer, fasting, simplicity, solitude, and worship (Walsh, 1999). Such spiritual formation can also include the more intimate and in-depth process of spiritual direction (May, 1992; Sperry, 2002b).

Case Example: Martin, a 43-year-old, married executive, had just made an appointment with a psychologist who practiced spiritually integrated psychotherapy. He had been referred by a friend who was involved in “growth counseling” with the psychologist. Martin sought help in “toning down my obsession with work” and “getting more balance in my professional, family, personal, and spiritual life.” While Martin regularly worked 60 hours a week, the same or less than his fellow executives, he did not find his work satisfying or as meaningful as it had been in the past. He attributed this to a midlife crisis in which he felt increasingly disconnected from his family and friends and “spiritually impoverished.” Spiritually sensitive psychotherapy that is informed by spiritual direction can presumably help Martin achieve this outcome.

Levels of Consciousness

Consciousness is commonly understood as the awareness of one’s existence, sensations, thoughts, and feelings. Self-aware consciousness is the uniquely human capacity to remember and reexperience the past in the immediacy of one’s own intuitions. Individuals differ in their capacity for self-conscious awareness depending on their degree of adaptability and their “level of awareness of the context in which . . . (they) live” (Cloninger, 2004, p. xvi). Four differing levels of self-conscious awareness can be identified. They are as follows: little or no conscious awareness; minimal awareness; moderate awareness; and maximal awareness. These levels of awareness reflect levels of spiritual development that have long been described in early Judeo-Christian literature, beginning with the Bible. Initially, three “ages” of spiritual growth and development—beginner, proficient, and perfect—were described. While favored by Origen and Augustine, these “ages” were replaced by the “ways” of purgative, illuminative, and unitive during the Middle Ages. More recently, efforts to combine the “ages” and “ways” have resulted in three “stages” of the spiritual life (Garrigou-Lagrange, 1938). These stages or levels appear to be comparable to the levels of conscious awareness.

Clinically speaking, these levels of self-aware consciousness can be approximated in terms of functionality and impairment on the Global Assessment of Functioning (GAF) scale (Aas, 2011). Furthermore, level of self-aware consciousness can also be approximated from the duration of the individual’s response to distress and upset. Specifically, individuals with very high levels of self-awareness have a very short-lived response to even moderate to severe distress, while individuals with very low levels seem to experience distress for several hours or even days. These four levels of self-aware consciousness with their clinical correlates can be described as follows (Sperry, 2010, 2018).

LEVEL 0

Individuals here tend to experience very little or no awareness and instead engage in emotional thinking, act in an egocentric fashion, seek immediate gratification, and display

impulsivity and emotional instability. They often carry diagnoses of severe personality disorders, substance dependence, or psychoses. Furthermore, their experience of distress typically lasts for several hours or even a few days at a time until a sense of calm is reestablished. Their GAF scores tend to be lower than 60.

LEVEL 1

Individuals here tend to experience a minimal level of awareness. Accordingly, their actions are purposeful and although still somewhat egocentric, they have some impulse control and can delay gratification. Generally, they can function relatively well in nonstressful situations, but they fare poorly when under moderate stress during which they can exhibit a range of negative affects. The duration of their experience distress and upset usually lasts for hours. Their GAF scores tend to be in the range of 60 to 74.

LEVEL 2

Individuals here tend to experience a moderate level of awareness. They are mature and are aware of others' needs as well as their own subconscious thinking. Their demeanor is characterized by calmness and patience. They typically experience positive emotions and are able to observe themselves and others with little need to judge or blame. As a result, they deal reasonably well with conflicts and relationships. The duration of their experience distress and upset usually lasts for minutes to an hour or so. Their GAF scores tend to be in the range of 75 to 90.

LEVEL 3

Individuals here tend to experience a maximal level of awareness. This translates to effortless calm, impartial awareness, creativity, and loving behavior. They are in touch with previously unconscious thoughts and motivations, possess a balanced outlook on life, and no longer struggle with wishful thinking and conflicts. Consequently, their experience of distress and upset is very short lived and momentary. Their GAF scores tend to be at the highest levels, that is, in the 90s. Cloninger (2004, 2011) has described a similar but different view of consciousness levels.

Relationship of Mindfulness to Levels of Spiritual Development

Therapists are increasingly incorporating mindfulness into spiritually oriented psychotherapy practice (Plante, 2016). Many assume that mindfulness is not simply a psychological intervention but also a spiritual intervention, or at least a psychospiritual intervention. Is that assumption accurate? Although it is beyond the scope of this chapter to fully respond to this query, it is possible to describe levels of mindfulness and their relationship with levels of spiritual development (Sperry, 2018).

Mindfulness is defined as “awareness of present experience with acceptance” (Germer, 2013, p. 7). Three core psychological processes and skills are associated with mindfulness.. They are:

- (1) concentration (single-focus awareness), (2) mindfulness per se (open-field awareness), and (3) loving-kindness and compassion. Until recently, the first two psychological processes have been emphasized in mindfulness- and acceptance-based psychotherapy. Those skills are also the primary vehicles for cultivating wisdom. . . . The third skill—loving-kindness and compassion—helps to cultivate a caring attitude toward ourselves and others, especially in the midst of suffering, which, in turn, allows us to hold our moment-to-moment experience with greater mindfulness and less resistance. (Siegel & Germer, 2012, p. 11)

The first two core processes and skill of mindfulness represent psychological interventions, while the third, loving-kindness and compassion, more accurately represents a psycho-spiritual intervention (Sperry, 2018).

Related to mindfulness is soulfulness which represents a much higher level of self-awareness than mindfulness because of its contemplative qualities. The “soul is the reservoir for our core values based on what really matters and what gives meaning and purpose to our life” (Hammer, 2018, p. 2). From a therapeutic perspective. “Soulfulness is much more powerful in transforming personality than is mindfulness, which often fails to reduce feelings of hopelessness” (Cloninger, 2006, p. 74). Unlike mindfulness, soulfulness represents a spiritual intervention. In terms of levels of spiritual development mindfulness is the domain of the second level, while soulfulness is the domain of the third level of spiritual development (Sperry, 2018).

Recovery of Virtue and the Influence of Positive Psychology on Psychotherapy

Although Maslow used the term “positive psychology” in 1954 and subsequent psychologists emphasized the promotion of mental health over the treatment of mental illness, Martin Seligman is considered the father of the modern positive psychology movement (Seligman & Csikszentmihalyi, 2000). Positive psychology’s roots are in humanist psychology with its focus on happiness and fulfillment. Earlier influences on positive psychology came primarily from philosophical and religious sources that predated the development of scientific psychology. Chief among these was Aristotle’s belief that happiness is constituted by rational activity in accordance with “virtue.” Christianity further developed virtue with its emphasis on the four cardinal virtues (prudence, temperance, justice, fortitude) and the three theological virtues (faith, hope,

charity), which served as a counterpoint to the seven deadly sins or vices, which centered on self-indulgence and narcissism.

Until the advent of scientific psychology in 1879, when Wundt established the first laboratory in experimental psychology, virtue was central to psychology. Virtue is traditionally defined as the disposition that moves one to accomplish moral good, or more contemporaneously, as a value in action (Peterson & Seligman, 2004). Essentially, virtue was “lost” for more than a century as scientific psychology developed, until its recent “recovery” as the positive psychology movement emerged. The publication of *Character Strengths and Virtues: A Handbook and Classification* by Peterson and Seligman (2004) represented a landmark research effort in identifying and classifying the positive psychological traits of persons. It identifies six classes of virtue consisting of 24 measurable character strengths. These include the following: (1) Wisdom and Knowledge: characterized by creativity, curiosity, open-mindedness, love of learning, perspective, and innovation; (2) Courage: characterized by bravery, persistence, integrity, and vitality; (3) Humanity: characterized by love, kindness, and social intelligence; (4) Justice: characterized by citizenship, fairness (Peterson & Seligman, 2004, p. 229), and leadership; (5) Temperance: characterized by forgiveness and mercy, humility, prudence, and self-control; and (6) Transcendence: characterized by appreciation of beauty and excellence, gratitude, hope, humor, and spirituality (Peterson & Seligman, 2004).

The recovery of the virtue tradition by positive psychology has influenced the practice of psychotherapy. The next section describes two such approaches.

Development of New Therapies Based on Positive Psychology and Well-Being Models

As suggested earlier, spiritually sensitive psychotherapy approaches based on materialist and reductionist premises are out of step with the impending paradigm shift, in contrast with approaches that are more holistic and based on virtues, strengths, and consciousness. In terms of levels of consciousness, cognitive-behavioral therapy and many conventional psychotherapy approaches appear to be primarily focused on Level 0 and Level 1 of consciousness and related clinical considerations. That is problematic for two reasons: First, treatment end points are limited to symptom reduction and at most to relapse prevention. These end points are particularly problematic in long-term, chronic conditions such as in recurrent depression wherein residual symptoms persist in the majority of patients upon successful treatment of their illness (Fava et al., 1998). Second, when the goal of therapy is reduction of symptoms and impairment, but not increased personal effectiveness and well-being, relapse is likely and perhaps even inevitable. Based on a six-year follow-up study of a novel treatment prevention strategy, it was speculated that merely being in remission of symptoms was insufficient to prevent relapse and that the absence of well-being actually creates conditions of vulnerability for relapse (Fava et al., 2004).

What is needed is another type of treatment, a more holistic therapy that can move clients beyond reduction of symptoms and impairment to complete symptom remission and higher levels of consciousness. In short, a therapy approach is needed that can promote growth to Level 2 functioning and higher. Whereas conventional approaches seem to focus largely on the assessment of symptom and deficits and specify a diagnosis, a holistic, growth-oriented approach should focus more on the assessment of consciousness, strengths, and positive experiences and actions. General treatment goals would likewise differ. Where conventional approaches would emphasize reducing symptoms and impairment (Levels 0 and 1), Level 2 goals would emphasize increasing self-awareness and spiritual development.

Positive Psychotherapy

Seligman and colleagues at the University of Pennsylvania have developed a way to treat conditions like depression by focusing on virtues, building positive emotions, and increasing the client's sense of meaning, instead of simply reducing symptoms such as sadness (Seligman et al., 2006). This approach utilizes a combination of 12 exercises that can be practiced individually or in groups. The technique, "using your signature strengths or virtues," is a primary intervention in positive psychotherapy. When tested in a randomized controlled trial, it was found that this technique did lead to positive treatment outcomes (Seligman et al., 2006). Seligman's positive psychotherapy approach is one of a number of emerging forms of psychotherapy influenced by positive psychology. Another promising approach is well-being therapy.

Well-Being Therapy

Well-being therapy is a theoretically and empirically derived treatment approach with promising treatment outcomes data (Fava et al., 2004). Well-being therapy was developed by Fava (2003) specifically as a relapse preventive strategy in the residual phase of affective disorders, and for nonresponders to standard treatment for affective disorders. Subsequently, it was expanded as a treatment intervention for anxiety disorders, including obsessive-compulsive disorder (Fava & Ruini, 2003). More recently, it has been utilized as a strengths-based strategy in school counseling and in life coaching (Ruini et al., 2006). Several studies show its superiority when compared to cognitive-behavioral therapy alone, including a six-year follow-up of nonmedication treatment for preventing recurrence in depression, which showed that when well-being therapy strategies were included in treatment, results were only 40% relapse rate compared to 90% rate with clinical management (Fava et al., 2004). Based on Ryff's (1989) model of well-being, well-being therapy is structured, directive, and problem oriented, yet it is client centered in that the client's positive appraisals of well-being lead the course of treatment. This contrasts with most other therapy approaches in which the therapist takes considerable responsibility in specifying destination and goals of treatment and leading the process. Well-being therapy is

an eight-session therapeutic intervention that emphasizes both self-observation, as well as interactions with the therapist. Interestingly, the therapist's role in well-being therapy is more that of a coach, with the client being largely responsible for leading the change process.

The overall goal of well-being therapy is to enhance the client's sense of well-being. This is accomplished by a threefold strategy. First, enhance the client's awareness of positive moments. Second, discuss and change negative thoughts that disrupt episodes of well-being. Third, improve the clients' impairments in six well-being dimensions. The therapeutic process in well-being therapy is rather straightforward. It begins with teaching the client to record (in a structured diary) current episodes of well-being and thoughts that sidetrack those experiences. It then involves reinterpreting those thoughts viewed from an observer's standpoint. Then, it utilizes reinterpretations to increase a sense of well-being in any of the six well-being dimensions that are impaired.

A variety of therapeutic interventions are utilized in well-being therapy. These include cognitive restructuring, distancing, fostering positive thinking, homework, happiness interventions, and spiritual practices. Well-being therapy can be provided individually or in small groups. It has been used with adults, older adults, children, and adolescents in clinical and nonclinical settings (Fava & Ruini, 2003). Well-being therapy is a directive and structured treatment approach in which the focus of treatment can be specified. As it is currently formulated, in the initial sessions, the focus is on identifying periods of well-being through a structured diary. Clients are taught to rank episodes of well-being on a scale from 0 to 100, where 0 represents the absence of well-being and 100 represents the most intense well-being that could be experienced. The focus on intermediate sessions is on discovering how thoughts and behaviors characteristically prevent well-being, once this pattern is recognized. These sessions emphasize self-monitoring moments and feelings of well-being. During these sessions the therapist encourages the client to engage in pleasurable activities each day, and they discuss specific strategies for enhancing well-being. The final sessions focus more directly on impaired dimensions of well-being. The therapist guides the client in recognizing errors in thinking and in generating alternate interpretations (Fava & Ruini, 2003).

Development of Competencies in Psychotherapy Practice and Training

Competency is the current zeitgeist in psychotherapy practice and training. Not simply another approach or training method, competency represents a veritable paradigm shift in psychotherapy training and practice. As such, it is challenging much of what is familiar and comfortable. Thus, requirement standards are beginning to be replaced with competency standards, core competencies are replacing core curriculums, and competency-based licensure is on the horizon. This trend is already evident in medical training, where competency standards have replaced requirement standards and competency-based examinations are a requirement for medical licensure.

The shift to psychotherapy competency is also an accreditation standard in psychiatry training programs, which now require that trainees demonstrate competency in at least three psychotherapy approaches. Training programs in clinical psychology have solidly embraced competencies, and marital and family therapy and professional counseling programs are poised to follow suit. Because competencies involve knowledge, skill, and attitudinal components, competency-based education is very different in how psychotherapy is taught, learned, and evaluated. Not surprisingly, models of instruction and supervision must necessarily change. The emergence of competencies on the center stage of training and practice reflects several societal trends, among them the demand for professional accountability and evidence-based practice. Fortunately, the expectation that therapists demonstrate the effectiveness of their therapeutic work parallels the recent upsurge in treatment outcomes research.

Six core psychotherapy competencies have been described. They are as follows: (1) articulate a conceptual framework for psychotherapy practice; (2) develop and maintain an effective therapeutic alliance; (3) develop an integrative case conceptualization and treatment plan based on an integrative assessment; (4) implement interventions; (5) monitor treatment progress and outcomes and plan for termination process; and (6) practice in a culturally sensitive and ethically sensitive manner (Sperry, 2010, 2011).

Currently, there is no consensus on competencies involving spiritually sensitive psychotherapy. Nevertheless, some have also endeavored to establish competencies and ethical guidelines for spiritually sensitive practice (Gonsiorek et al., 2009; Richards, 2009). While the current lack of consensus on competencies leaves a void for psychotherapists practicing in this area, it provides both a challenge and an opportunity for this specialty field to develop and mature.

There are, however, three notable developments to aid psychotherapists. The Association for Spiritual, Ethical, and Religious Values in Counseling (ASERVIC), a division of the American Counseling Association (ACA), has published a list of competencies: “Competencies for Addressing Spiritual and Religious Issues in Counseling” (ASERVIC, 2009; Cashwell & Young, 2005). It is noteworthy that these competencies have been recently revised and extended (ASERVIC, 2009). This revised document includes 14 competencies of which the first six are cognitive competencies, for example, “can describe the similarities and differences between spirituality and religion,” while the last five are clinical competencies. These involve assessment, diagnosis, goals setting, and the utilization of spiritually sensitive treatment interventions.

The American Psychological Association’s (APA) Division 36 (Psychology and Religion) has developed some preliminary guidelines (“Preliminary Practice Guidelines for Working with Religious and Spiritual Issues”) that focus on assessment, therapy, and diversity considerations in the practice of spiritually oriented psychotherapy (cf. Appendix 2.1, Hathaway & Ripley, 2009). While these guidelines have not been formally adopted by the APA, they “represent the sorts of common best practice recommendations from

exemplar clinicians who specialize in addressing religious and spiritual issues in practice” (Hathaway & Ripley, 2009, p. 33).

More recently, a research group has proposed 16 competencies relevant to spiritually sensitive clinical practice (Vieten et al., 2013). They define such competencies a set of knowledge, skills, and attitudes necessary to effectively and ethically engage in spiritually sensitive practice. Knowledge is the information, facts, concepts, and awareness of research on spirituality and therapy necessary for working effectively with clients. Skills are to the requisite ability to effectively utilize knowledge of religion and spirituality in clinical work. Attitudes are the perspectives and biases therapists hold about spiritually sensitive clinical practice (Vieten et al., 2013).

This research group engaged in several activities that eventually led to the final selection of competencies. First was a comprehensive review of literature and a focus group with leading scholars and clinicians. Next, an online survey was undertaken that involved 184 researchers and clinicians with experience in spiritual practices in clinical practice to suggest wording for each item. Finally, a group of 105 licensed psychotherapists with expertise in spirituality rated the items for clarity and relative importance as basic spiritual competencies.

Here is a sampling of these items. Identified as a knowledge competency is: understand that clients may have experiences that are consistent with their spirituality, yet those experiences may be difficult to differentiate from psychopathological symptoms. Identified as a skills competency is: inquire about spiritual background, experience, practices, attitudes, and beliefs as a standard part of understanding a client’s history. Identified as attitudes competency is: awareness of how their own spiritual background and beliefs may influence their clinical practice and their attitudes, perceptions, and assumptions about the nature of psychological processes. A book details each of the competencies and describes strategies for implementing them in clinical practice (Vieten & Scammell, 2015).

Based on these four developments, table 13.2 includes a tentative list of competencies for spiritually sensitive psychotherapy that “map” to the list of core psychotherapy

Table 13.2 Core Competencies of Spiritually Sensitive Psychotherapy
1. Articulate an integrative conceptual framework for psychotherapy that is spiritually sensitive 2. Develop and maintain an effective therapeutic alliance sensitive to the spiritual dimension that adequately deals with spiritual transference, countertransference, and resistance 3. Include spirituality in the case conceptualization and treatment plan based on an integrative assessment and diagnosis that includes the spiritual dimension 4. Implement spiritual and psychological interventions, including referral to spiritual resources if indicated 5. Monitor and evaluate overall treatment progress and outcomes as well as incorporate spiritual dimension in the termination process 6. Practice in a culturally sensitive and ethically sensitive manner, acknowledging cultural and religious factors

competencies (Sperry, 2010; 2011; 2012; 2016a; 2016b). These were derived, in part, from Sperry (2012), Aten and Leach (2009), and Vieten et al (2013).

Concluding Comments

Six different indicators have been described to support the contention that a paradigm shift is occurring in the theory and practice of spiritually oriented psychotherapy. This paradigm shift is likely to be more far reaching and substantive than the “cognitive revolution” that shifted the focus from a behavioral to a cognitive-behavioral perspective. The shift from a materialist and reductionist perspective to a postmaterialist and holistic perspective with an emphasis on self-aware consciousness constitutes a radical and revolutionary change with many implications. For example, a number of the historical and contemporary psychotherapy approaches identified as being sensitive to spiritual issues appear to be more consistent with a materialist perspective than with a postmaterialist perspective. An indicator of this is their reductionist view of spirituality and psychology. Thus, it should not be too surprising then that these approaches may only be able to offer limited help to individuals seeking spiritual growth and development.

The model of consciousness and spiritual development levels described here articulates four different levels of goals that can serve as a taxonomy for choosing psychotherapeutic approaches and interventions. Unfortunately, most existing therapeutic approaches, including the majority of spiritually sensitive approaches, are well suited for Level 0 and 1, while approaches like positive psychotherapy and well-being therapy are sensitive to Level 2 spiritual issues and goals.

The time has come for the development of other spiritually sensitive psychotherapy approaches that target the various levels of consciousness. In tandem with the paradigm shift that is occurring in psychotherapy competencies, it may well be that the shift under way in spiritually sensitive psychotherapy may be propelled forward synergistically with increasing interest in consciousness phenomena. For example, research on the clinical applications of mindfulness has greatly increased in the past few years at the same time more clinicians are utilizing mindfulness methods with clients, and even practicing mindfulness themselves (Germer, 2013).

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Journey From a Materialist to a Postmaterialist Perspective—A Portrait

Len Sperry

Abstract

An individual's professional and personal life tends to evolve over time. Sometimes this evolution involves significant changes in assumptions and premises about science and human nature. Chapter 13 described several facets of this evolution. How this evolution occurs has not been well charted, nor have there been many illustrations of this process in print, particularly of clinician-researchers. In this chapter, the evolution and career trajectory of a clinician-researcher is described. It illustrated three distinct phases that occurred in this individual's life: materialistic, dualistic, and postmaterialistic. While this is an actual portrait, some aspects of it have been disguised to protect privacy.

Key Words: materialism, postmaterialism, dualism, philosophy of science, self-aware consciousness

Presumably, individuals can and do evolve or shift from a materialist to a postmaterialist perspective. How this evolution occurs is not particularly clear, nor have there been many illustrations of this process in print, particularly of clinician-researchers. Here is one such example. The portrait is about Dr. E. and describes three distinct periods or phases of the evolution in his professional and personal life. For convenience, they are labeled “materialist,” “dualist,” and “postmaterialist” phases. Although this is an actual portrait, some aspects of it are disguised to protect privacy.

Background

Dr. E. is a 55-year-old, married, Caucasian male who had completed a MD, a residency in psychiatry, and a PhD in biochemistry. Dr. E. teaches, researches, and practices neuropsychiatry in an academic medical center. He is a tenured full professor with appointments in the department of psychiatry and the department pharmacology. He has remained at the same institution in which he received his medical training and graduate degree.

Materialist Phase

The materialist perspective is sometimes referred to as scientific naturalism in philosophical and scientific circles. A hallmark of this perspective is that all reality is a function of matter. Human life is likewise a material phenomenon and mind is considered the expression of matter. Constructs like God and the afterlife are considered to be false projections of the mind. Human nature is viewed as neutral and human persons are considered to be the products of evolution. Freedom and free choice are also false projections of the mind, and individualism is emphasized over the communal (Nagel, 2012). Generally speaking, human life has no transcendent purpose. Instead, the only reasonable purpose in life is to maximize pleasure and minimize pain. Reductionism is a central value and constructs in this perspective (Rand & Hardi, 2005).

For psychology and psychiatry, this means that behavior and personality are reduced to biological mechanism and explanations. Similarly, higher-order constructs such as love and spirituality are also reduced to biological explanations, for example, the God gene. For better or worse, this materialist perspective underlies most undergraduate and graduate education in the Western world, particularly in the sciences. For example, he recalls the fervor of a graduate school professor proclaiming that the indisputable marker of whether a phenomenon or construct truly exists is if it could be measured!

Dr. E. was subtly imbued with the materialist perspective during his medical training. For a long time, the culture of medical science had favored this perspective also known as scientific naturalism (Rand & Hardi, 2005). He believed that modern psychology and psychiatry have almost no awareness of the limitations of materialism. He recalls hearing and reading critiques of this perspective in undergraduate courses. Since the critiques were so dissonant with his graduate school and medical training, he did not attempt to reconcile these critiques with his own beliefs, until later in his professional life.

He recalls being convinced at the beginning of his clinical research career that personality could be explained satisfactorily with genetic coding and other psychobiological mechanisms. This view persisted until he began researching the influence of memory on personality development. But he was shocked to find that an individual's autobiographical memories were social constructions as perceived in the present, rather than actual memories of past events. Because the materialist perspective could not provide a convincing explanation for this phenomenon, he became increasingly disenchanted and began to question this perspective.

Dualist Phase

Although there are various forms of dualism, some commonalities can be noted. The basic premise is that persons are both material and immaterial. While the brain is considered material, mind and spirit are nonmaterial substances that involve consciousness and self-awareness (Stapp, 2005). This duality is expressed in the "mind-body problem" in which the challenge is to describe the relationship between mental and physical processes (e.g.,

interactionism or parallelism). In psychology and medicine, the basic concern is determining which sphere (mind or brain) is primarily responsible for illness and how each sphere affects the other. Human nature is largely considered bad or tainted by most religions. For example, Calvinists (and cultural Calvinists) view human nature as depraved, and individuals are divided between the good or the elect and the bad. Human behavior and feelings are the results of upbringing and impulses as well as unconscious processes or maladaptive thinking. Individualism is typically emphasized over the communal. Human life may or may not have a transcendent purpose, but through insight and effort it is possible to achieve personal adjustment or even fulfillment in life.

By his 41st birthday, Dr. E. was enjoying the perks of an academic career. He had been a tenured full professor with appointments in two departments for two years. He had received and continued to receive federal research funds, and he had a modest publication record. But he also experienced some confusion and discontent as his “world just didn’t compute like it used to.” He now attended to the physical and mental health of his patients, recognizing that each played a role in the pathogenesis of their illness. He recalls becoming more connected with patients in his clinical work. In the past, he had seen patients for medication management but now was spending more time with them and integrating psychotherapy. In fact, he found that patients did better with this combined therapy, and he enjoyed this form of clinical work. Before, he was convinced that medical interventions, like psychotropic medications, were all that patients needed to stabilize and improve. But reflection on his practice style showed that most patients were not doing well with this treatment regimen.

Then there was the matter of his daughter, Amy. He had agreed with his wife, who was a devout Episcopalian, that Amy would be raised in the faith. This meant Dr. E. started attending church services, something he had not done since high school, and becoming involved in a range of activities at the parochial school his daughter was now attending. Now, matters like sin and salvation were on his radar. His own religious upbringing was in the Presbyterian Church, and as he started to read about religion, particularly about Calvinism, he began to question his life. He also began to pray again. One of his friends in whom he had confided his confusion and discontent, said it sounded like the male midlife crisis. He wasn’t sure about that but he did recognize that his life over the past 20 or so years had been largely “unexamined,” and he tentatively concluded that there was more to life than competing for grants on narrower and narrower topics. His current research had also moved beyond the physiological markers to include the psychological substrates of personality development.

Postmaterialist Phase

The basic assumption of this phase is that all that exists is indivisibly related through a common universal source. Human persons are considered to be embodied spirits, and human nature is viewed as basically good (Bohm & Hiley, 1993). A quantum view of life

is embraced, and although reductionism and dualist thinking are viewed as limiting, as is Newtonian physics, they are not fully dismissed. Human persons are considered to be influenced by past positive and negative experiences, yet they have free will and the capacity to develop (Bohm & Hiley, 1993, p. 236) beyond trauma or handicaps, particularly through self-aware consciousness. Because of the belief that all things and human persons are connected, a realistic balance between communal and individual needs and aspirations is valued. Generally speaking, life is understood as having a transcendent purpose involving increased levels of consciousness and the universal unity of being.

Dr. E.'s life continued to evolve. He was now in his mid-50s and his daughter was now in college. He was now practicing a more integrative form of treatment. He mused that when he began practice, his treatment philosophy was to treat diseases with empirically based treatments. Now, his philosophy was to foster optimal health and well-being in his patients while treating their symptoms. He had been appointed medical director of the medical school's psychiatry clinic, which meant that he had increased responsibility for supervising psychiatry residents and clinical psychology interns. He took this responsibility seriously and endeavored to role model competent and compassionate patient care.

His research focus had broadened and reflected his fascination with the quantum perspective. Funding was now becoming available for "integrative" research and he was successful in securing it. About five years ago he was doing research on memory and personality development and was surprised to find that research subjects' autobiographical memory did not always coincide with their semantic memory of early life recollections. He tried to make sense of his finding: Autobiographical memory appeared to be a social construction reflecting the subject's current perceptions rather than objective past reality. Certainly, this was inconsistent with the scientific naturalism perspective in which he had been trained. It resulted in a careful examination of his basic assumptions about science and life. As a result, his research on personality began to extend to the development of self-aware consciousness in adults.

For four years he had been practicing mindfulness meditation and was experiencing a sense of centeredness and increased connectedness with people and nature. He noticed that relationships with colleagues and friends had also changed, as he was more drawn to those who were also interested in a broader view of life. He reports that his life is full and meaningful and his relationships, particularly with his wife and now married daughter, are life giving and enjoyable. He believes he has achieved a balance in his life that had been a constant struggle for him, particularly during the first 30 years of his career.

Concluding Note

This portrait is not meant to suggest that the evolution of these phases are, in any way, normative. Rather, the three labels, materialist, dualist, and postmaterialist, seem to reasonably characterize the life experience of Dr. E. It is conceivable that others' journey to a postmaterialist perspective might not involve a dualist phase. However, it sometimes

happens that individuals with a religious upbringing, wherein goodness and badness and sin and grace are central to that worldview, may begin at a dualist phase. Or, like Dr. E., wherein medical and graduate school training was so formative, individuals might “regress” to a materialist perspective.

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Honoring Religious Diversity and Universal Spirituality in Psychotherapy

P. Scott Richards

Abstract

Spirituality is a universal human concern and capacity, but there is great diversity in the world concerning how spirituality is understood and practiced. Within this context of diversity, it is challenging for psychotherapists to ethically and effectively work with spiritual issues during treatment in order to facilitate their clients' healing and growth. This chapter describes some principles and practices that may assist psychotherapists in their efforts to succeed at this important challenge, including seeking competency in religious and spiritual aspects of diversity, selecting a spiritually integrated treatment framework and approach, finding common spiritual ground with clients, and creating a spiritual space that helps clients access the resources of their spirituality during their healing journeys. The chapter also describes a theistic, spiritually integrated model and approach to psychotherapy. It concludes with a brief discussion of recent research findings and needs in this domain.

Key Words: psychotherapy, spirituality, universals, values, principles, religious diversity, counseling, theism, research

The teachings of the major world religions and the writings of many philosophers, theologians, and social scientists converge in agreement that spirituality is a universal human concern and capacity—a basic condition of human existence (Emmons, 1999; Finnegan, 2008; Holmes, 2007; Tacey, 2004). As expressed by Sue et al. (1999):

Understanding that people are cultural and spiritual beings is a necessary condition for a psychology of human existence. . . . in addition to rationality, life consists of emotions, intuitions, and spirituality. . . . A psychology that fails to recognize this aspect of human existence is a spiritually and emotionally bankrupt discipline. . . . Moreover, a psychology based solely on the separation of science and spirituality and that uses primarily the segmented and reductionistic tenets of the natural sciences is one that may not be shared by three quarters of the world nor by the emerging culturally diverse groups in the United States. (p. 1065)

Although there is widespread agreement that spirituality is a universal human characteristic and capacity, there is great diversity in how it is understood and expressed (Holmes, 2007; Tacey, 2004; Zinnbauer et al., 1999). Perhaps the most common and diverse way that spirituality is understood and expressed is through religious beliefs and practices. There is an enormous amount of religious diversity in the world, including five major Western or theistic religions (i.e., Judaism, Christianity, Islam, Zoroastrianism, and Sikhism) and six major Eastern world religions (i.e., Hinduism, Buddhism, Jainism, Shintoism, Confucianism, and Taoism) (Smart, 1993, 1994). Within each of these world religions, numerous subdivisions or subtraditions can be found reflecting even greater diversity in belief and practice (Richards & Bergin, 2014; Smart, 1993, 1994).

In addition to those who understand and express their spirituality through a religious tradition, growing numbers of people find meaning and give expression to their spirituality outside one of the major world religions (Finnegan, 2008; Tacey, 2004). For example, many people find understandings about spirituality within transpersonal, humanistic, and existential philosophical traditions (e.g., Elkins, 2005; Lukoff & Lu, 2005). Many others understand and express spirituality in a private, individualist manner devoid of ties to institutions or formal theological and philosophical frameworks (Finnegan, 2008; Sperry & Shafranske, 2005; Tacey, 2004). Finally, approximately 16% of the world's population consider themselves atheistic or nonreligious (e.g., nonbelievers, agnostics, free thinkers, and secularists) (Barrett & Johnson, 2002). Atheists and nonreligious persons also grapple with spiritual concerns as they face universal human questions about the origin of life, meaning and purpose, morality, love, suffering, evil, and death. Atheistic and naturalistic worldviews, much like the world's religious traditions, attempt to provide conceptual frameworks and social support for understanding and expressing universal spiritual questions and needs (Richards & Bergin, 2005).

Within this context how can psychotherapists learn to ethically and effectively use language and interventions that respect and honor religious and spiritual diversity? Furthermore, how can they access that which is universal in human spirituality in order to facilitate their clients' journeys of healing and growth? Although these are challenging tasks, they are achievable. The purpose of this chapter is to describe some principles and practices that may assist psychotherapists in their efforts to succeed at this important challenge.

Develop Competency in Religious and Spiritual Aspects of Diversity

In order for psychotherapists to work effectively and ethically with spiritual clients and issues, it is essential for them to develop competency in religious and spiritual aspects of diversity. This is important for several reasons (Richards & Bergin, 2014). First, psychotherapists are ethically obligated to seek an understanding of religious aspects of diversity so that they can work competently with religious clients (American Psychological Association, 2002). Shafranske and Malony (1996) argued that "it is incumbent that

clinicians develop at least a rudimentary understanding of religion in its institutional expressions” (p. 566). They pointed out that religious affiliation “may be a far more potent social glue than the color of one’s skin, cultural heritage, or gender. . . . Religious identification for some may be the thread that unites individuals into a social unit. . . . religion must be taken account of as a factor in any appreciation of individual difference and cultural diversity” (p. 564).

Although multicultural specialists have helped mental health professionals become more aware of differences due to race, ethnicity, gender, sexual orientation, and so on, they have given relatively little attention to religious and spiritual aspects of diversity (Smith & Richards, 2005). Because of this neglect, many professionals are not adequately prepared to work sensitively and effectively with religious clients. Ethical violations may occur if psychotherapists disregard the importance of their clients’ religious beliefs and values (Bergin, 1980; Worthington et al., 1996).

Second, psychotherapists will enjoy more credibility with religious clients and leaders if they obtain training in religious and spiritual diversity. Many religious people have an unfavorable view of the mainstream mental health professions and a distrust of psychotherapy (Richards & Bergin, 2014; Worthington et al., 1996). Several studies have found that devoutly religious persons are often reluctant to seek psychotherapy because they fear that secular therapists may misunderstand, pathologize, and seek to undermine their religious beliefs (Richards & Bergin, 2014; Weaver et al., 1997; Worthington et al., 1996). Religious clients want to receive services from psychotherapists who are willing and capable of working with them in a religiously sensitive and competent manner. Developing competency in religious aspects of diversity and building trust with people from diverse religious backgrounds could lead to increased referrals from religious leaders and communities and increase the likelihood that religious people will receive mental health services when needed.

Third, competency in religious diversity may help psychotherapists understand how to more fully access the healing resources in religious communities to assist their clients. There is a growing body of evidence that religious and spiritual beliefs, practices, and influences can both prevent problems and help promote coping and healing where problems have occurred (Koenig et al., 2001; Pargament, 1997). Spiritual views of psychotherapy, along with spiritual assessment and intervention techniques, have been proposed to help therapists more fully understand how they can draw upon the religious and spiritual resources in their clients’ lives to assist them in coping and healing. However, an understanding of clients’ religious beliefs and backgrounds is an essential foundation or prerequisite for using such resources and interventions. When therapists have specific knowledge about the religious background and beliefs of their clients, they often enjoy greater credibility and it is easier for them to understand how their clients’ religious beliefs and culture may be intertwined with the presenting problems and symptoms. It also is

easier for them to select spiritual and secular interventions that are in harmony with their clients' spiritual worldview and values.

The foundational skills of religiously and spiritually sensitive psychotherapists are similar to those required of effective multicultural counselors, including awareness of one's own cultural and racial heritage and values; respect for and comfort with cultures, races, and values that are different from one's own; understanding of how a client's cultural and racial heritage could affect their worldview and sense of identity; awareness of how one's helping style could affect clients from different cultural and racial backgrounds, and sensitivity to situations where it may be appropriate to refer a client to someone of their own culture or race (D. W. Sue & Sue, 1990). Spiritually sensitive psychotherapists also acquire specialized knowledge and training about religion and spirituality. This enables them to generalize their multicultural attitudes and skills to religious and spiritual clients and issues (Richards & Bergin, 2014).

Several recommendations have been made about how psychotherapists can increase their competency to work with clients from diverse religious and spiritual backgrounds, including gaining a general understanding about the world religions; seeking in-depth knowledge about religious traditions frequently encountered in psychotherapy; gaining expertise in the psychology and sociology of religion; reading books or taking workshops, classes, and online webinars about working with spiritual issues in psychotherapy (e.g., Berrett, 2019; Pearce et al., 2019); staying current with scholarly literature about religion and spirituality in mental health and psychotherapy; seeking supervision or consultation from colleagues who have expertise in religious and spiritual aspects of diversity and treatment; and engaging in personal spiritual exploration and growth practices (Miller, 2011; Richards & Bergin, 2005, 2014; Shafranske & Maloney, 1996).

Affirm Universal Spirituality and Use It as a Resource in Treatment

Psychotherapists can affirm that which is universal in spirituality by seeking to understand client's views of spirituality and to find common spiritual ground with them. When seeking to understand and affirm spirituality with clients from diverse religious and spiritual traditions it can be helpful for psychotherapists to have some understanding about the diverse ways that spirituality may be understood in the world. Beginning with a broad perspective about spirituality can help psychotherapists give clients room to explore and clarify their beliefs about what spirituality means to them.

The world religions differ somewhat in their teachings about spirituality and how it is developed (Richards & Bergin, 2005, 2014). Nevertheless, as can be seen in table 15.1, there are some general similarities among them. For example, the theistic world religions teach that humans are spiritual beings created in the image of God. These religions also emphasize the importance of human beings' relationships with

Table 15.1 View of Spirituality of the Major World Religious Traditions	
Western Religious Traditions	View of Spirituality
Judaism	Obedience to God's laws and worshipping Him leads to character development (acquisition of qualities such as goodness, humility, and holiness). Humans can communicate with God through prayer and worship. God responds to people reaching out to Him.
Christianity	Accepting Jesus Christ as Savior will lead one to good works, a moral life, and devotion and worship. This will allow one to receive the influence of the Holy Spirit and partake of other fruits of the spirit (e.g., love). Through prayer and the influence of the Holy Spirit, human beings can communicate with God and receive God's help, influence, and grace.
Islam	Obeying God's law as revealed in the Qur'an and "giving up" worldly things allows people to grow spiritually. The path of spiritual growth involves overcoming vices such as arrogance, greed, and dishonesty. This leads to higher levels of religious experience and union with God. Humans can communicate with God through prayer, meditation, and repetition of set phrases or the name of God.
Zoroastrianism	Choosing good over evil, prayer, and meditation will help people on the pathway to spiritual growth. Human beings can communicate with God through prayer.
Sikhism	Through dependence on God, human beings can overcome their ego and pride and achieve spiritual liberation and growth and a mystical union with God. Spiritual growth leads one to the qualities of love, faith, mercy, and humility. Humans can communicate with and worship God, particularly through prayer and singing.
Eastern Religious Traditions	
Hinduism	Spirituality is achieved through good works, knowledge, and worship and devotion (one of the three paths to salvation). Ultimately, spiritual growth leads to a realization of the oneness of all things (Brahman-Atman) and to a release from the rounds of rebirth. People can communicate with the deities and receive assistance from them.
Buddhism	In Theravada Buddhism (TB) spiritual enlightenment and eventual nirvana come from renouncing the world, believing in the 4 Noble Truths, and following the Eightfold Middle Path. In Mahayana Buddhism (MB) loving service, faith, and compassion (not celibacy or asceticism) are seen as the keys to spiritual growth and enlightenment. M.B.s may worship helping beings.
Jainism	Spiritual enlightenment is viewed as pure omniscient consciousness or infinite knowledge. Release from karma-matter and spiritual enlightenment is gained through overcoming attachment to worldly things (asceticism), faith in the Jain saints, right knowledge, right conduct (e.g., ahimsa or nonviolence), and meditation.
Shinto	Spirituality is perhaps best thought of as feelings of appreciation and closeness to nature and enjoyment of life. Human beings can worship the kamis (deities) in order to "secure their continued favor" (Palmer & Keller, 1989, p. 87)

Table 15.1 <i>Continued</i>	
Eastern Religious Traditions	
Confucianism	There are no teachings about spiritual communication with deity or about transcendent spiritual enlightenment. Confucius did describe what he believed are the characteristics of a “superior man” or “true gentleman.” These qualities included “li (the code of moral, social conduct), jen (virtue, compassion, love), yi (righteousness), and te (virtue)” (Nigosian, 1994, p. 200).
Taoism	Living in harmony with the Tao is the pathway to inner harmony and peace. An important principle of the Tao is <i>we-wei</i> , that is, the principle of non-action. <i>We-wei</i> is “a call to passive action . . . One should not resist, confront, or defy. One should not lay down . . . rules, or requirements. . . . Only sincere humility, minimal desires, and pure spontaneity can enable one to find the Way” (Palmer & Keller, 1989, p. 70).

Adapted from Richards and Bergin (1997). Used with permission of the publisher and authors.

God and living in harmony with God’s moral laws. The Eastern religions traditions also emphasize the importance of correct living and spiritual enlightenment, but do not view spiritual progression as dependent on one’s relationship with or obedience to a Supreme Being.

There is agreement between all of the world religions that humans are spiritual beings and that spiritual enlightenment and growth is a universal human potentiality (Richards & Bergin, 2005, 2014). There is also considerable agreement that spirituality may involve (1) a search for the sacred or transcendent in life; (2) engaging in spiritual practices and disciplines such as prayer, worship, mindfulness, and meditation; (3) a deep sense of meaning, purpose and values; (4) living congruently with one’s beliefs and values; (5) a universal love of humanity; and (6) religious affiliation and practice, though spiritual beliefs and practice without religious affiliation is also commonplace. There is also much agreement that spirituality may include experiences such as feeling compassion and love, being loved, receiving inspiration, feeling a sense of life meaning and purpose, enjoying close relationships with family and friends, and feeling a connection or relationship with a higher power, God, and/or nature. There is also agreement that there are universal spiritual principles, values, or virtues for living that cut across all spiritual traditions and cultures, including honesty, openness, gratitude, humility, patience, integrity, faithfulness, courage, forgiveness, commitment, service, tolerance, responsibility, compassion, optimism, self-discipline, sharing, selflessness, kindness, trust, industriousness, modesty, and perseverance (Bergin, 1985, 1991; Dahlsgaard et al., 2005; Richards & Bergin, 2005; Rye et al., 2013; Seligman et al., 2005).

Select a Spiritually Oriented Treatment Approach

A large number of spiritually oriented treatment approaches have been developed during the past few decades that affirm the universality and importance of human spirituality in

therapeutic change. Buddhist, Hindu, Christian, Jewish, Muslim, and ecumenical theistic approaches have been proposed (e.g., Epstein, 1995; Hedayat-Diba, 2000; McMinn, 1996; Pargament, 2007; Rabinowitz, 1999; Richards & Bergin, 2014; Spero, 1985). Some scholars have also incorporated spiritual perspectives and interventions into cognitive, interpersonal, humanistic, Jungian, multicultural, psychodynamic, and transpersonal psychologies (e.g., Fukuyama & Sevig, 1999; Griffith & Griffith, 2002; Neilsen et al., 2001; Pargament et al., 2013; Richards & Bergin, 2004; Sperry, 2001; Sperry & Shafranske, 2005; West, 2000). Clearly, psychotherapists have a wide variety of spiritually oriented approaches to choose from.

It is important for psychotherapists to select a spiritually oriented treatment approach that is consistent with their personal worldviews if they wish to work sensitively and effectively with religious and spiritual issues during treatment. Fear and Wolf (1999) suggested that “therapists need to operate within a theoretical orientation which encompasses the same underlying metatheoretical assumptions as their personal philosophy” (p. 253). They reasoned that congruence between therapists’ personal philosophical values and theoretical orientation is necessary to promote professional development and therapeutic efficacy and to prevent burnout.

Consistency between a therapist’s personal worldview and theoretical orientation is also necessary for ethical practice. There is much agreement that ethical practice requires therapists to be clear about their own worldview and values (e.g., Arthur, 2001; Halbur & Halbur, 2006; Ibrahim, 1985; Neimeyer et al., 1993; Richards & Bergin, 2005; Tjelveit, 1999). Therapists who are clear and congruent in regard to their personal and professional beliefs and values are more capable of handling values issues that arise in therapy in an ethical manner (Richards et al., 1999).

Picking an approach that is consistent with their life philosophy can be challenging for psychotherapists, especially if their worldview seems to differ significantly from that endorsed by the larger therapeutic community. All mainstream secular psychotherapy traditions are grounded in the theology of the naturalistic–atheistic worldview, which denies the importance and reality of spiritual influences in human health and healing (Bergin, 1980; Dixon, 2002; Richards & Bergin, 2005). Because the naturalist–atheistic theology or worldview assume that spiritual realities *do not* exist, psychotherapists may feel pressured to abandon their spiritual worldview in their professional practice. This seems counterintuitive and counterproductive given that the majority of people in the world, including psychotherapy clients, believe in spiritual realities. Psychotherapists will be more effective if they adopt a therapeutic orientation that it is in harmony with their own spiritual beliefs and then learn to use it in an effective and ethical manner.

An important first step when deciding upon a spiritually oriented orientation is for psychotherapists to carefully examine, explore, and articulate their own personal spiritual worldview or theology. This could require considerable personal spiritual exploration and searching, depending on where the psychotherapist is at in their own spiritual journey

(Miller, 2011). Once they have done this, they can learn about the various spiritually oriented psychotherapy approaches that have been developed and select one that is most consistent with their own spiritual beliefs. Psychotherapists need to ensure that their spiritual approach is not only consistent with their own beliefs but that it is internally consistent in its theology, philosophy, personality theory, and therapeutic practices and techniques. A number of activities can be helpful in selecting and integrating a therapeutic framework and orientation into one's sense of personal and professional identity, including personal introspection, meditation, prayer, and/or contemplation; reading books and sacred writings about spirituality and spiritual exploration and participating in group or class discussions about spirituality; writing a personal counseling philosophy paper; engaging in videotaped session review with peers and/or supervisors; and consultation with spiritually minded colleagues (Halbur & Halbur, 2006; Miller, 2011).

Theistic Spiritually Integrative Psychotherapy

During the past few decades, many researchers and practitioners throughout the world have contributed to the development of theistic spiritual perspectives and approaches in mainstream psychology and psychotherapy. Surveys have shown that approximately 30–50% of psychotherapists are members of one of the theistic world religions, believe in God, and use spiritual interventions in their professional practices (e.g., Shafranske, 2000). A variety of theistically informed psychotherapy approaches have been described in the literature, including Christian, Jewish, Muslim, psychodynamic, interpersonal, humanistic, and cognitive ones (e.g., Pargament et al., 2013; Richards & Bergin, 2004, 2014; Sperry & Shafranske, 2005).

I will now describe a theistic, spiritually integrated approach to psychotherapy that my colleagues and I have developed, used, evaluated, and refined during the past 35 years (Bergin, 1980, 1988, 1991; Berrett et al., 2018; Richards, 2005; Richards & Bergin, 2005; Richards & Carlson, 2005b; Richards et al., 2007). I do this for two reasons. First, I share our approach as one example of how a spiritual framework can serve as a conceptual framework for applied practice. Second, I share our theistic spiritual approach with the hope that it will help Jewish, Muslim, Christian, and other therapists who believe in God or a Supreme Creator more fully understand how they can incorporate theistic perspectives into treatment in a sensitive, competent, and ethical manner.

Mainstream mental health professionals have appropriately embraced some Eastern spiritual perspectives and practices, such as mindfulness and meditation, but they have been slower to affirm the value of Western theistic perspectives and practices (Plante, 2016). I hope that the theistic treatment model and spiritual interventions described in this chapter will help rectify this neglect. In describing our theistic spiritual strategy, I am not trying to advocate that all psychotherapists adopt it as their framework for treatment. As I previously stated, it is important that psychotherapists select a conceptual framework and therapeutic approach that is consistent with their own spiritual beliefs. Given that

approximately 80% of the population in North America profess belief in God and affiliate with Christianity, Islam, or Judaism, I think a theistic approach to psychotherapy is needed in the mainstream mental health professions (Richards & Bergin, 2005, 2014).

Figure 15.1 illustrates that the conceptual framework for our theistic integrative approach includes theological premises that are grounded in the theistic worldview, philosophical assumptions that are consistent with the theistic worldview, a theistic personality theory, and a theistic view of psychotherapy. The theological foundations of our approach are based in the worldview of the theistic world religions. There is great diversity between and within the theistic world religions, but they also share important theological beliefs, including the ideas that God exists, human beings are the creations of God, the human

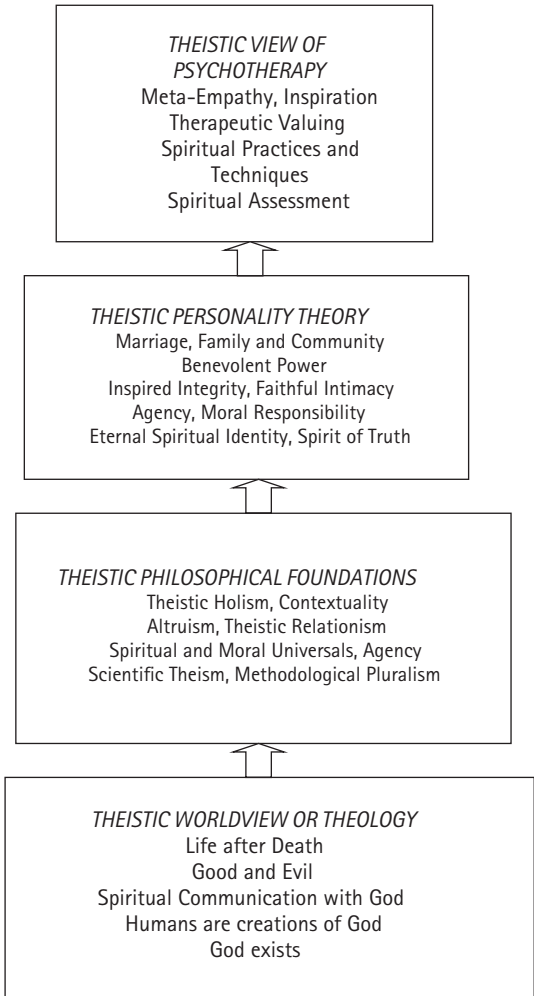


Figure 15.1 Theological, Philosophical, Theoretical, and Applied Foundations of Theistic Integrative Psychotherapy
Note. Adapted from *A Spiritual Strategy for Counseling and Psychotherapy* (2nd ed.), by P. S. Richards and A. E. Bergin, 2005, American Psychological Association. Used with permission.

spirit or soul continues to exist after mortal death, there is a divine purpose to life, human beings can communicate with God through prayer and other spiritual practices, and God has revealed moral truths to guide human behavior (Richards & Bergin, 2005). The theistic worldview is diametrically opposed to the naturalistic, scientific worldview, which assumes that God does not exist, humans cease to exist when they die, and there is no divine purpose to life (Miovic, 2004; Richards & Bergin, 2005).

Our theistic integrative psychotherapy approach is grounded in a number of philosophical assumptions that are consistent with theism, including theistic holism (Richards & Bergin, 2005). Theistic holism rejects the materialistic reductionism of the naturalistic, scientific worldview which assumes that matter is the only reality and that complex things can be understood by reducing them to individual components or elementary material particles (Beauregard et al., 2014; Nagel, 2012; Sheldrake, 2013). Instead, our theistic perspective affirms that human beings cannot be reduced to mere biology, physiology, or environment, but that they are composed of an eternal spirit or soul that was created by God (Richards & Bergin, 2005). This view is consistent with the postmaterialist view that the human mind, consciousness, is “as primordial as the physical world. Mind is fundamental in the universe, i.e., it cannot be derived from matter and reduced to anything more basic” (Beauregard et al., 2014, p. 273; Sheldrake, 2013). Our theistic perspective also endorses several other philosophies that conflict with the naturalistic worldview, including human agency, theistic morality, theistic relationism, altruism, and contextuality. It is beyond the scope of this chapter to discuss these philosophical perspectives here, but it has been done elsewhere (e.g., Griffin, 2000; Richards & Bergin, 2005; Slife et al., 1999; Slife et al., 2012).

The theistic worldview also has many potential implications for personality theory, which can only be briefly mentioned here but have been described in more detail elsewhere (Miller & Delaney, 2005; Pargament, 2007; Richards & Bergin, 2005; Sperry & Shafranske, 2005). According to the theistic perspective, the core essence of identity and personality is spiritual. Human beings are composed of both a mortal body and an eternal spirit or soul that continues to exist beyond the death of the mortal body. People who believe in and live congruently with their eternal spiritual identity are more likely to develop in a healthy manner socially and psychologically (Richards & Bergin, 2005). People who neglect their spiritual growth and well-being are more likely to suffer poor mental health and unfulfilling relationships. Therapeutic change is facilitated when clients access the resources of their faith and spirituality (Richards & Bergin, 2005).

The theistic conceptual framework also affirms that there are universal spiritual values and principles that promote healthy human functioning, such as integrity, honesty, forgiveness, repentance, humility, love, spirituality, marital commitment, sexual fidelity, family loyalty and kinship, benevolent use of power, and respect of human agency (Bergin, 1980, 1985, 1991; Miller & Delaney, 2005). Such spiritual principles can provide psychotherapists with a rationale for assessing whether their clients’ lifestyles are healthy and

a basis for evaluating what therapeutic goals to endorse and what spiritual interventions to use (Bergin, 1991; Berrett, 2019; Richards & Bergin, 2005). In this sense, our theistic approach to treatment is value laden in that it affirms the importance of universal spiritual principles and virtues that are conducive to health and human welfare (Bergin, 1985, 1991, 2002; Berrett, 2019; Dahlsgaard et al., 2005; Jensen & Bergin, 1988; Richards & Bergin, 2005).

Figure 15.2 presents a conceptual model for our theistic, spiritually integrative treatment approach. This model has been adapted and expanded upon from previous publications (Richards et al., 2018; Richards et al., 2020) and illustrates the relationship between spiritually integrated treatment and recovery. In our theistic framework, spiritual connection refers to the quality of clients' relationship with their spirituality, which they may define as their God or Higher Power; their sense of purpose, meaning, and deepest desires; their own best self; their connection with nature; or any other spiritual source.

The left side of the figure illustrates that spiritual disconnection and struggles often adversely influence people's psychological and relationship functioning—and vice versa (Pargament, 2007). In our clinical work, we have noticed that the loss of spiritual connection in clients' lives is manifested in numerous ways, including loss of spiritual identity, focus on extrinsic versus intrinsic religious motivations, negative images of God or spirituality, loss of faith in God as an answer or solution to suffering, loss of spiritual intuitions, and difficulty in accepting and giving love (Richards et al., 2020).

This is not to say that all spiritual struggles cause psychological and relationship problems, or that all psychological and relationship problems are caused by spiritual struggles. In fact, we have observed in our clinical work that in many cases spirituality remains strong during psychological and relationship crises and struggles, providing clients with spiritual and emotional strength and resources that helps them cope and eventually heal

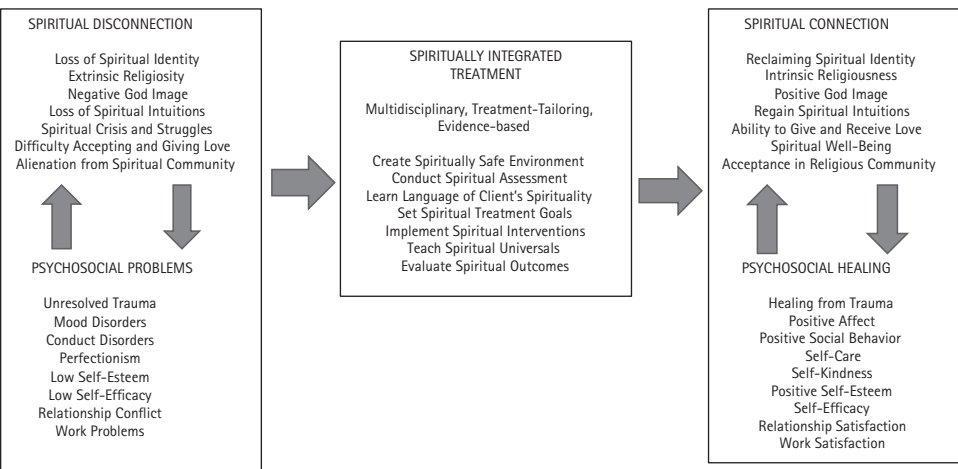


Figure 15.2 Role of Religion and Spirituality in Treatment and Recovery

(Richards et al., 2018). In addition, mentally healthy people may experience spiritual crises and struggles, and their psychological and relationship resources may help them cope with and recover from their spiritual struggles. Nevertheless, we have also observed that spiritual and psychosocial functioning are often intertwined in a manner that struggles in one dimension of functioning can adversely affect well-being in the other (Pargament, 2007; Richards & Bergin, 2005, 2014).

The middle of Figure 15.2 is intended to illustrate that spiritually integrated treatment helps break unhealthy reciprocal influences that often occur between spiritual struggles and psychosocial functioning. Spiritually integrated treatment helps patients reconnect with the religious and spiritual resources in their lives (Richards & Bergin, 2005; Richards et al., 2007). This enables them to begin a healthy cycle of recovery where spiritual and psychosocial resources and functioning mutually influence each other in healing ways. Our theistic, spiritually integrative treatment approach is consistent with current practice guidelines which recommend a multidisciplinary approach to treatment, which may include using medical doctors, nurses, psychiatrists, psychologists, marriage and family therapists, and dietitians as part of the treatment team. We integrate spiritual perspectives and interventions with evidence-based, best-practice medical and psychological treatment methods in a treatment-tailoring manner depending on patients' preferences and needs (Richards & Bergin, 2005; Richards et al., 2007).

On the right side of Figure 15.2, it can be seen that psychosocial healing and recovery is positively influenced by renewed spiritual connections—and vice versa. Helping clients heal and renew spiritual connections is a challenging process that requires both clinical and spiritual sensitivity and competence (Berrett et al., 2010; Pargment, 2007). In previous publications and workshops, we have described a variety of spiritual interventions and strategies that can help heal and renew their spirituality (Berrett et al., 2018; Berrett et al., 2010; Richards & Bergin, 2005).

As psychotherapists incorporate spiritual practices and interventions into treatment, clients will begin to reconnect with their spirituality, which may include their relationship with God and other spiritual beliefs and resources. As they do, clients can reclaim their sense of spiritual identity, embrace an intrinsically motivated spiritual orientation, form more positive and benevolent images of their God, increase their faith in God or their spiritual source, listen to and trust their spiritual intuitions, and learn to give and receive love. Clients' locus of identity and self-worth may shift over time from external, materialistic criteria to valuing and living in harmony with internal spiritual principles and values (Berrett et al., 2018; Berrett et al., 2010; Dahlsgaard et al., 2005; Richards & Bergin, 2005; Richards et al., 2007; Seligman et al., 2005).

I now offer some therapeutic perspectives and recommendations that my colleagues and I have found helpful in our efforts to affirm and access the healing influence of spirituality in our work with clients with diverse spiritual beliefs. These perspectives and recommendations are grounded in our theistic, spiritually integrative framework

for psychotherapy and not all of them may fit other spiritually oriented therapeutic approaches. I encourage psychotherapists to modify my perspectives and recommendations, where needed, in order to ensure that they practice consistent with their own spiritual framework and approach.

Implementing a theistic, spiritually integrated approach in treatment requires clinical and spiritual sensitivity and competence. Preparing spiritually for treatment sessions, creating a spiritually safe environment, conducting a spiritual assessment, setting spiritual treatment goals, affirming universal spiritual principles, and implementing spiritual practices and interventions are all essential aspects of our theistic integrated treatment approach (Berrett et al., 2010; Berrett et al., 2018; Richards & Bergin, 2005; Richards et al., 2007). I will say more about each of these topics below.

Prepare Spiritually for Psychotherapy Sessions

Being an effective psychotherapist requires a great deal of professional and personal preparation. In addition to professional education and training, and emotional insight and well-being, psychotherapists who wish to incorporate spirituality into treatment may find they are more effective if they engage in personal spiritual preparation. Several research studies provide evidence that many psychotherapists prepare spiritually for psychotherapy sessions by praying, meditating, contemplating, or engaging in other spiritual practices that help them to be spiritually attuned (e.g., Chamberlain et al., 1996; West, 2000).

Create a Safe and Spiritually Open Therapeutic Relationship

It is important to establish a spiritually safe and open therapeutic relationship with clients. Religion and spirituality are considered private topics, even sacred, by many clients. Many religious people have fears that mental health professionals will not respect and may even seek to undermine their religious beliefs and values (Richards & Bergin, 2014; Worthington et al., 1996). In addition, some clients believe that religion and spirituality are taboo topics in psychotherapy, perhaps believing that the separation between church and state in government extends to the mental health professions, or perhaps being aware that many psychotherapists are unwilling or unprepared to address these topics (Richards & Bergin, 2005). Whatever the reason may be, clients who do not feel a great deal of trust for their psychotherapists are unlikely to freely discuss their spiritual beliefs and values.

Psychotherapists can help clients feel safe to discuss religious and spiritual issues in treatment by explicitly informing them that it is permissible and appropriate for them to do so if they desire. Psychotherapists can do this verbally and in a written informed consent document given to clients at the beginning of treatment. Psychotherapists can also let clients know that they view spiritual beliefs as a potential resource for treatment. Questions about clients' religious and spiritual backgrounds on intake questionnaires can

also help open the door to spiritual discussions. Communicating a willingness to explore spiritual issues without prematurely disclosing specific details about their own religious beliefs can help psychotherapists establish trust with a wide range of clients (Richards & Bergin, 2005).

It is also important for psychotherapists to communicate interest and respect when clients self-disclose information about their spiritual beliefs. Psychotherapists can let clients know that they respect them for having the courage to discuss their religious and spiritual beliefs. If religious differences and value conflicts with clients arise during treatment, they must be dealt with in a respectful and tolerant manner. When value conflicts occur, psychotherapists should openly acknowledge their values and explicitly affirm that their client has the right to differ from them without having their intelligence or morality questioned. Sometimes it is necessary to consider whether the value conflict is so threatening that referral would be in the best interest of the client (Richards et al., 1999).

Conduct a Religious and Spiritual Assessment

It is important for psychotherapists to conduct a religious–spiritual assessment of their clients as part of a multidimensional assessment strategy (Richards & Bergin, 2005). Many helpful publications about religious and spiritual assessment are now available (e.g., Ai et al., 2022; Chirban, 2001; Hoge, 2013; Pargament, 2007; Richards & Bergin, 2005).

In the initial session or two, psychotherapists should do a history of the religious and spiritual background of every client, including the positive and negative experiences in their religious backgrounds and their current religious affiliation or spiritual framework. It can be helpful to explore what is meaningful to clients in regard to spiritual matters and what is not, and to find out how much time they devote to various religious practices, such as scripture study, prayer, church attendance, meditation, private religious experiences, and service.

Psychotherapists should seek understanding about how clients' religious beliefs and background may contribute to their conflicts, impasses, and difficulties. An effective clinical interviewing process invites clients to share in a safe environment their true thoughts, feelings, and beliefs about spirituality and the role of it in their lives (Berrett et al., 2018). By asking clients questions about their religious background and current spirituality, inviting them to elaborate when needed, psychotherapists can gain much insight into how clients' spirituality may be intertwined with emotional, psychological, and relationship issues.

When conducting a spiritual assessment, it is important to clarify clients' religious and spiritual strengths and resources. It is also helpful to understand the positive, the uplifting, and the strengthening aspects of clients' spirituality and religious community and how this may assist them in treatment. Gathering information and seeking clarifications about clients' spirituality may be needed throughout the course of treatment.

Learn the Language of Clients' Spirituality

As psychotherapists conduct a religious and spiritual assessment, they have the opportunity to begin to understand their clients' language of spirituality (Berrett et al., 2010). There are a number of spiritual themes that seem to be universal in the human family that can help psychotherapists and clients find common ground for understanding each other's spiritual language. These themes include experiences such as love, faith, suffering, meaning and purpose, responsibility, repentance, forgiveness, gratitude, belonging, congruence, honesty, family, community, enlightenment, transcendence, and the quest for a relationship with a higher power or Creator. These can be talked about with clients and doing so can help expand psychotherapists' understanding of their clients' spirituality as well as clients' understanding of their own spirituality.

In seeking to learn the language of their clients' spirituality, psychotherapists can ask clients to help them understand their views and language of spirituality. In developing this relationship of sharing and understanding, psychotherapists create a spiritual space and safe environment in which clients can do their work. As clients' share and use their language of spirituality, it often strengthens their deeply held beliefs which can be an anchor in difficult times. Explorations about spiritual beliefs and understandings can edify and build clients up toward understanding who they really are, and who they can become.

As psychotherapists grow in understanding of clients' spiritual language, they will be more capable of joining, respecting, supporting, challenging, and nurturing clients in their spiritual beliefs in a way that facilitates recovery (Berrett et al., 2010). As clients develop and understand their own spiritual language, it can help strengthen their sense of spiritual identity and feelings of worth and goodness.

Create a Space for Spiritual Awareness and Experiences

In addition to providing a spiritually safe and open therapeutic relationship for clients, it is important for psychotherapists to make efforts to create *spiritual space* for their clients, or in other words, to create an environment that gives clients the opportunity to recognize and affirm spiritual insights, impressions, and experiences (Miller, 2005; Richards & Bergin, 2005; West, 2000). Psychotherapists can help clients recognize and explore spiritual feelings and experiences that occur both within and outside the therapy hour.

West (2000) suggested several things that can help create a space for the recognition of spiritual influences and experiences in psychotherapy, including (a) accepting that therapy can be a spiritual space; (b) tolerating silence so that the spiritual space can unfold; (c) listening in a deep and holistic manner to words, feelings, and spiritual impressions; (d) speaking authentically by appropriately sharing feelings of the heart; and (e) accepting the spiritual experiences that occur. Griffith and Griffith (2002) also discussed attitudes and skills that are helpful for creating a spiritual space, including (a) fostering curiosity, wonder, and openness to the being of the other; (b) attenuating cynicism and certainty; (c) promoting openness and respect by democratizing the structure of therapy;

(d) communicating respect for clients' personhood; (e) paying attention to feelings and bodily sensations that permit spiritual experiences to be recognized, understood, and expressed; and (f) listening carefully to what clients spontaneously speak about when they feel safe and respected.

When psychotherapists are successful at creating a spiritual space for their clients, spiritual experiences, insights, and influences that seem to go beyond ordinary therapeutic processes may occur. For example, some psychotherapists have reported experiencing deep spiritual connection or communion with their clients (Chamberlain et al., 1996; West, 2000; White, 2002). Reminiscent of Buber's (1923/1996 *I–Thou* relationship, this spiritual connection enhances psychotherapists' empathy and compassion for their clients and promotes healing and growth. Psychotherapists have described this experience in different ways, including (a) feeling part of something bigger than themselves or their clients, (b) feeling that grace is present, (c) feeling that God is present, (d) feeling the presence of healing energies or spiritual beings, and (e) feeling that something special has happened between the psychotherapist, client, and God (Chamberlain et al., 1996; Richards & Bergin, 2005; West, 2000; White, 2002).

Within such a spiritual therapeutic space, some psychotherapists have also reported experiencing inspiration, enlightenment, and/or a heightening of their attributes and abilities that enabled them to (a) more clearly assess and understand their clients' problems, and (b) select and implement effective interventions (Chamberlain et al., 1996; Richards & Bergin, 2005; West, 2000; White, 2002). These feelings of inspiration are sometimes described as promptings, intuitive hunches, and gut feelings. Psychotherapists often perceive that such spiritual impressions lead to more accurate understandings and assessments of their clients. Some psychotherapists have also reported that spiritual insights have enhanced their ability to appropriately select and effectively implement standard secular interventions, as well as commonly used spiritual interventions. At other times, spiritual impressions lead psychotherapists to say or do something in therapy that was not planned and that is not typically used, but that clearly had positive therapeutic effects.

Invite Clients to Engage in Spiritual Interventions and Practices

Psychotherapists can help clients access the resources of their spirituality by inviting them to engage in spiritual interventions and practices that are consistent with their spiritual beliefs. Religious and spiritual practices such as praying, meditating, contemplating, mindfulness, engaging in spiritual imagery, reading sacred writings, engaging in acts of worship and ritual, and seeking spiritual counsel and direction from spiritual leaders have been practiced for millennia by religious believers (Smart, 1993, 1994). There is growing empirical evidence that there is healing potential in such practices (e.g., Koenig et al., 2001; Rosmarin & Koenig, 2020). Growing numbers of psychotherapists report encouraging clients to engage in these practices as adjunctive interventions during or outside of therapy sessions (Plante, 2009; Richards & Bergin, 2005). Religiously devout

and spiritually minded clients typically welcome the inclusion of spiritual perspectives and interventions in treatment.

Spiritual practices and interventions are useful for helping clients challenge and modify unhealthy and inaccurate perceptions of God and self, overcome feelings of shame and unworthiness, gain a clearer sense of life’s purpose and meaning, set self-chosen spiritual goals, learn to again listen to the spiritual impressions of their hearts, reaffirm their sense of spiritual identity and worth, and reconnect with God and significant others (Richards et al., 2007). There are many other potential benefits of such practices and interventions when they are used appropriately (Miller, 1999; Plante, 2009; Richards & Bergin, 2004, 2005; Richards et al., 2007).

Help Clients Learn and Explore Universal Spiritual Principles

Research has shown that *discussions of spiritual concepts* is one of the most frequently used spiritual interventions used by psychotherapists who use a theistic, spiritually integrated approach (e.g., Richards & Potts, 1995; Sanders et al., 2015). We have found in our own clinical work that teaching clients universal spiritual principles and helping them explore how these principles might help them in their own treatment and recovery is extremely helpful (Berrett et al., 2010; Berrett et al., 2018). Nearly 20 years ago, we wrote a workbook about principles of spiritual healing and renewal that we used in a spirituality group in our inpatient eating disorder treatment program to help patients learn and apply universal spiritual principles to assist in their recovery. We empirically evaluated and found support for the effectiveness of the group and workbook in a controlled experimental outcome study (Richards et al., 2006).

Table 15.2 provides a list and brief descriptions of the spiritual topics in the second edition of the workbook that we explore with clients during treatment (Berrett et

Table 15.2 Spiritual Renewal: A Principle-Based Approach to Treatment, Recovery, and Inner Peace	
Chapter 1	Affirming Faith: Your faith can help you heal and grow
Chapter 2	Be Resilient: Life is difficult but you can transcend your pain and struggles
Chapter 3	Embrace Your Worth: You can know of the inherent spiritual worth of self and others
Chapter 4	Find Purpose: You can find purpose and create positive meaning in your life
Chapter 5	Take Responsibility: You can accept responsibility for your life
Chapter 6	Forgive: You can forgive yourself and others and let go of the past
Chapter 7	Have Integrity: You can enjoy a life of congruence, genuineness, and integrity
Chapter 8	Love Fully: You can accept and give and deepen the gift of love in your life
Chapter 9	Live in Gratitude: You can have a grateful heart
Chapter 10	Enjoy Spiritual Harmony: You can live in spiritual peace and harmony by internalizing spiritual beliefs, practicing spiritual principles, and listening to and following your heart

al., 2019). These topics are grounded in universal spiritual principles or virtues that are accepted in virtually all religious and spiritual traditions of the world—both theistic and nontheistic—and they have received theoretical and empirical support from psychological researchers (e.g., Dahlsgaard et al., 2005; Rye et al., 2013; Seligman et al., 2005). We agree with scholars who have argued that psychotherapists should embrace their responsibility to help clients explore and internalize healthy principles, values, and virtues (Bergin, 1980, 1985; Dahlsgaard et al., 2005; Tjeltveit, 1999; Woolfolk, 1998).

I now discuss several of the spiritual principles and interventions listed in Table 15.2 in more detail. Due to space limitations, it is only possible to discuss several of these principles and interventions, but more details about how we help clients explore and internalize these spiritual principles and virtues are provided in the workbook (Berrett et al., 2019).

EMBRACE YOUR SPIRITUAL IDENTITY AND WORTH

When psychotherapists understand clients' spiritual beliefs and values, they can watch for occasions when clients demonstrate faithfulness, hard work, endurance, humility, congruence and other signs of character and strength. When this occurs, they can point it out in an affirming way to their clients. Many clients have a hard time seeing the good in themselves and so affirming their goodness and spirituality by giving feedback about specific occasions when they have behaved congruently, courageously, and honorably can have a positive impact. In doing so, psychotherapists are holding up a *therapeutic mirror* to the positive that clients often have a hard time seeing in themselves. Holding up the therapeutic mirror can help clients see their inherent spiritual worth and goodness (Berrett et al., 2010).

Shame, self-judgment, and self-contempt create a false negative identity. But as psychotherapists hold up a mirror for clients and help them see love in themselves and in their lives, then healing can take place. Clients gain confidence that if they listen to their hearts, they can give and receive love even while they are not completely recovered because love is part of who they are. It is part of their identity.

Receiving the reflected witness of their goodness through feedback, compliments, kindness, and love from others helps clients' sense of spiritual identity and integrity grow in positive ways. When clients see who they really are, they see that they are separate from their problems and mistakes. When clients live in harmony with their hearts, their spiritual identity is manifest in their countenance and in the way they live moment by moment. They feel at peace and lose the need for dysfunctional and self-defeating behaviors.

To reconnect with their hearts, clients need to once again let love in and let love out. Psychotherapists can explore how clients refuse love and what they can do to begin to open up their hearts and to receive love from other people. Psychotherapists can also help clients examine how they can show their love for others through word and action. This process involves labeling love as an expression of the heart and accepting love from others

as a gift from their heart. By doing so, clients can begin to increase awareness of how much love there is around them and how much love they have to share with others. Love is a gift, whether it comes from God, oneself, or from significant others. Love can help heal the lonely, the empty, and the shameful sense of self.

FIND PURPOSE IN LIFE

Psychotherapists can help clients explore the meaning of their lives and find purpose in life. In order to cope, heal, embrace harmony, and find peace in life, it is essential to gain a sense of purpose and mission. What kind of person does the client want to be? What kinds of relationships would the client like to enjoy? What are some things the client would like to experience during life? What would the client like to achieve? Does the client have some talents or interests that she would like to develop and share? What does the client believe God wants him to accomplish? What does the client care about most? What goals does the client desire with all of her heart to achieve? All these questions have to do with desire, hope, and a sense of mission in life.

Feeling a sense of meaning and purpose in life is essential for happiness and growth. Psychiatrist Victor Frankl (1963) wrote a best-selling book called *Man's Search for Meaning*, wherein he described his experiences as a prisoner in a German concentration camp during World War II. Frankl's experiences led him to believe that finding meaning in life is essential to well-being and survival. Frankl concluded that prisoners in the concentration camp who had a vision of some goal, purpose, or task in life had a much greater chance of surviving than did those who had no sense of mission. There is also evidence that those who lack a sense of purpose and meaning in life are at greater risk for depression and suicide. In a study of 60 university students who attempted suicide, the reason given by 85% of the students for their suicide attempt was that life seemed meaningless (Frankl, 1978).

Many clients experience a gnawing feeling of something missing—something that has never been recognized or focused on with intensity. Many of our clients have shared that some of the deepest and most heartfelt spiritual desires and yearnings of their heart as children or adolescents have not come to pass yet in their lives, but that the yearnings and desires are still there. We have worked with people who have “sold out” or given up on those dreams and heartfelt spiritual desires for short-term pleasure and gratification, and they have paid a high price for that, in disillusionment, disappointment, and unhappiness.

Some people may say that heartfelt spiritual desires and dreams are just not reasonable or feasible in today's materialistic, hedonistic world. But our view is that clients pay a high price if they neglect, minimize, or disqualify their heartfelt spiritual yearnings and desires. What is that price? The price can be floating from one important item in life to another, back and forth, trying to meet the expectations and needs of all: trying to meet every expectation, trying to accomplish every wish, and trying to do every good thing with an equivalent amount of energy and effort, and most likely feeling like a failure at all of these things.

When we help clients honestly look at their yearnings and desires, we find that they are often rather simple yet profound. Their desires usually have something to do with wanting feelings of peace, love, and a sense of satisfaction or well-being in their lives. Their desires often have less to do with having things and much more to do with enjoying relationships with significant others. By helping clients get clarity and understanding regarding their heartfelt spiritual desires and yearnings, we can help them get close to the core of who they really are.

As clients begin to identify, create, and declare how their lives could be, they can begin to create an expectation and a hope for the future. If they can identify their desires, if they can visualize or imagine a vision in their minds about how life can be, then their vision is something they can someday achieve. They can begin to live in a world of possibility, choice, and power rather than a world of hopelessness and helplessness. Possibility is a building block for faith and hope, and their hope can increase and become the vehicle towards making those things a reality.

For clients who believe in God, when they know that God has a purpose for their life, then it is easier for them to find meaning in their life experiences. As they discover the meaning in their life experiences, they become much more capable of coping with and growing from them.

ENJOY SPIRITUAL HARMONY BY LISTENING TO YOUR HEART

Psychotherapists can help clients learn to listen to and follow the spiritual impressions and insights of their hearts. Listening to and following spiritual impressions of the heart is an important pathway toward recovery and healing (Richards et al., 2007). People from diverse cultures and religions have for thousands of years considered the heart a source of emotion, courage, wisdom, and spirituality (Childre & McCraty, 2001). According to McCraty et al., (2004, p. 15), there is a large amount of contemporary scientific evidence supporting the idea that “the heart is a sensory organ and a sophisticated center for receiving and processing information.” There is also growing evidence that the heart plays an important role in spiritual experiences, intuitive ways of knowing, and in healthy physical and emotional functioning (e.g., Childre & McCraty, 2001; McCraty et al., 2004a, 2004b).

According to our theistic view of psychotherapy, the heart is a metaphor for clients’ eternal spiritual identity and a receptor for spiritual impressions and influences that come from the Creator (Richards & Bergin, 2005; Richards et al., 2007). Helping clients get in touch with and affirm their spirituality through the metaphor of the heart is typically non-threatening and well-accepted and can assist them in discovering or rediscovering their sense of identity as spiritual beings (Richards et al, 2007). Psychotherapy clients often acknowledge a lost or a broken heart. As clients become more aware of their spirituality and better at sensing those things that speak to their heart, they begin to challenge their negative self-perceptions.

Clients' hearts are the inner core of their being. The heart is more than feelings and it is more than thoughts. It receives spiritual impressions and conveys a sense of knowing and understanding (Richards et al., 2007). When clients become aware of their hearts as a source of information and a resource for self-direction this can facilitate a growing sense of spiritual integrity and well-being.

Helping a client connect with their heart is valuable because it is often the most potent source of motivation in their lives. The heart is a felt sense, a knowing, an intuition, and an impression. The heart is not emotions. Emotions are a different source of information. Emotions are tied to the impressions of the heart, but those emotions tend to be peaceful, deep, and calm. The heart is the intuitive part of us. It is the quiet voice inside of us that is deep and powerful. According to our theistic perspective, the heart is that part of us that recognizes spiritual experiences that come from God. When we speak of the heart, we are referring to the spirit or soul, which is recognized by all of the theistic world religions.

Listening to the heart involves living in the present with optimism and spiritual awareness, rather than focusing on conflicts, confusion, and negative self-talk. The heart can help clients connect to their priorities, values, dreams, and deepest desires, which can help them in understanding and pursuing the most important path of their lives.

Listening to the heart also involves clarifying which principles are critical to live by, and then striving to live a life congruent with those self-chosen principles. It also involves recognizing truth in the moment. When truth is listened to and followed change occurs. Once clients recognize what their heart is saying to them, they can make promises and commitments to themselves, God, and others and act upon their heartfelt understandings and values with spiritual integrity. Spiritual integrity comes from a consistent pattern of living true to self-chosen beliefs and values (Miller, 2005; Richards & Bergin, 2005).

Clients will grow in self-respect as they find the courage to follow their hearts, and to act on these internal prompts even in times when they feel overwhelmed, undeserving, or fearful. Learning to trust and follow the spiritual impressions of the heart is not a quick fix but rather, an ongoing development of inner understanding and sense of purpose and direction (Richards et al., 2007).

Future Research Directions

There is a pressing need for more research on spiritually integrated treatment approaches and on specific spiritual interventions (Richards et al., 2015; Richards & Worthington, 2010). Although there is a growing body of studies that provide general support for the efficacy of such treatment approaches, the data base is still relatively small and has methodological limitations. Religiously accommodative cognitive treatment approaches for religious clients with depression and anxiety meet evidence-based standards of efficacy, but other spiritually integrated approaches need additional investigation.

We agree with the APA Task Force report on evidence-based practice in psychology (American Psychological Association, 2006) that a variety of research designs can help develop an evidence-base concerning the effectiveness of spiritually integrated psychotherapies, including qualitative case studies, single-case experimental designs, practice-based evidence designs, process-outcome studies, randomized controlled trials (RCTs), and meta-analytic reviews (American Psychological Association, 2006). We think that practice-based evidence (PBE) designs may be especially valuable for building a more adequate evidence base about spiritually integrated psychotherapies. PBE designs complement traditional RCT methodology in that they collect data in actual treatment settings, which significantly increases their external or real-life validity, a limitation of RCTs. In PBE studies, therapists engage in treatment as usual, but they assess treatment processes and outcomes on a regular basis during the course of treatment (Barkham et al., 2010).

In November 2016, I received a \$3.57 million grant from the John Templeton Foundation to conduct a large collaborative PBE research study about the processes and outcomes of spiritually integrated psychotherapies (<https://bridgesinstitutesip.com/bridges-capstone-conference/>). Our *Bridges* research team used much of the grant money to fund 19 research teams which have now conducted PBE studies at treatment sites located in 8 countries, 14 languages, and with 7 faith traditions and 11 professional disciplines. The researchers who participated in our Bridges grant project have contributed the data from their individual studies to help create a big data set on the processes and outcomes of a diverse variety of spiritually integrated psychotherapies. A special section of *Psychotherapy* journal and a book has been published about the project (Richards et al., 2023). Findings from the project are impressive and have provided valuable empirical support and insight into the processes and positive outcomes of the spiritually integrated approaches included in the project (e.g., Richards et al., 2023; Sanders et al., 2019; Rosmarin et al., 2019).

Conclusion

The movement to integrate spiritual perspectives and interventions into mainstream psychology and psychotherapy has matured during the past decade and continues to gain momentum. Spiritual worldviews contribute important insights into previously neglected aspects of human nature, personality, therapeutic change, and the practice of psychotherapy (Bergin, 1980; Jones, 1994). I hope that psychotherapists from diverse spiritual traditions will contribute to the effort to affirm that which is good in religious traditions and in personal spirituality so that these can serve more fully as healing and unifying influences in the lives of our clients and in all of the human family. I hope that researchers and practitioners will join together in conducting practice-relevant research that further documents the healing potential of spiritually integrated psychotherapies. This effort is needed to ensure that spiritual resources for healing and change are available to all who seek spiritual sensitive and competent mental health services.

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Counseling and Psychotherapy Within and Across Faith Traditions

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Abstract

This chapter begins with general considerations for religiously and spiritually oriented psychotherapy, including the importance of seeing religion and spirituality as dimensions of cultural diversity, considering clients' welfare and autonomy, and maintaining competence. Four types of religious and spiritual intervention approaches are then discussed: assimilative, accommodative, collaborative, and emergent. Assimilative approaches introduce spiritual interventions or considerations into a standard psychotherapy approach. Accommodative approaches involve adapting a standard psychotherapy regimen to include religious or spiritual matters. Collaborative approaches entail a mental health professional and religious leader working in tandem for the sake of clients' welfare. Emergent approaches are innovative, new developments that have not yet been fully established. Next, specific issues related to counseling within (when the client and counselor share the same beliefs) and across (when the client and counselor hold differing beliefs) faith traditions are offered. The chapter concludes with some thoughts regarding future directions of religious and spiritual interventions in counseling and psychotherapy.

Key Words: religion, spirituality, religious counseling, spiritual issues in psychotherapy, religious diversity, religiously accommodative psychotherapy, psychology—clergy collaboration

Introduction

With five minutes remaining in our final psychotherapy session, a client surprised me (Snow) with the question: "So what do you think about me and God?" The majority of our therapeutic work had been spent discussing specific sources of anxiety, concerns about the future, and ways of coping with these fears. My mind traveled back to conversations early on in therapy regarding my client's spiritual struggles, including feelings of frustration and disappointment with God. Now in the waning moments of our time together he chose to broach the topic once more. It struck me that perhaps there was a well of unprocessed material waiting to be tapped, beliefs and values waiting to be uncovered—a vast driving force in my client's life. Perhaps his question was a reflection of the progress he

had achieved throughout the time that we had worked together. After successfully treating his anxiety, maybe he was now comfortable pondering issues of ultimate meaning, asking profound questions about faith and his connection with the divine.

Most people who seek the services of counselors and psychotherapists have spiritual experiences and beliefs (Gallup Polls, 2009), they look to religion as they cope with life challenges (Pargament, 1997, 2007), and they face ultimate concerns that involve religion and spirituality (Emmons, 1999). Even with religion becoming less important to U.S. residents over the past 20 years, 76% still identify with a religion and 87% believe in God (Gallup Polls, 2018). Most (73%) still report religion to be very important or fairly important to them, down from 87% in 1992. When people are struggling with serious problems, two-thirds of Americans desire to work with a therapist who integrates spiritual values in therapy (Vieten et al., 2013).

In 2018, 50% belonged to a church or synagogue and 32% had attended services in the past seven days (Gallup Polls, 2018). An additional portion of people—perhaps as many as one-third of all U.S. residents—describe themselves as spiritual but not religious (Gallup, 2003).

Juxtaposed to these findings is the humbling reality that many mental health professionals are not adequately prepared to address religious and spiritual issues in psychotherapy. Vogel et al. (2013) reported results of an extensive survey project of U.S. doctoral programs in clinical psychology involving perspectives of students, faculty, interns, program directors, and internship training directors. Respondents reported on the effectiveness and methods of diversity training in their programs. Although programs appear to be doing a relatively good job training in certain domains of diversity (e.g., ethnicity and race and socioeconomic diversity), training in religious and spiritual diversity was the lowest rated form of diversity training.

Given the prominence of religion and spirituality in society, and the relative dearth of training, it is wise for mental health professionals to seek opportunities for continuing education and supplemental training regarding their clients' religious and spiritual beliefs and behaviors in order to provide effective assessment and treatment. But this is not to say that counselors and psychotherapists should be religious advisers, pastoral counselors, or spiritual directors. Although some overlap exists, the goals and methods of mental health counseling and psychotherapy are distinct from the goals and methods of spiritual interventions, and these distinctions ought to be respected and maintained (Gonsiorek et al., 2009). Herein lies a major challenge facing contemporary mental health professionals: How do we embrace the importance of understanding spiritual and religious issues while still affirming the distinct contribution of mental health training and practice?

In this chapter, we first suggest several general considerations, then we look at existing interventions and describe four possible approaches: assimilative, accommodative, collaborative, and emergent. Then we turn our attention to counseling when the counselor and

client share the same faith. Finally, we consider counseling when the counselor and client have different faiths.

General Considerations for Counseling Within and Across Faith Traditions

The general considerations we include here pertain to culture, client welfare, client autonomy, and therapist competence.

Religion and Spirituality as a Cultural Issue

Over the past several decades counselors and psychotherapists have become increasingly aware of the importance of understanding the cultural diversity among their clients (Hook et al., 2017; Sue & Sue, 2007). Every client, and every therapist, is shaped by the mores, assumptions, and values emerging from their ethnic and cultural communities. I (McMinn) recall working with a client who reported feeling like an incomplete woman because of her hysterectomy. After several weeks of using standard second-wave cognitive-behavioral therapy (CBT) strategies to help her see her situation differently, my supervisor pointed out that her beliefs about womanhood may actually be closely tied to the cultural community that helped define her throughout her life—including the 167 hours spent each week outside my office. It wouldn't be fitting, or productive, to compete with the culture of my client during the one hour she spent in my office each week. My client's cultural beliefs helped to define her identity, created hope and meaning in her life, and helped sustain her through challenging life situations. After I recognized my cultural insensitivity (with the help of a supervisor), apologized to my client, and began helping her to evaluate her beliefs in a more culturally inclusive manner, she made progress in therapy.

In the same way, religious and spiritual diversity issues are often powerful influences for counseling and psychotherapy clients. If overlooked, the results of our interventions may be compromised, or even damaging to clients. Consider something as basic as the definition of health. An agnostic second-wave CBT practitioner may see health as the capacity to reinterpret difficult life situations without letting the situations become too upsetting. In contrast, a devout Buddhist or Hindu client may desire to accept suffering as an inevitable part of living, and ultimately to transcend suffering through spiritual practices and the wisdom gained from spiritual mentors. A devout Jewish, Christian, or Muslim client may see health as the ability to maintain faith and find meaning in the midst of suffering.

Just as it is important for mental health professionals to know basic information about different cultures and ethnicities, so also it is important to have basic knowledge of different religious systems, spiritual beliefs, and practices (American Psychological Association, 2017). This knowledge can be obtained through various avenues including taking a world

religions course, reading a world religions text, having open conversations with friends and acquaintances about their spiritual beliefs and practices, attending workshops and seminars on religious and spiritual issues in psychotherapy, or getting supervised training on the topic.

One challenge in learning about cultural diversity in psychotherapy is to actively avoid overgeneralization. For example, a therapist learning about Asian American culture may start assuming that all Asian American clients have communitarian values, emphasize achievement and diligence, avoid bringing shame to their families, and so on. But, of course, there are many cultures in Asia, various levels of acculturation to consider, and individual differences from one client to another. It would be a mistake to assume too much based on general knowledge of cultural categories. In the same way, knowing about religious systems can easily lead to overgeneralizations and faulty conclusions. It is important to recognize vast diversity within every major faith tradition, and to realize there is a good deal of individual variation in how people experience and express their faith-related beliefs.

Ms. Davison comes for psychotherapy because of a persistent generalized anxiety disorder that contributes to insomnia, inhibits her relationships, and leads to feelings of dread and apprehension about the future. She and her psychotherapist set goals for the first session—to learn ways to manage and reduce her feelings of anxiety, to establish closer relationships with family members and colleagues at work, to reduce her tendency toward perfectionism, and to sleep better as she learns to manage her anxiety. In the middle of the first session, Ms. Davison mentions that she is an elder at the Presbyterian church she attends, and that she would like a therapy approach that is respectful of her faith.

As the psychotherapist ponders the best treatment for Ms. Davison, it will be important to consider something about her religious faith, both in terms of understanding the basic themes of the Christian faith, and also in terms of the individual nuances of her particular faith experience. Christians generally believe in an afterlife, and they seek to live in a way that reflects the example of Jesus. Perhaps Ms. Davison puts a good deal of pressure on herself to be perfect, and then feels defeated and anxious when she falls short of these lofty standards. But then again, Presbyterian theology emphasizes that good works can never earn approval with God—that is only accomplished by God's undeserved favor. So perhaps Ms. Davison's faith is actually a protective factor that keeps her from even greater levels of perfectionism and anxiety. And it will be important to consider that she is an elder in the church. What does her leadership role in a faith community say about the levels of stress she experiences, about the respect she garners in relationships, about how much weakness and struggle she can reveal to others in her faith community, and about her capacity to manage stress? What sort of gender issues

might arise by being a woman leader in a religion that has historically been dominated by male leaders? All these matters, and more, are worth exploring in the context of counseling.

Client Welfare

One of the most fundamental principles of health service psychologists and other mental health professionals is that we promote the welfare of our clients. This is foremost in the mental health practitioner's mind, just as it is foremost in our ethical standards. Thus, it is unsurprising that client welfare is important to consider when counseling within and across faith traditions. It is important for mental health professionals to be respectful rather than dismissive when religious and spiritual issues come up in therapy. On one hand, faith-related beliefs and practices often enhance a person's well-being, and on the other hand, some religious and spiritual beliefs can be damaging to self and others. At these times it is important for mental health professionals to help clients think incisively about their various beliefs and practices. Both the protective and risk factors of religion and spirituality must be considered.

PROTECTIVE FACTORS OF RELIGION AND SPIRITUALITY

Scientific evidence showing the protective benefits of religion and spirituality for mental health functioning is accumulating rapidly, though it is important to consider the distinction between religion and spirituality in order to interpret the findings of these various studies. Measures of spirituality tend to assess experiential dimensions of life that are naturally connected to mental health—such as gratitude, life satisfaction, inner peace, and connection with something greater than oneself. Thus, it should not be surprising that these measures correlate positively with other measures of mental health. To argue that spirituality brings about better mental health is more tautology than evidence based (Koenig, 2018).

In contrast, religious belief and behavior do not naturally overlap with mental health, so correlations between religion and psychological well-being are intrinsically more complex than correlations between spirituality and mental health. Koenig (2018) summarized the opportunity this affords researchers:

Religious involvement may lead to major depression by enhancing guilt, shame, and lowering self-esteem for failure to live up to religious values and standards. In that case, challenging religious beliefs and discouraging religious behaviors. . . would improve mental health and well-being. In contrast, religious beliefs and behaviors may protect against depression by giving meaning to life events, providing hope, surrounding persons with a community of support, and providing beliefs and practices that generate feelings of being loved and cared for. In that case, interventions that support and encourage religion would result in a decrease or resolution of depression. (p. 6)

In years past, it was common to hear or read psychologists disparage religion, presuming it interfered with mental health (e.g., Ellis, 1962, 1983). But more recent empirical evidence has shifted the conversation toward the protective benefits of religion (see Hill & Pargament, 2003; Koenig, 2018; Koenig et al., 2001; Miller & Thoresen, 2003; Oxlander et al., 2018; Powell et al., 2003; Priester et al., 2009; Seeman et al., 2003). The relationship between religion and health is strikingly positive in terms of its average effects at the population level (Koenig et al., 2001; Priester et al., 2009). Religion's benefits extend to both physical and mental dimensions of health and well-being. While a majority of this research has focused on Christianity, the benefits of other religious faiths and nonreligious forms of spirituality have been supported as well.

Koenig (2018) outlined 10 ways religion helps people cope: by providing an optimistic view of the world, offering people meaning and purpose, allowing people to process loss and trauma, giving hope, empowering people to act, suggesting a sense of control when facing difficult circumstances, revealing role models for good living, guiding decision-making, offering answers to ultimate questions, and providing a community of support. The empirical relationships between positive religious coping and mental health benefits are robust and compelling (Koenig et al., 2001).

As empirical evidence grows, the fields of counseling and professional psychology have become more open to religion and spirituality, both as an important diversity issue, and as a potential benefit to client health (Aten & Leach, 2009; Miller & Delaney, 2005; Pargament, 2007; Richards & Bergin, 2005; Shafranske, 1996; Sperry & Shafranske, 2005). Thus, we approach this topic with the assumption that religion may bring potential benefits to client health and wholeness.

First, religious and spiritual systems often help people make meaning of life, including the difficult and tragic aspects of life (Slattery & Park, 2011). Religious meaning-making is often promoted by faith-based institutions, clergy, and the sacred texts and traditions associated with the faith. For example, members of various religious institutions are taught to seek maturity through living a dedicated, purposeful life. Altruistic and prosocial behaviors have positive effects on mental health (Post, 2005; Schwartz et al., 2002) while also serving the well-being of society as a whole. Many religious traditions emphasize cultivating an interior relationship with the divine and/or seeking transcendence. For those who are intrinsically religious, relationship with God is a powerful motivating force behind outward behavior. Second, religious communities often provide social support, thereby offering clients valuable relationships, shared beliefs and experiences, and collective spiritual rituals. Third, religious leaders may have specific help to offer psychotherapy clients. Many clergy spend a substantial amount of time counseling parishioners (Weaver, 1995), and many are open to collaborating with mental health workers (Benes et al., 2000; Edwards et al., 1999; Lish et al., 2003; McMinn et al., 2003; McMinn et al., 1998).

As researchers continue to identify protective factors associated with religious beliefs and behaviors, counselors do well to recognize that the religious faith of their clients can

contribute to positive therapeutic outcomes in a variety of ways. As noted previously, circumstances can vary widely from one client to another, and one religious practice to another, so discernment and clinical wisdom are important. It is also important to recognize that not all aspects of religious belief and behavior promote health and well-being.

RISK FACTORS OF RELIGION AND SPIRITUALITY

Some clinicians note that religion can be harmful to their clients, and in selective ways this appears to be true. For example, Hood et al. (1996) found religiousness in the United States to be linked to rigid thinking, prejudice, and narrow-mindedness. Whereas positive religious coping, described above, is connected to protective factors, negative religious coping (also called spiritual struggle) is associated with various risk factors for poorer mental health (Koenig, 2018).

Anne, an intelligent, passionate college student came to one of us (Neff) to address symptoms of anxiety and depression. Early in the treatment it became clear that her negative view of self, mixed with her high expectations, were fueling her anxiety and depression. Her religious beliefs and views of God were integral to her negative self-concept. She would become ridden with shame and guilt if she was not “making the most of every opportunity” or was failing to be “godly” in all aspects of her life. Her guilt and shame over her imperfections caused intrusive ideation of self-harm. Shame dynamics paralyzed her and invaded her self-concept. When harmful and painful things occurred in her life, she believed this was God’s way of getting her attention, stating that at times God needed to bring out the sledgehammer to get her attention due to her stubbornness. While Anne described her relationship with God as a source of strength and comfort, it also was clear that she had internalized messages of perfectionism, which were contributing to shame. She had a difficult time grasping the grace-filled messages of her religion and had a tendency to focus on messages leading to self-deprecation. The way it manifested in Anne’s life led to what was at times debilitating anxiety and strained interpersonal relations. Anne’s struggle highlights that not all religious and spiritual experience contribute to the well-being of a client.

Anne’s pervasive experience of shame is not uncommon, as spiritual and religious distress often includes struggles with religious and moral guilt, as well as anger toward God (Exline et al., 2014). For clinicians committed to their client’s welfare, these findings about negative religious experiences are concerning, especially because they are associated with poor mental health (Ano & Vasconcelles, 2005) and physical health outcomes (e.g., Park et al., 2011).

In working with a client like Anne, it is important to see the complex interplay of protective and risk factors in her life. Religion should not be discouraged, in part because of how it provides her strength and comfort, but at the same time the negative implications of her faith should be considered and addressed in a sensitive manner. Clinicians who are highly trained in religious and spiritual issues are typically able to do this as part

of a culturally sensitive intervention. For those who are not as highly trained in religious and spiritual issues, it may be helpful to consult with a colleague or clergy person who understands Anne's religious perspective.

When considering client welfare, it is important to recognize both the positive and negative dimensions of religion and spirituality. Religious and spiritual beliefs can sustain and enhance mental health in difficult times, and they can also lead to distress and despair (Plante, 2011). Discerning the difference is one of the challenges of effective clinical work.

Client Autonomy

Psychotherapists have an ethical obligation to respect the autonomy and dignity of counseling and psychotherapy clients. As such, religious persuasion is typically not the goal of mental health interventions. When religious values are discussed, it is within a context of affirming the client's right to self-determination. Consider the following case example:

Melissa is a 17-year-old high school student seeking help for depression. She discloses to her therapist that she is pregnant and trying to decide how to tell her parents. The following session, Melissa reports that she mustered the courage to tell her parents, who responded lovingly and supportively. They are suggesting that Melissa terminate the pregnancy. This seems like a good idea to Melissa also, but she wonders if she might regret the decision later. The father of the child wants nothing to do with Melissa or the decision about whether to abort the fetus. The counselor schedules a family session with Melissa and her parents to discuss the situation, and in the process he asks about religious values regarding abortion. Melissa does not identify with any religion. Her parents report being Catholic, but they state that they have lapsed from their faith and that this is not an important consideration. Melissa and her parents leave the session in agreement that abortion is the best option. This creates inner turmoil for the counselor, who is a committed Roman Catholic and opposed to abortion.

As difficult as this situation may be for the counselor, the client's autonomy remains a guiding principle for ethical counseling and a distinguishing feature between mental health counseling and religious guidance. The counselor is correct to assess religious values during the family session, and the counselor is also correct to grant Melissa—in consultation with her family—self-determination in the choice she faces. Likewise, if the roles were reversed—with a counselor who believed abortion to be the best option and a teenager who chose to give birth because of moral objections to abortion—then the counselor would likewise be obligated to be respectful of the client's values and autonomy.

Client autonomy should not be confused with unrealistic efforts to remove all persuasive influence from counseling and psychotherapy. Virtually all counseling and psychotherapy involves exerting influence. For example, a couples therapist may help a person become more communicative and assertive in a relationship, even if the person

initially does not see any reason to change. An individual psychotherapist may empower a depressed client to exercise more frequently or use stress-provoking exposure techniques to treat a client with an anxiety disorder. An addictions counselor might help a client acknowledge a problem with alcohol abuse. Exerting influence is a common part of counseling and psychotherapy, but within the context of informed consent and in a way that is respectful of the client's self-determination and autonomy. Efforts to persuade a client to change religious viewpoints are generally discouraged in counseling and psychotherapy, and they may only be appropriate in certain situations. For example, if a psychotherapist is convinced that a client's religious views are causing damage to the client or others, then some level of persuasion might be fitting, but only if the religious change is clearly associated with a mental health outcome, and if the religious issues are discussed in a relational context where the client feels fully respected and accepted regardless of the outcome of the conversation.

Issues of client autonomy are especially complex in life-threatening situations. When I (Snow) worked in an acute eating disorder facility, I encountered negative religious coping that sometimes became life-threatening to my patients. While most of these cases were more insidious, one young man I will call Nicholi openly acknowledged that he used his eating disorder as a form of self-flagellation. Through the evaluation process, it quickly became clear that Nicholi applied moral rules to himself that he would not apply to any other person, not even someone who professed his same religion. Although he initially ascribed his cognitive belief to his religion, he came to realize that he had actually created his own personal moral system. Within this system he believed that he alone was uniquely bad and unworthy of love. This thought was so embedded in his way of thinking that it motivated him to punish himself physically. This would manifest at times through cutting, and most pervasively through self-starvation.

Nicholi's situation is an example of extreme conflict between a person's religious beliefs and their physical well-being. In treatment, Nicholi was urged to comply with strict behavioral interventions in order to regain health. He was reminded often that his cognitive capacities for reasoning and judgment were severely impaired due to malnutrition. Essentially, he was asked to suspend religious objections to treatment in order to regain physical health. Once Nicholi was weight-restored and no longer in imminent physical danger, he could more safely explore his beliefs in therapy. In other words, Nicholi was urged to place his own autonomy on hold in order to become physically and cognitively restored. After this process took place, his negative religious coping needed to be directly addressed in therapy in order to prevent relapse.

Therapist Competence

The final general consideration discussed here pertains to therapist competence. As is true with any area of specialty or multicultural practice, competence in handling religious and spiritual issues requires adequate training, experience, and sensitivity.

One potential challenge for therapists wishing to work with religious and spiritual issues is that many may have struggled to obtain sufficient training in this area. Although there is increasing interest among psychologists to consider religion and spirituality in counseling, many psychologists have limited training on how to integrate religious and spiritual dimensions into therapy (Brawer et al., 2002; Crook-Lyon et al., 2012; Schafer, et al., 2011; Vogel et al., 2013).

Cultural competency training has tended to emphasize race, ethnicity, gender identity, and sexual orientation and is less likely to consider religious and spiritual dimensions of diversity (Hage et al., 2006; Vogel et al., 2013). Many graduate programs struggle to systemically provide training on issues of religious and spiritual diversity, with few programs offering specific coursework focused on religious and spiritual diversity. Most learning occurs on the informal level, dealing with religious and spiritual issues as they come up in supervision, or through informal peer-to-peer interactions (Vogel et al., 2013).

Feeling insufficiently prepared may be a significant barrier for engaging religious and spiritual issues with clients. With increasing attention being given to religious and spiritual research and training, more opportunities will likely be developing for therapists wishing to obtain competency. Training opportunities include attending national and local conferences that offer training on religious and spiritual dimensions of mental health, obtaining consultation or supervision from a therapist who has experience in this domain, and systematic reading.

In addition to adequate training and experience, interpersonal sensitivity is integral to therapeutic competence. We live in an increasingly globalized and interconnected world. Cultural humility is essential to therapist competence as therapists are increasingly engaging clients from a variety of different cultures and religions. Hook and Watkins (2015) include both an intrapersonal and interpersonal component of cultural humility. Intrapersonally, cultural humility begins with a willingness to reflect on “one’s own self as an embedded cultural being” (p. 661). Interpersonally, cultural humility entails having an other-oriented stance characterized by an openness to the other’s cultural background. This includes being respectful and considerate, genuinely interested in and open to exploring the other’s perspective, avoiding assumptions, treating the other as equal, and avoiding assuming one already understand the other’s culture. It is essential to approach culturally different individuals from a place of “openness to, respect for, and prizing of the other’s cultural perspective” (Hook & Watkins, 2015, p. 662).

Consider the following situation:

You are working as a psychologist at a university teaching hospital. Much of your work involves consulting with physicians on medical/surgical floors and in outpatient clinics. Today you are called to an inpatient neonatal unit to visit with Ms. Ayer, a 26-year-old, first-generation Sikh immigrant from Punjab who recently gave birth to her first child, a 3-pound baby girl. Ms. Ayer has been commuting to the hospital each day to be with her child. The neonatal pediatrician who

talks with Ms. Ayer frequently is concerned that she may be experiencing postpartum depression. The purpose of your consultation is to help the pediatrician determine whether Ms. Ayer is depressed and, if so, to recommend an appropriate treatment.

It is unlikely that the hospital in this situation employs a Sikh psychologist, so matching the religious values of client and therapist will not be possible. Still, the psychologist bears responsibility to be informed and respectful regarding the client's religious and spiritual values.

Hathaway and Ripley (2009) have provided a thoughtful list of "preliminary practice guidelines when working with religious and spiritual issues" (p. 46). They divide these guidelines into three areas: assessment guidelines, intervention guidelines, and multicultural/diversity guidelines. Notice that all three of these areas are relevant in the previous example of working with a Sikh immigrant who may be experiencing symptoms of postpartum depression.

Among the assessment suggestions, Hathaway and Ripley (2009) emphasized attentiveness to spiritual and religious concerns, including screening questions for all clients as well as more extensive assessment when spiritual and religious issues are particularly salient (see also Richards & Bergin, 2005). They also emphasized the importance of learning what is normative for a particular religious group so that a client's particular beliefs and behaviors can be interpreted in light of normative faith practices. In assessing Ms. Ayer, it will be important to know how closely she identifies with the Sikh faith, what immigrating to another country means about her connection to family and faith community, whether the father of the child is still part of her life, and, if so, the nature of that relationship. It will also be helpful to know the meaning of her giving birth to a girl, and how depression is viewed within her Punjabi culture and among others of similar faith.

Regarding intervention, it is important to seek client consent before using spiritually oriented interventions, and established evidence-based interventions should be preferred over untested spiritually oriented methods of treatment. Of course, religious and spiritual treatment goals should only be used if they are relevant to the primary mental health treatment goals. With devout clients, competent therapists should understand and attempt to accommodate the client's spiritual and religious beliefs while not compromising the integrity of the treatment being offered. Also, it is important to recognize that religious and spiritual interventions may be harmful in some situations, such as working with a psychotic client who is having religious delusions (Hathaway & Ripley, 2009). If a psychologist were to offer treatment to the client in the previous case example, it would be important that the primary goals of treatment be focused on mental health (e.g., treatment of postpartum depression) rather than on religious education or spiritual transformation. Religious and spiritual beliefs may be a frequent topic of conversation throughout the intervention, and perhaps some spiritually oriented techniques would be

used, but the primary goals and methods of treatment would remain focused on mental health issues.

Finally, Hathaway and Ripley's (2009) multicultural/diversity suggestions emphasized that as psychologists learn about clients' religious and spiritual values, they also need to gain self-awareness of their own beliefs and values and not coerce or impose their values on clients. Psychologists should be wise about whether to disclose their religious and spiritual views to clients. Hathaway and Ripley also state the importance of obtaining continuing education, supervision, and consultation and encourage psychologists to recognize the complexity of religious and spiritual variables in relation to other areas of diversity such as sexual orientation, age, gender, and so on.

We have offered four general considerations here—religion and spirituality as a cultural issue, welfare of the client, client autonomy, and therapist competence. These set a context for considering particular intervention approaches when counseling within and across faith traditions.

Intervention Approaches

Religion and spirituality may be integrated into counseling and psychotherapy in a variety of ways, making any taxonomy likely to minimize the creative and artistic aspects of mental health professionals' work. Still, taxonomies can be useful in order to consider the range of possible interventions and the place that each gives to religion and spirituality. We suggest four general types of approaches: assimilative, accommodative, collaborative, and emergent.

Assimilative Approaches

Therapists may choose to assimilate spiritual interventions in the context of a standard psychotherapy intervention. For example, a counselor may encourage an anxious client to engage in spiritual journaling (Frame, 2003; Wiggins, 2011) though the majority of each session is devoted to standard therapeutic activities such as cognitive restructuring, exposure treatments, considering developmental issues, exploring emotions, discussing past and current relationships, and so on. The spiritual intervention—journaling, in this case—is not the main focus of treatment, but it allows a client to consider how religious and spiritual matters may relate to symptom patterns and the other material being explored in the context of counseling. Schlosser and Safran (2009) provide a list of many spiritual interventions that can be employed in mental health treatment, including forgiveness, prayer, spiritual history, spiritual genograms, spiritual relaxation, and so on; and Aten et al. (2011) provide a more intensive exploration of several spiritual interventions. Some of these treatment methods can be assimilated into standard treatment, while others require that the treatment itself be altered to make intentional use of religious and spiritual interventions. Altering a treatment because of religious and spiritual considerations is considered an accommodative approach.

Accommodative Approaches

Whereas an assimilative approach may draw upon spiritual interventions from time to time, accommodative approaches are those that have been transformed by the integration of religious and spiritual principles and methods. Spiritually accommodative approaches tend to be standard treatment protocols—often manualized treatments—that have been altered to incorporate a particular religious or spiritual approach. The most common example of this is cognitive-behavioral therapy that has been adapted for Christian clients, though cognitive-behavioral therapy has also been adapted for Muslim clients (Hook et al., 2010; Schlosser & Safran, 2009). In these approaches, for example, religious imagery may be used instead of standard imagery, and sacred writings may be used to help identify and correct dysfunctional thought patterns.

Collaborative Approaches

A third category involves the collaboration of mental health professionals and religious leaders (Benes et al., 2000; Edwards et al., 1999; McMinn et al., 2003). Rather than assuming that a mental health professional can address the various spiritual and religious needs of their clients, the collaborative approach assumes that a religious leader or spiritual expert—typically someone who is already part of the client's life—can provide important guidance and support in the process of treatment. Consider the following example:

A nonreligious counselor sees a married couple to help improve their relationship. Both husband and wife are Muslim. In the first session, it becomes clear to the counselor that certain religious issues are likely to affect the process and outcome of treatment. For example, the counselor does not feel adequately prepared to fully understand the couple's view of gender roles and sexuality. The counselor asks the husband and wife for written authorization to discuss basic treatment progress and questions about faith with the imam at the mosque where they attend. Both partners sign the authorization and express appreciation that their faith will be respected in the process of treatment.

As this example illustrates, when a counselor or psychotherapist lacks expertise in particular religious or spiritual beliefs, it is often wise to consult with a religious leader who is part of the client's social support system. This approach communicates much care for the client. It communicates that they have permission to bring all of themselves into the therapy room. Many clients are unsure about whether spiritual and religious issues are permitted in counseling, and are looking to their counselor to give clear signs as to what can be discussed. Collaborating with faith leaders can be a helpful tool for navigating religious and spiritual issues with clients.

At other times, a client may be referred directly to a religious or spiritual leader to address a value or belief that is unfamiliar to the mental health professional. This may be a good option in many cases. These referrals should be done with care, however, and not simply as a way of avoiding the work of understanding a client's religious or spiritual experience.

Unfortunately, some clients are referred to a religious leader in a manner that can be construed as dismissive. Haphazard referrals can be potentially damaging; for example, consider a client who is having doubts, anger, or guilt that seem inappropriate to discuss within a religious community, or a client who has experienced abuse within a place of worship, whether physical, emotional, or spiritual. To avoid overlooking situations such as these, therapists should have at least a basic understanding of what is happening prior to referring a client.

Emergent Approaches

Some approaches to integrating spirituality and religion into psychotherapy are not yet established and should therefore be considered emergent approaches that may or may not demonstrate long-term effectiveness. An example of this can be seen in the growing trend toward positive psychology interventions (Bolier et al., 2013). Because many of the topics of positive psychology were initially identified by surveying character strengths and virtues identified in religious traditions (Peterson & Seligman, 2004), it is not surprising that positive psychology interventions include constructs of interest to those who are religious. For example, gratitude, humility, forgiveness, hope, and wisdom are topics studied in positive psychology that also share substantial overlap with religion. But even with the natural overlap between positive psychology interventions and religion, it is not clear how much positive psychology interventions are being used in religious and spiritual forms of counseling and psychotherapy. Moreover, the initial research indicates relatively modest effect sizes for positive psychology interventions (Bolier et al., 2013; Davis et al., 2016), suggesting that their usefulness in religious and spiritual forms of psychotherapy require more research.

Determining Which Approach to Use

When should assimilative, accommodative, collaborative, and emergent approaches be used? We have no firm answers to this question because the creative dimensions of therapy and the diversity of client characteristics, interests, and needs demand flexibility in how spirituality and religion are addressed. We suggest three factors for mental health professionals to consider when determining which approach to use.

First, it is important to consider client beliefs and desires. Some clients are highly interested in incorporating religion and spirituality in treatment, and others are not. It is useful to assess this early in the treatment relationship. Richards and Bergin (2005) advocate a two-level approach to assessing religious and spiritual beliefs. The first level is to discern a global sense of the role of religion and spirituality in a client's life. This is typically done with a simple probe on the intake form or in the first interview. For example, "Tell me some about your religious and spiritual beliefs and how important they are to you." For clients who identify closely with religious and spiritual values, a more detailed level of assessment can be pursued. Here the clinician attempts to understand the client's

experience of the divine, the nature of the client's religious beliefs, how religion may be used for coping, a sense of the client's spiritual well-being, and so on. Culturally sensitive assessments are an invitation to authenticity. Just like questions pertaining to sexual orientation or ethnicity create a safe space to share, questions about religious and spiritual diversity communicate to clients that they are welcome to discuss all aspects of who they are. There is nothing they have to leave at the door, so to speak.

Assimilative and emergent approaches to treatment can be used in a wide variety of contexts, though they assume at least a modest level of interest in religion or spirituality on the client's part. Accommodative approaches are typically used with clients who have a high degree of commitment to a religious or spiritual worldview and would like their beliefs to play an important role in treatment. Collaborative approaches are likely to be used for clients who are part of a faith community and are interested in having a religious or spiritual leader involved with their treatment; perhaps the client was even referred to therapy by a faith leader or another person within a religious community.

Second, it is important to consider issues of competence. Though a client may desire an accommodative approach, a counselor who has no training or experience with spiritually oriented interventions should not attempt to provide this treatment. Referring the client to another mental health professional would be appropriate in this case. Similarly, assimilative and emergent approaches require some expertise in one or more spiritually oriented intervention and should not be attempted without some background or training on the part of the mental health professional. Collaborative approaches are generally accessible to all mental health professionals, assuming they have basic respect for religious leaders and can communicate effectively with them (McMinn et al., 2003).

Third, the research base for spiritual and religious interventions should be considered when selecting an intervention approach. We turn to this topic next.

Outcome Data on Religious and Spiritual Intervention Approaches

Several reviews and meta-analyses of religious and spiritual interventions have now been published. Kennedy et al. (2015) provided a helpful but brief review organized by the type of problem being treated (e.g., generalized anxiety disorder, coping with illness, and schizophrenia). Gonçalves et al. (2017) completed an exhaustive review of religious and spiritual interventions as part of physical health interventions. Perhaps the most useful review to date for mental health professionals is the detailed empirical analysis of 24 outcome studies by Hook et al. (2010).

The interventions reviewed by Hook et al. (2010) were used to treat a variety of problems, including anxiety, depression, and even schizophrenia. Almost all the existing research is limited to what we have called accommodative approaches. That is, current research tends to focus on relatively standardized forms of treatment that have been adapted to include religious and spiritual variables. Most of the published studies have been with Christian interventions, though some have considered other faiths, including

Islam, Buddhism, Taoism, and nonspecific spirituality. In general, research evidence suggests that some accommodative approaches are as effective as standard approaches, but most are not more effective than standard treatment. Of the 24 studies reviewed, Hook et al. (2010) deemed two therapies efficacious. Two additional therapies were deemed efficacious when combined with medication, two more when combined with existing inpatient treatments, and six treatments were considered possibly efficacious. Three treatments were not considered efficacious. Table 16.1 lists treatments in each category.

Most of these studies have methodological limitations, many use analog clients, and the standardization of treatment approaches leaves much to be desired. More and better research is needed to understand the effectiveness of religious and spiritual approaches to counseling and psychotherapy (McMinn et al., 2011).

In summary, we have described four types of intervention approaches that consider religious and spiritual issues. Assimilative approaches add religiously or spiritually oriented interventions or homework to a standard treatment approach. Accommodative approaches are treatments that have been modified from their standard form in order to introduce religious and spiritual issues. Collaborative approaches involve communicating with religious or spiritual leaders throughout the treatment process. Emergent approaches are new treatments that are not yet established but show promise. The client's beliefs and desires, the psychotherapist's competence, and empirical support for various

Table 16.1 Religious and Spiritual Treatments With Empirical Support
Efficacious treatments
Christian accommodative cognitive therapy for depression
Twelve-step facilitation for alcoholism
Efficacious treatments when combined with medication
Muslim accommodative psychotherapy for depression
Muslim accommodative psychotherapy for anxiety
Efficacious treatments when combined with existing inpatient treatment
Spiritual group therapy for eating disorders
Buddhist accommodative cognitive therapy for anger
Possibly efficacious treatments
Christian devotional meditation for anxiety
Taoist cognitive therapy for anxiety
Christian accommodative group treatment for unforgiveness
Spiritual group treatment for unforgiveness
Christian accommodative group cognitive-behavioral therapy for marital discord
Christian lay counseling for general psychological problems
No evidence for efficacy
Spiritual group cognitive-behavioral therapy for anxiety
Muslim accommodative cognitive-behavioral therapy for schizophrenia
Christian accommodative cognitive-behavioral therapy for eating disorders

Source: Hook et al. (2010).

treatment options should be considered when determining which approach to use with a particular client.

Special Issues When Counseling Within Faith Traditions

Counseling clients who share a common faith with the counselor provides potential opportunities, as well as barriers, to successful treatment. A therapeutic relationship in which both patient and counselor are mutually acquainted with the same faith system can streamline the building of rapport and conceptualization of the client's strengths, needs, struggles, and desires. The same relationship also presents the counselor with unique barriers. Counselors should be wary of making broad generalizations based on their personal experiences of the same religion. A person's religion and spirituality are heavily influenced by geography, culture, and identity markers. This can lead to vast differences in what a person defines as core doctrine and practice. Skilled psychotherapists will be careful to make a nuanced assessment of each client rather than make assumptions.

Potential Benefits

When the psychotherapist and client share the same religious or spiritual identity, it often serves as a powerful nexus of connection. Therapists following the same faith as their clients may instill confidence in those they help regardless of the presenting concern; a larger sense of shared purpose contributes to the building of rapport. Many therapists have experienced similar reactions from clients when a shared faith commitment is made known: "Thank goodness; I am so happy to hear that, I was really hoping you would share the same faith as me; I was worried you wouldn't be a believer; good, now I know you are safe." Some clients can value their faith to such an extent that it becomes the deciding factor in their decision of therapists—even above and beyond education, experience, or training.

Seeking a counselor or psychotherapist with similar beliefs may help clients with rapport building and overcoming the stigma often attached to seeking mental health treatment within some prominent religious groups. This barrier is most easily overcome if the counselor discloses information about similar faith beliefs early in the treatment relationship. Thus, working within faith traditions can provide the safety and security that many clients need in order to enter into and benefit from professional counseling.

Similarly, a shared religious or spiritual identity allows the therapist and client to understand religious and spiritual content when it is a topic of conversation, just as any cultural similarity allows for shared discourse that might seem foreign to those not sharing the same cultural identity. This shared vocabulary can allow for efficiency and empathy in the context of counseling.

A shared faith background also opens opportunities for collaborative or accommodative interventions that are not possible when psychotherapists do not understand the client's faith beliefs and experiences. Thus, innovative and creative options for spiritually integrative forms of counseling are possible.

Potential Concerns

The psychotherapist working within faith traditions ought to also take heed, however. Although a common faith may promote connection, psychotherapists can also be lulled into a false sense of connection with clients of similar faith. Clients who knowingly share a tradition with their therapist may avoid talking about personal thoughts or behaviors that generally diverge from mainstream beliefs or are associated with feelings of shame. Conversely, a therapist who is sensitive to these dynamics can spot crucial opportunities for relational healing. For example, to combat shame within the therapy room, therapists can attempt to normalize spiritual struggle early in the therapy process. Clients can be asked to share aspects of their faith beliefs that have either helped or hindered them in regard to the problems they are facing. The concept of both positive and negative religious coping can be quickly introduced with inventories such as the Brief Religious Coping Scale (Paragment et al., 1998).

Being an insider to a client's faith tradition can potentially limit a therapist's ability to assist a client in evaluating or modifying thought processes. Perhaps the religious beliefs contribute in some way to the client's inability to identify and restructure thinking patterns that are maladaptive, such as when someone with a rigid belief system is forced to grapple with life circumstances fraught with complexity and ambiguity. Indeed, when faced with tragedy, it is common for people to struggle with their faith, even to the point of abandoning their beliefs altogether (Exline & Rose, 2005). For clients dissatisfied with a faith system that encourages reliance on traditional tenets to explain suffering and hardship, a therapist who shares the same faith might focus on resolving the client's questions rather than allowing the client to accept the ambiguity and uncertainty of life. Training and supervision can help a therapist working with clients who share his or her faith tradition to maintain a broad perspective when considering treatment options.

Therapists may be prone to experiencing varying levels of negative countertransference as well. Clients questioning doctrines, facing spiritual struggle, or inclined to leave faith may cause negative feelings in the therapist. It is important for the therapist to maintain their own self-awareness and practice within ethical constraints in these situations.

Therapists working within faith traditions, particularly when clients come from the same religious community, should carefully consider the presence and effect of multiple role relationships. Indeed, because of this Richards and Bergin (2005) discourage clinicians from working within their local congregations. They support this stance with a number of arguments. First, the client and therapist are more likely to make outside social contacts, as they frequent the same religious services. These contacts increase the risk of developing therapist–personal friend, therapist–lover, or therapist–business partner dual relationships. Second, clients who have shared intimate life details with a therapist who attends the same religious gatherings may feel embarrassed, awkward, and uncomfortable. Such clients may go on to discontinue attending religious services in order to avoid encountering their therapist. Third, therapists are more at risk of violating their clients' confidentiality. Therapists may inadvertently disclose information discussed in a therapy session, mistakenly believing it was learned outside treatment.

Special Issues When Counseling Across Faith Traditions

Counseling across faith traditions also brings potential challenges. Although these challenges can be bridged, it takes understanding and effort on the part of the therapist. For starters, most faith traditions inherently bring with them specific definitions of health and healing. Although we would love to say that therapy is a purely objective enterprise, experience tells us that subjectivity always plays a role in the process of therapy. Just as counseling across cultures requires keen self-awareness on the part of the counselor, so also it is imperative that therapists explore their own religious and spiritual beliefs, and potential biases and limitations, when it comes to working across faith traditions. Training and supervision should be sought out where appropriate in order to maintain cultural sensitivity and to counter the potential pitfalls of issues such as countertransference, misguided interventions, and misdiagnoses stemming from cultural biases.

It is also useful to consider the disclosure of one's faith values. Therapists may choose to advertise their faith tradition, to join with religious leaders as sources of networking and referral for religious clients, or to disclose their faith within informed consent, either verbally or written. While this may appeal to some clinicians, others prefer to keep their personal lives more private. Still, there is always the possibility that clients may inquire about their psychotherapist's faith background. Self-disclosure in this instance may be a culturally sensitive strength, as therapists can join their client around notions of ultimate meaning and spiritual quest without having to share the same religious worldview. Exploring the client's reasons for asking such questions may also lead to important insights that can add to the richness of therapy for the client.

A client may have fears about working with a therapist who does not share her or his worldview; these fears can be discussed openly, much as fears about ethnic and cultural differences might be discussed. Therapists may wish to share their theoretical orientation and typical way of conducting therapy; then, clients can choose whether to pursue psychotherapy. Most important may be the client's desire to see how the therapist responds to faith beliefs in general. Is the therapist respectful versus shaming, and open-minded versus stereotyping?

When counseling across faith traditions, the knowledge that a therapist brings into the consulting office should always be accompanied by a posture of learning and exploring with the client. Questions such as the following may be helpful:

What about your faith is most significant to you personally?

What does your faith look like in your daily life? How do you view yourself, others, and the world in light of your faith?

Priester et al. (2009) suggest the following potential questions (pp. 107–108):

What was your experience of religion as a child?

What aspects of your parents' religion did you like and/or dislike?

Did you go through any major religious changes in your life? Any conversion experiences?
Any changes in denomination?
What religious beliefs bring you the most comfort?
What religious practices bring you the most comfort or feelings of support?
At what point in your life did you feel closest to your God(s)?
At what point in your life did you feel most distant from God?

Finally, when providing mental health services across faith traditions, it is important to consider collaborative models of intervention, as described earlier in this chapter. If a client's presenting problem is faith based in nature, or the person requests spiritually oriented interventions, it may be helpful to consult with a clergy member from the patient's religious faith tradition. Most religious clergy will be happy to consult and doing so may help build rapport with the client.

Conclusion

In this chapter we have discussed general considerations for religiously and spiritually oriented psychotherapy and counseling. These include viewing religion and spirituality as cultural diversity issues, considering the welfare of the client, respecting the client's autonomy, and maintaining competence. We then considered different intervention approaches, including assimilative, accommodative, collaborative, and emergent approaches. Finally, we addressed specific issues related to counseling when the client and counselor share the same beliefs and when the client and counselor hold differing beliefs.

Most world religions teach something akin to the Golden Rule—that we should treat others the way we would like to be treated ourselves. Perhaps this is the most fitting and useful summary statement that can be offered when considering religious and spiritual issues—an area that has received relatively less attention than other forms of human diversity in counseling and psychotherapy. Until we have clearer research findings and clinical practice guidelines, it may be most useful to use the Golden Rule as a standard of care. Do we offer our clients the same sort of respect and autonomy that we ourselves wish to have with our spiritual and religious values? Do we have the basic knowledge to engage in informed conversation and understand the nuances of our clients' beliefs? Are we willing to keep mental health goals the first priority, recognizing the need to protect our clients by practicing within the scope afforded us by our training and professional credentials? Do we stay current with the literature so that we can offer clients the best care available, in a way that is sensitive to human diversity?

Future Directions

We suggest two primary areas for future development: research and training. Regarding research, there is a small but growing body of research on religious and spiritual approaches

to psychotherapy, and what little has been reported has focused mostly on accommodative approaches. Questions for the future include the following:

1. What effects on outcome and therapeutic alliance result when a counselor or psychotherapist introduces a spiritually oriented intervention in an otherwise standard approach to treatment (assimilative approach)?
2. To what extent do the therapist and client need to share a similar faith perspective when an accommodative intervention is used?
3. Which therapies are useful for which individuals holding which religious and spiritual beliefs?

As with research, training in religious and spiritual issues is still in its infancy (Vogel et al., 2013). Training models have been described (e.g., McMinn et al. 2014), but no clear criteria or standards are available. Moreover, there seems to be some ongoing resistance to training in religious and spiritual interventions, with only a small minority of APA-accredited doctoral programs providing systematic education regarding religious and spiritual issues (Brawer et al., 2002; Vogel et al., 2013). Thus, we offer the following training-related questions:

1. What minimal standards in religious and spiritual issues should be expected of all health care psychology and counselor education training programs?
2. Much as cultural diversity training begins with self-awareness, how can self-awareness be enhanced regarding religious and spiritual worldview issues?
3. What sort of practicum and internship training opportunities might be available if we considered collaborative training opportunities within religious communities?
4. What ethical issues need to be considered and reconsidered in light of current practices for counseling within and across faith traditions?

Counselors and psychotherapists are routinely invited into the most intimate places of clients' lives. Some would call them sacred places. Learning to enter quietly, respectfully, and appreciatively is a worthy endeavor.

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Psychoanalysis, Psi Phenomena, and Spiritual Space: Common Ground

Ruth Rosenbaum

Abstract

Psychoanalysis, psi phenomena (telepathy, clairvoyance, and psychokinesis), and spirituality might appear to be strange bedfellows. However, with the evolution of psychoanalytic theories of intersubjectivity and scientific studies of psi phenomena, a portrait has emerged of the kind of space within which the self exists. It is a space characterized by indistinct boundaries between self and other, a shared space, and it appears to be crucial for psychological growth and transformation. This concept of the self connecting with an “other” beyond its own localized boundaries is also the basis of spiritual experience and spiritually- inspired forms of transformation, such as miracles and mystical states. In exploring the common ground shared by these overlapping territories of the self’s expansive reach, we may discover the conditions that enhance the possibilities for change and growth in psychoanalysis and, in the process, approach a more comprehensive understanding of the nature of consciousness itself.

Key Words: psi phenomena, consciousness, conscious, unconscious, intersubjective field, attunement, resonance, spiritual space

Introduction: The Space of Transformation

One does not need an elaborate study to conclude that nearly every human being, at some point in life, has wished or prayed for a miracle—for an event or outcome so unlikely that it would seem to be an impossibility. Whether it be recovery from a terminal illness, a much-needed windfall, a romantic connection, or an available parking spot, the appeal of a miracle is not only that it solves an immediate problem but that it engenders a direct feeling of connection with a dimension beyond the confines of the self, whether experienced as God, the universe, extraordinary luck, or an infinite, ineffable “source.” The experience of a miracle immediately lifts the self out of a space of isolation, and out of the predictability of the mundane into an awareness of a larger, transcendent scope of reality within which all things are possible. This direct experience of the astonishing magnitude of reality has the potential to transform our experience of being-in-the-world and being-in-self.

What characterizes miracles, whether in casual form (any highly unlikely but beneficial event) or in Biblical form (the parting of the Red Sea, Christ's walking on water), is that they are "in some remarkable sense 'contrary to the normal course of nature'" (Flew, 1967, p. 347). In psychoanalysis, patient and therapist seek to transform what would ordinarily be "the normal course of nature," the "normal course" being the universal human tendency to engage repeatedly in life from the same set of perspectives, perspectives shaped by a complex tangle of nature, nurture, and culture, which often lead to various forms of suffering and lack of fulfillment. It truly seems like a miracle when a person who has experienced extreme trauma in childhood can emerge from a pattern of chronic self-destructive behavior to lead a constructive, enjoyable life, or when an "untreatable" schizophrenic, through a healing relationship with a therapist, can enjoy a productive, satisfying life, sometimes without medication (Dorman, 2004; Greenberg, 1964; Steinman, 2009). Even on a less dramatic scale, small changes in our habitual perspectives can have a profound effect on our capacity to experience joy and fulfillment in life.

To illuminate the kind of space in which the miracle of psychological transformation is most likely to take place, this chapter focuses on areas of convergence of psychoanalysis, spiritual space, and psi phenomena. These three seemingly disparate realms each facilitates experience outside the generally expected or "normal" course of events, and, like the proverbial blind men trying to describe an elephant, each reveals a different aspect of the way the self participates in what psychologist and philosopher William James (1902) called the "reality of the unseen" (p. 53). It appears, as will be discussed, that the process of psychological change and growth is reliant on permeable boundaries between self and other, and on modes of relating and communicating that are beyond logical, explicit description. These same features characterize spiritual experience and psi phenomena such as telepathy, clairvoyance and psychokinesis.

What You Don't See Is What You Get: Our Implicit, Unseen Reality

Psychoanalytic theory rests on an unseen, elusive foundation: the unconscious. Supporting Freud's contention that unconscious mental processes dominate our behavior, motivation, and experience far more than do conscious processes, recent research in cognitive science indicates that the role of the unconscious in shaping our experience is even greater than previously understood (Gilhooley, 2008). On the level of visual perception alone, scientists estimate that our eyes receive *and process* 10 million bits of information per second, of which only 16 can be engaged with consciously (Norretranders, 1998, p. 93), pointing to a truly "unseen" reality that is constantly affecting us, but that far surpasses what can be detected and processed by conscious awareness. The difference in proportion—10,000,000: 16—conveys some idea of the supremacy of unconscious mental activity over conscious, and it represents just one of our perceptual systems.

The existence of an unseen reality that permeates and enriches our “normal course” of quotidian activities and strivings is also the cornerstone of spirituality. In fact, spirituality involves a search for a deeper meaning or truth beyond what is evident on the surface of life. The mystic’s exhilarating experience of oneness with everything and everyone points to a substrate of interconnectedness that eludes explicit observation. Spiritual space, the immeasurable space that surrounds and pervades our measured existence, is filled with infinite potential in which the self can participate, and, in the process, shift from its “local” address in classical time and space to one that can be defined only by the absence of finite boundaries and measurements. The self in meditation, the self in prayer, the self in creative reverie, the self experiencing telepathy, the self in mystical union with nature or with another self in passionate lovemaking, and the self engaged with the “other” in the unique intimacy of the psychoanalytic relationship are all examples of the self’s participation beyond its finite “seen” space.

What’s Psi Got to Do With It?

Psi, a general term referring to types of communication or information transfer that exceed common understanding of how such communication normally takes place, includes telepathy (mind-to-mind communication), clairvoyance (environment-to-mind communication) and psychokinesis (the capacity to move objects or influence a physical system in the absence of any discernable physical means of doing so).¹ These phenomena indicate that the self participates in an as yet indefinable and unseen aspect of reality that defies our customary assumptions of the separation between our minds and our separation in time and space.

For example, remote viewing experiments, conducted at the Stanford Research Institute, and funded by the CIA, the Defense Intelligence Agency, the Army, the Navy, and NASA, demonstrated that subjects were able to draw or describe a distant undisclosed, randomly selected target site that was visited and observed by an agent. In other studies, the subjects’ accurate remote perceptions of the undisclosed site were performed precognitively, before the agent arrived at the site, and sometimes before the site was even selected. These precognitive remote viewing experiments, conducted by the Princeton Engineering Anomalies Research Lab, yielded odds against chance of a hundred billion to one (Radin, 1997, p. 105). Other studies of psi phenomena will be described later in this chapter, as they illuminate aspects of the intersubjective space shared by patient and therapist and of potential spiritual space.

Terms and Distinctions

Since the following terms can be used in different ways in different contexts, clarification as to their meaning in this discussion is important.

“Consciousness” refers to the process by which we engage in the perception, reception, creation, or contemplation of aspects of reality, either seen or unseen. It encompasses both conscious and unconscious mental processes.

The “unconscious” refers to that part of consciousness which is outside awareness. It shares certain features with spiritual space, in that it is a nonlocal phenomenon (not confined by classical spatial parameters), and also transcends time (Freud, 1915/1957).

“Conscious” mental processes involve those aspects of consciousness of which we are aware. Conscious and unconscious mental processes are dynamic and fluid, in that something that was outside awareness at one moment may enter conscious awareness at another, and vice versa.

One does not have to be conscious for consciousness to be engaged. For example, several studies (Kelly et al., 2007; Kihlstrom et al., 1990; Parnia, 2014) demonstrate that patients who had been under deep general anesthesia as well as patients in full cardiac arrest were subsequently able to cite details of conversation or behavior on the part of members of the surgical team, indicating that their consciousness had engaged with the environment even when conscious mental processes, by all known scientific measurements, were offline.

The Elephant-in-the-Room: A Brief History of a Psychoanalytic Taboo

What an irony! Psychoanalysts invited the unconscious not only into the treatment room, but also into popular culture. (Who has not heard of a “Freudian slip”, defense mechanisms, or the id, ego, and superego?) Yet within the field of psychoanalysis, the concept of the unconscious has been carefully pruned so that experiences that appear to derive from similar soil, such as psi phenomena and spiritual experience, have, for the most part, been cordoned off from professional viewing. Psi phenomena, in particular, acquired such taboo status that analysts dared not make public their interest or possible belief in such phenomena for fear of damaging their reputations (Farrell, 1983; Mayer, 1996a, 2001, 2007).

For many decades, psychoanalysts had been practicing in the shadow of Freud’s rejection of religion and spirituality. Writing of religion, he said:

The whole thing is so patently infantile, so foreign to reality, that to anyone with a friendly attitude to humanity it is painful to think that the great majority of mortals will never be able to rise above this view of life. (Freud, 1930/1961b, p. 74)

Freud’s major thesis was that religion was “the universal obsessional neurosis of humanity; like the obsessional neurosis of children, it arose out of the Oedipus complex, out of the relation to the father” (1927/1961a, p. 43).

As for spiritual experience, Freud (1930/1961b) made his view clear in his response to his friend Romain Rolland’s description of a feeling he experienced often: “a sensation

of ‘eternity,’ a feeling as of something limitless, unbounded—as it were, ‘oceanic’” (p. 11). Freud stated that he could not discover this oceanic feeling in himself, and furthermore, that:

the idea of men’s receiving an intimation of their connection with the world around them through an immediate feeling . . . sounds so strange and fits in so badly with the fabric of our psychology that one is justified in attempting to discover a psychoanalytic—that is, genetic—derivation of such a feeling. (p. 12)

Though in recent decades, many psychoanalysts (Bion, 1970/1995; Eigen 1998, 2001; Gargiulo, 2006/2007; Gottesfeld, 1985; Grotstein, 1998; Loewald, 1978; Matte-Blanco, 1975; Meissner, 1984) have recognized the legitimate place of a patient’s religion and spirituality in analytic discourse, Roland (2011) points out that the field in general is still uncomfortable with elements of spiritual experience that lie outside the Judeo-Christian tradition. Also, few who write about spirituality and psychoanalysis consider the contribution that studies of psi phenomena can make to understanding the interconnectedness of self and other that is fundamental to both topics. Schermer (2003), for example, in an extensive exploration of psychology, psychoanalysis and spirituality, pointedly excludes the subject of paranormal or psi phenomena (p. 26).

Interestingly, Freud (1922b/1973, 1925c/1973, 1933/1965, 1933/1973a, 1941/1973d) was more open to serious consideration of psi phenomena, particularly telepathy, than he was to religion or spirituality. Though he engaged in a complex dance of approach–avoidance regarding the subject, he was clearly fascinated by it and thought that psychoanalysis and telepathy were vitally related. “I should like to point out,” he stated,

that by inserting the unconscious between the physical and what has hitherto been regarded as mental, psychoanalysis has prepared the way for the acceptance of such processes as telepathy. If one gets used to the idea of telepathy one can account for a great deal by means of it. (Freud, 1933/1973a, p. 108)

Freud was a member of both the British and the American Society for Psychical Research, and, in 1921, wrote to an acquaintance: “If I had my life to live over again I should devote myself to psychical research rather than to psychoanalysis” (Jones, 1957, p. 392). He postulated that telepathy was most likely an activity of the unconscious mind, and that much could be learned about repressed unconscious wishes from telepathically received material similar to the way one could learn from dreams (Freud, 1922/1973b). He analyzed the readings of fortunetellers, one of whom he referred to as “a genuine ‘medium’” (Freud, 1941/1973d, p. 62), and suggested that an unconscious wish, along with the thoughts and factual material connected with it, could be transferred from one person to another. In fact, some of the fortunetellers’ apparent errors appeared to derive

from their ascertaining their clients' inner reality—their unconscious (unseen) wishes and fantasies—more accurately than their observable (seen) reality.

Yet, because it was Freud's priority to protect psychoanalysis from association with the occultists and table-tappers of his time and to assure its place in history as a scientifically based endeavor, he ultimately distanced himself from an area of exploration that may have allowed him to learn more about his overriding passion—the exploration of the unconscious. Though early on, a handful of analysts (Balint, 1955; Burlingham, 1935; Ehrenwald, 1948; Eisenbud, 1946, 1947; Servadio, 1935/1973) explored the subject of telepathy, particularly as it occurred in the analytic session, for the most part the subject remained associated with infantile or magical, delusional thinking.

As Eisenbud (1946), commented:

One of the most remarkable facts in the history of the psychoanalytic movement is the indifference with which Freud's publications on the subject of telepathy have been received . . . In the more than twenty years that have elapsed since Freud's first publication on the subject in 1922, scarcely more than a half dozen psychoanalytic authors have made clinical contributions to the field, and most of these have published single communications followed by strange and enduring silences. (p. 32)

With a few exceptions, this silence endured for the next several decades.

In recent years, several analysts, among them Bass (2001), Eshel (2006), and Suchet (2004), have written about their patients' telepathic dreams and the uncanny "knowing" and unconscious communication that can take place in the analytic session. However, some describe these occurrences as special instances of patient–analyst interconnectedness, resisting acknowledgement of the larger para-psychoanalytic implications of such experiences. Eshel (2006) for example, after an in-depth exploration of a patient's telepathic dreams, concludes:

I find that this account did not take me into the domain of occultism, but rather into *the occult of psychoanalysis and the psychoanalytic process* . . . particularly of patient–analyst unconscious interconnectedness in the psychoanalytic situation and its 'impossible' extremes, defying space, time and personal boundaries. (p. 1622)

There are, however, several analytic writers—Farrell (1983), Lazar (2001), Mayer (1996a, 1996b, 2001, 2007), de Peyer (2016), Rosenbaum (2011), and Tennes (2007)—who have not subsumed anomalous occurrences in psychoanalysis under a proprietary psychoanalytic domain. Instead, they have urged consideration of these occurrences as instances of a much deeper realm of experience of which psychoanalysis is a part, and have challenged the field's sequestering of the Freudian unconscious from other manifestations of unconscious activity.

Zero Degrees of Separation?

One of the most important factors responsible for the softening of the taboo against open discussion of psi phenomena by psychoanalysts has been the acceptance of intersubjective and relational theories of psychoanalysis. These approaches overturned the classical analytic notion of the self as an encapsulated entity, separate from other selves. They represented a radical departure from the Freudian one-person psychology, in which the analyst was a “blank screen” onto which the patient projected his dysfunctional patterns, which were then to be observed, examined, and treated with specific techniques in order to bring about a cure, much as a medical doctor examines a physical body and then applies a treatment. Intersubjective theory ushered in a reformulation of how selves interact in space together, and held that the individual unconscious does not reside strictly within the individual (Loewald, 1988).

The intersubjective field is co-created by the subjectivities of patient and analyst (Atwood & Stolorow, 1984) and, as in Ogden’s (1994) related concept of the “analytic third” (p. 4), it is an essence of the relationship between patient and analyst that transcends a logical summation of their explicit communications. This field, unique to each patient–therapist dyad, becomes an active part of the analysis, resulting in a continuous unfolding of moments of possibility created by patient, therapist, and the field itself as it arises and evolves out of their mutual interactions, both conscious and unconscious.

Winnicott (1975) foreshadowed intersubjective theory with his description of transitional objects and phenomena, characterized by a lack of clear boundaries between inner and outer, subject and object, self and other. He spoke of an “intermediate area of experience” that is essential to the infant’s development, and that “throughout life is retained in the intense experiencing that belongs to the arts and to religion and to imaginative thinking, and to creative scientific work” (p. 242). Ferenczi (Ferenczi & Rank, 1924/1986) was also an early proponent of what, in the 1980s, came to be known as the “two-person psychology” (Modell, 1984) underlying analytic treatment. In both intersubjective and relational thinking (Kohut, 1984; Mitchell, 1998; Stolorow, 1991; Stolorow et al., 1987), the analyst–patient relationship emerged as a poetic parallel to the observer–observed relationship in quantum physics: The observer (analyst) has a mutative effect on the observed (patient) simply by virtue of the unique personal, theoretical, and experiential lenses through which they observe, on both conscious and unconscious levels. Thus, the oft-cited observation that Freudian patients have Freudian dreams, Jungian patients have Jungian dreams, and so forth (Hufford, 2003). It is important to note that the patient is also an observer with a uniquely personalized set of lenses that affect and change the analyst, so that each member of the dyad is both observer and observed, creating an ongoing Mobius strip of interactive, creative transformations of two selves that are essentially interconnected.

Kulka (1997) and Gargiulo (2010) elaborate on a quantum context for psychoanalysis and for the growth of the self, underscoring the parallel between quantum wave-particle

phenomena, and the creation, out of a field of wave-like possibilities in the analytic session, of in-the-moment particle-like interpretations and the emergence of meaning. Though a quantum context is not identical to a spiritual context (and some physicists would bristle at any analogy between the two), the qualities of spiritual space and quantum space are alike in that both are implied spaces of boundless potential, not defined by measurable physical dimensions. We do not see quantum or spiritual space but we assume their presence because particles, events, information, and all facets of life seem to emerge from them, similar to the Buddhist concept of emptiness from which all form arises.

The Nature of Intersubjective Space

The intersubjective nature of the growth of the self acquired even more substantiation from research on nonverbal communication between mother and infant (Beebe & Lachmann, 2002). Fascinating frame-by-frame analysis of videotaped interaction between mothers and babies as young as four months old reveals split-second shifts in their mutually shaping responses to each other. These studies vividly illustrate how the psychological growth of the infant occurs within a relational context, each member of the dyad affecting and regulating the other's responses, primarily on an implicit, unconscious level. As adults, we continue to grow "in relation" to others. Paradoxically, the discovery of our individual "separate" selves is dependent upon the fact that we are never wholly separate from others. (In spiritual experience a related paradox exists: discovery of the self often occurs through selflessness, through a merging of the self with the divine or with God. Thus, the self is simultaneously lost and found through surrender to a relationship with the "Other".)

Unmediated Resonance

Our consciousnesses interact in Winnicott's "intermediate area" (1975) to such an extent that it is reasonable to postulate that all experience emerges from an intermediate, intersubjective space where subject-object and self-other boundaries are blurred. What is this space like? A clue to the nature of intersubjective space can be found in the activity of mirror neurons, a type of premotor neuron first discovered in the mid-1990s in the prefrontal cortex in monkeys (Gallese et al., 1996), and then in human brains as well. It was found that the same mirror neurons were activated not only when the monkeys executed certain actions but also when they observed the same action being performed by others. In humans, for example, if a person raises a hand, the same neurons fire in the brain of someone watching the hand rising as fire in the hand-raiser's brain. These neurons play a role in our immediate experience of what another experiences, as well as in understanding, without words, the intention of others (Iacoboni et al. 2005). They may be the neural basis for empathy, for our attunement to each other's inner states (Iacoboni, 2008). Research has demonstrated that observation of emotional states such as disgust, pain, and the registering of moral violation also activate mirror neurons in specific areas of the observer's brain (Jeon & Lee, 2018). Mirror neurons, however, may initiate a different kind of empathy

than the familiar notion of “putting oneself in another’s shoes.” In the “embodied simulation” that is associated with mirror neuron activity, we are automatically, and without conscious effort, in each other’s shoes. According to Gallese (2003), one of the discoverers of mirror neurons, we all participate in a prereflexive “shared intersubjective space” (p.160). The kind of empathy facilitated by mirror neurons suggests a possible “unmediated resonance” (Goldman & Spirada, 2005, p. 207) between human beings.

Up until now, mirror neurons have been found to be activated only through direct sensory observation of another’s action or emotional expression, so that other instances of “unmediated resonance,” such as the mystic’s merging with the infinite, or telepathy, or some of the mysterious forms of intersubjective experience that occur in psychoanalysis, require further explanation. Gallese et al. (2007), for example, state that mirror neurons cannot account for projective identification, in which the analyst is said to have reactions and feelings that have been projected into his psyche by the patient’s unconscious or split-off emotions. They comment that some have looked to telepathy as an explanation (p. 150). Note that projection is not a one-way street: The analyst’s unconscious projections can penetrate and impact the patient’s psyche as well. In fact, therapeutic action in work with psychotic patients often involves the patient’s introjecting and assimilating parts of the analyst’s healthier, stronger ego (Searles, 1976, pp. 158–159).

Perhaps mirror neurons will eventually be discovered that do not require direct observation through the five senses, so that “observation” may ultimately extend to the entire spectrum of what can be perceived and responded to by the unconscious. Though neuroscience may never fully explain all intersubjective phenomena, it does seem as though our neurobiological structure primes us for experiences in which the self is not separate from the other, and in which shared intersubjective space is the rule, not the exception. At a conference on Neurobiology and Attachment Theory in Psychotherapy (June 2006), Allan Schore spoke of the “immediate connection” triggered by right hemisphere to right hemisphere attunement between patient and therapist. (The right hemisphere of the brain is thought to be the site of most unconscious communication and information processing.) This unmediated brain-to-brain resonance, Schore said, is more fundamental to positive change in the patient than any particular technique or verbal intervention.

Fields Without Borders

Though contemporary psychoanalysis has, for the most part, embraced the concept of an interactive, intersubjective field, and of a “two-person” psychology, it has stopped short of exploring the space in which the dyadic intersubjective field exists, as if there is a fence around the field within which patient and analyst interact with one another. Intersubjective theorists Atwood and Stolorow (1984) state that “patient and analyst together form an indissoluble psychological system” (p. 64); however, they do not address the space within which this psychological system exists. From a more comprehensive perspective, one can view the analytic experience as created and affected not only by what occurs within the

dyad but also by the field that permeates it. Just as there are no fixed boundaries between patient and therapist, there are no fixed boundaries between the dyadic intersubjective field and the space or field that surrounds and suffuses it.

Green (2000) commented that “our thinking about the ‘inter’ in psychoanalysis cannot be confined only to that which takes place between the two members of a couple; it also refers to another order of determination that eludes the observation of their relations” (p. 21). Furthermore, Tennes (2007) suggests that

from a two-person model, we must move to one that is triadic, but one in which ‘the third’ is not simply a product of the psyches of patient and analyst but is, rather, a superordinate field that, however inadequate our capacity to explain it, informs and contains the analytic encounter. (pp. 510–511)

Following is a case example of the possible interpenetration of the patient–therapist field with a superordinate field. As suggested by this case, the patient–therapist intersubjective field appears to establish a dynamic, relational connection with the intangible space that lies beyond it. Thus, there is a parallel between the patient–therapist relationship and the relationship between the patient–therapist field and the field of a larger reality or potential spiritual space.

Interpenetrating Fields—A Case Example

(Note: The patient’s name and certain details have been changed in order to protect his identity.)

Sam first came to see me because of a debilitating depression following a significant job disappointment. He was 42, very handsome, had made a fair amount of money in his architecture business, a “golden boy” in many respects, and yet he had never maintained a relationship with a woman for more than two months. Sam’s women had to be perfect looking and what he called “cultured,” and under the Sam microscope, no one came close. He had a few friends, but even they found his rigid judgments of many people hard to bear, and they’d begun to distance themselves from him. Sadly for Sam, he applied the same contemptuous lens toward himself, and, at 42, his life was worthless to him because he had not fulfilled the grand vision he had for himself—not enough money, not enough status, and no perfect wife to bear him the perfect children.

In the first several months of our working together, most of my therapeutic efforts fell flat, and were met with thinly veiled disdain, including Sam’s occasional comments about the “fuzziness” of female logic. Then one day, I was running a few minutes late for his session, and when he came into the office and sat down, he had a quizzical smile on his face.

“I’d like to know what you think of this. I don’t think this is really worth talking about, but listen to what happened. I was waiting for you and I had this bag of M&Ms, and to pass the time, I tried to guess what color the next M&M would be before I took it

from the bag. And, you know, I got all but one right! I mean, I don't think it's more than coincidence; I hate all that New Age-y stuff, but it's kind of interesting."

With any other patient, I might have simply nodded and listened for what would follow. But with Sam, I recognized that this event, outside his usual set of expectations as to how the world worked, had caught his attention. I tried not to let it wander.

"What do you find interesting about it?" I asked.

"Oh, nothing really," he backed off smugly. "I thought *you* might find it interesting; I think women like these kinds of things."

"Well, then," I responded, "that was very thoughtful of you to tell me about it. But, you know, if it were truly insignificant to you, if you were absolutely certain it was *mere* coincidence, I don't think you would have mentioned it."

"I guess I was wondering if there might be something to it, I mean, do you think I might have some kind of special talent?"

I knew I had to tread cautiously. To play into a belief that Sam had special powers would simply reinforce his old template, and provide fuel for his conviction that he could only value himself if he could achieve a greater-than-mortal position.

So, I said, "I don't know about that, but I do think it means that there is something outside your usual way of seeing things that in some way intrigues you. Maybe it's liberating to think that there's something you haven't yet categorized. You know, maybe there are more things in heaven and earth than are dreamt of in your philosophy."

"That's from Hamlet, isn't it?" Sam asked.

I nodded.

"Well," said Sam, "I don't think that's relevant at all. I don't want a quote from literature. I hated all those humanities majors in college. I want a logical, scientific explanation."

For the moment, I dropped my end of the rope in this tug of war, and Sam went on to talk about other things. But in the next few months, a series of unusual coincidences—well beyond the relatively simple guessing of M&M colors—occurred in Sam's life. Each incident was unusual in itself, but the growing frequency with which they occurred was truly striking. It seemed that Sam's surprise at the M&M experience, and his reluctant indulgence of my attempt to linger on the subject, had attuned his attention to notice more complex, odds-defying coincidences, or synchronicities, inspiring him to explore the meaning they held for him. There was an uncharacteristic openness with which he recounted these events; he became like an excited schoolboy bringing in material for show-and-tell. It occurred to me that he was experiencing something he had missed out on in childhood. When Sam would return home from grade school, his mother would greet him with nasty comments and physical threats that were sometimes carried out. There was no milk, no cookies, and no innocent after-school chatter for Sam.

Then, a few months into this new opening for Sam and me, there was an event so remarkable that it seemed to provide a powerful jolt to Sam's psychic structure and initiate a process of transformation that neither of us could have expected.

First, some background: When Sam was depressed, he would read about the lives of famous and powerful men, hoping to connect with their courage and aspirations in a way that might kindle a spark of his own sense of worth. At one point he came across a little-known book containing George Washington's personal diary. In it were a series of prayers Washington had written for himself to provide solace and inspiration.

Sam told me about his favorite of the prayers, albeit a bit sheepishly, since, as he said, it was a little "corny" and too religious. But if it was good enough for George Washington, it was good enough for him. He proceeded to recite the first part of Washington's "Monday Morning Prayer" for me:

O eternal and everlasting God, I presume to present myself this morning before thy Divine majesty, beseeching thee to accept of my humble and hearty thanks, that it hath pleased thy great goodness to keep and preserve me the night past from all the dangers poor mortals are subject to, and has given me sweet and pleasant sleep, whereby I find my body refreshed and comforted for performing the duties of this day, in which I beseech thee to defend me from all perils of body and soul. . . (Johnson, 1919, pp. 26–27)

About the time of his discovery of the prayer, Sam, always in pursuit of hypermacho endeavors, signed on to become a crew member of a ship on a perilous expedition near the Arctic Circle. He was gone for over four weeks. Upon his return, he came in for his first session, smiling somewhat cryptically.

"OK," he announced, "I have to acknowledge that there are some things that can't be explained by logic or science."

I was certainly intrigued.

Sam explained: Before his return to the United States, he took a side trip to Norway. On his second night in a village north of Oslo, he was having dinner at a restaurant, when a pretty young Norwegian woman drew his attention. He invited her to join him at his table. She was a college history major, and during their conversation, she happened to mention that her class was currently studying American history. One of her course requirements was that each student choose a prominent figure in American history and present a report to the class. She told Sam that she had chosen George Washington. What a coincidence, said Sam, and told her he'd recently read a book about Washington. Then, mainly to score points as a sensitive man, Sam told her of his discovery of Washington's prayers for guidance. As Sam began to recite the "Monday Morning" prayer—"O eternal and everlasting God, I presume to present myself this morning . . ." the young woman interrupted him, and took up where he'd left off. In halting English, she recited the entire first part of the prayer, the same part Sam had recited to me.

After recounting these events, Sam just looked at me. We were both speechless. Then Sam proceeded to get out pen and paper and insisted, just to make sure we weren't getting

too carried away, that we try to calculate the odds against this happening by chance. And so, we went down Sam's list of questions, and tried, together, to estimate the following:

What percentage of Americans even know of the "Monday Morning" prayer by George Washington, and of those, what percentage know the prayer from memory? Of those Americans, what percentage might have traveled to a village north of Oslo recently? Of that infinitesimally small group, what percentage would have dined in the same restaurant and at the same time as the young history student who dined there that evening? Then, as Sam insisted, we had to factor in: What percentage of Norwegians even know of George Washington's "Monday Morning" prayer? And of those, what percentage could actually recite a substantial portion of the prayer?

Needless to say, the odds we came up with were, conservatively speaking, a gazillion to one against this happening strictly by chance. And then, events of an equally improbable---one could say miraculous---nature unfolded over the next several months. Sam gradually began to show signs of genuine humility, questioning many of his arrogant judgments and fixed, contemptuous attitudes toward people he had deemed "losers." He started doing volunteer work at a hospital, and befriended an elderly man who lived near his home, helping him with shopping and other tasks. He allowed exploration of the impact of his relationship with his father, which he had previously deemed "irrelevant" to his struggles with attaining a sense of self-worth. Perhaps most surprising, after several months, he fell in love with a woman unlike any he'd dated before (without the various "pedigrees" he'd always insisted upon) and has since married her. Because she was unable to have children, Sam relinquished his dream of having his own perfect children, and he is now the devoted father of their two young adopted girls.

Although there is no way of being certain of this, it is possible that our mutual focus on the coincidence of Sam's guessing the M&M colors, an anomalous experience for him, and our shared exploration and enjoyment of the synchronicities he subsequently reported, may have established a resonance with a larger field of unseen reality that interacted with Sam's and my relational field. Then, in a nonlinear, inexplicable way, this interaction may have opened our intersubjective field to the manifestation of a series of increasingly improbable synchronicities.

Like Beebe's (Beebe & Lachmann, 2002) videotaped mother-infant pairs' subtle shaping of each other's experience, Sam and I had engaged in a delicate choreography around the subject of synchronicities, with each one of us accommodating both consciously and unconsciously to the other's very different starting positions, and ending up equally stunned by his experience in Norway. We both felt that our relationship had been touched by a relationship with something beyond our comprehension. The effect this had on Sam was transformative, as he was deeply affected by what he experienced as a personal engagement with the vastness of a reality well beyond the narrow psychic space within which he had originally existed, and the narrow vision of what constituted a "worthwhile" or successful life. It also brought us closer and facilitated deeper work that resulted in very

practical changes in his life, and in his capacity for tolerance, love, and compassion for himself and others.²

Psi Research—Illuminating the Superordinate Field

It is beyond the scope of this chapter to undertake a comprehensive review of recent scientific studies of psi phenomena. I have selected two types of psi research that touch on the concept of the space within which the self resides, and which have implications for psychoanalytic work and the nature of intersubjective fields in general. In addition, results from psi experiments point to the possible existence of an infinite spiritual space or “source,” and to ways in which the unconscious may interact with that space.

One of the most highly regarded series of psi experiments was conducted over a period of 25 years, beginning in 1979, at the Princeton Engineering Anomalies Research (PEAR) Laboratory (cited earlier regarding remote viewing experiments). The PEAR Lab was established in 1979 by Robert Jahn, Dean Emeritus of the Princeton Engineering School and professor of Aerospace Sciences, and cofounder Brenda Dunne, to explore the impact of human consciousness on physical, material systems.

A typical PEAR lab experiment sought to explore the effect of human intention on the output of a random event generator’s production of 1s or 0s, which, according to chance, would normally be 50% of each. Usually, the human subject, or operator, would sit in a room with the box-like machine as it produced and recorded its thousands of bits of data in the form of rapidly streaming 1s and 0s. Before beginning, the operator would set an intention to shift the mean result either higher or lower than what would be expected by chance. Even when the operator was not in the room with the machine, sometimes up to thousands of miles away, some PEAR experiments, along with those from other laboratories, demonstrated that distance did not diminish the subjects’ capacity to alter the chance statistics of the generator. A meta-analysis of 832 experimental studies of the effect of human consciousness on random event generators, including the Princeton studies, found overall odds against chance of the impact of human intention on the machines’ output of over a trillion to one (Radin, 1997, p. 140).³

In an interview with PEAR cofounder Brenda Dunne (personal communication, February 11, 2004), she explained that most of the more successful operators tried to feel a kind of merging with the machine, to create, in her words, a kind of “third space” or “blurring of identities between human and machine.” That approach, which could be described as a kind of meditative state that softened distinctions and altered the sensation of boundaries of the self, seemed to produce better results than when subjects tried to exert their will over the machine in a more overt conscious way. This blurring of identities and creation of a “third space” is strikingly similar to the descriptions of what takes place between analyst and patient in the intersubjective field. Stern (2004) and the Boston Change Process Study Group (Stern et al., 1998) have proposed that change occurs in therapy precisely when therapists are willing to abandon their familiar

framework and wade in more deeply to meet the patient in intersubjective waters, or, one could say, to “blur” their habitual sense of themselves, their roles, and their linear assessment of the patient.

In the PEAR experiments, it appeared as though the against-chance effects took place outside conscious control: After an initial conscious intention was selected (to either raise or lower the otherwise statistically predictable production of 1s and 0s), the unconscious aspect of consciousness seemed to take over and “deliver” the anomalous results. Here, too, there is a parallel to descriptions of the primacy of the role of the unconscious in therapeutic efficacy, that is, in altering the probable, “statistically likely” repetitive patterns in a person’s inner and outer life. As Schore (2006), stated, in emphasizing the essential role of unconscious attunement between patient and therapist in positive treatment outcome: “The unconscious does better when left to do its own thing without the conscious mind on its shoulder.” In psychoanalysis, it seems that interpretations, affective expression, and explicit communication are the visible, conscious scaffolding upon which implicit meaning, unconscious resonance and transformational processes perform their alchemy.

Unconscious Forays into Quantum, Superordinate, and Spiritual Space

In a conceptual model of the relationship between the human mind and its material environment, based on the findings of the PEAR and other psi studies, Jahn and Dunne (2001) proposed that there is an interface between the conscious and the tangible (observable) physical world and an interface between the unconscious and the intangible (quantum-ruled) physical world. We are used to the former interface, as it obeys classical rules of time and space, cause and effect; what we see *is* what we get. The unconscious and the quantum intangible realms, however, both speak a counterintuitive logic-defying language—time does not exist as we normally conceive of it, nor does space. In both the unconscious and the intangible physical realms, events that we normally think of as impossible occur routinely: Think of the wildly improbable scenarios that emerge from our unconscious in dreams, and also of the behavior of subatomic particles as in the phenomenon of quantum entanglement—what Einstein called “spooky action at a distance” (Lindley, 1996)—when two paired particles, separated at a source, seem to “know” and respond instantaneously to each other’s spin and charge, even at great distances from each other.⁴

Jahn and Dunne (2001) speculate that at times the unconscious is able to carry information from the intangible realm with which it has undetectable but intimate contact, into conscious awareness, resulting in psi or anomalous phenomena such as remote viewing, human-machine effects, and telepathy.⁵ They then suggest that perhaps this entire range of experience—from the world of conscious awareness and perceivable phenomena to the unseen unconscious and the intangible quantum realms—emanates from, or participates in, an even less comprehensible yet all-encompassing space they term the “Source.” They describe the “Source” as an ineffable, infinite space that is inherently spiritual in that it gives rise to everything yet has no identifiable physical dimensions or

properties of its own. This concept is similar to the Buddhist concept of emptiness mentioned earlier—emptiness itself has no form and no substance but is that from which all form and substance emerges.

Uncanny Intersubjective Influence

The extensive reach of the intersubjective field has been highlighted by another category of psi studies, primarily by Braud and Schlitz (1991), in which they explored the capacity of average individuals to influence the biological systems of distant subjects. The subjects' degree of physiological relaxation or arousal was measured by as many as seven different physiological indices, including electrodermal response, muscle tension, and heart rate. Subjects were not aware of either the timing or the direction of the intention of the influencer. Influencer and subject were separated by distance and sometimes by special soundproof and electromagnetically proofed rooms. The influencer was given computer-generated random sequences with instructions as to when to mentally focus on either arousing or calming the distant subject. At other times, the influencer was randomly instructed to direct attention away from the subject, thereby producing "no-mental-influence" control periods. The combined results of 37 such experiments demonstrated a highly significant correlation between the influencers' intention and changes in the subjects' physiology, producing odds against chance of more than a hundred trillion to one (Radin, 1997, p. 153). By whatever yet undiscovered means these phenomenal effects occurred, the nature of the intersubjective space involved appears to be similar to that involved in studies demonstrating the positive impact of prayer (including prayer from a distance) on the healing of physical conditions, often without the knowledge of those being prayed for (Byrd, 1988; Dossey, 1993; Harris, 1999; Springer & Eicher, 1999). If we can influence each other's physiology, even at a distance, and even without the recipient's knowledge of the intended influence, we have to radically shift our thinking about the effect intentions have on the mental states of others as well (since physiology and mental states are themselves mutually interactive).

To this point, a meta-analysis of studies of a different type of distant influencing, known as attention focusing facilitation experiments, was published in *The Journal of Alternative and Complementary Health Care* (Schmidt, 2012). These experiments explored whether a person's positive intention could enhance the attentional focus of the mind of another person at a distant location. Schmidt concluded that there is a "positive effect of benevolent intentions" and that, while further research is needed, the results "might have some implications for the areas of nursing and health care, distant healing, as well as group meditation practice" (p. 533).

Future Directions: Implications for Clinical Work and Research

In psychoanalysis, in spiritual experience, and in psi phenomena, it has been shown that there is a heightened engagement with a nonlocal dimension of experience that exceeds

the boundaries of our physical selves and of the “seen,” material world, an engagement that appears to facilitate transformation and to reveal fundamental aspects of our mutual influencing not always apparent to us.

How can enhanced awareness of this aspect of our existence inform therapeutic approaches to healing a variety of mental health issues? What are the clues that we should pay attention to and research further in order to answer this question?

The Healing Potential of Intimacy

For over three decades, study after study has shown that the single most consistent and significant factor in positive outcome in psychotherapy is the quality of the therapeutic alliance, the relationship between patient and therapist as they work together in the best interest of the patient (Arnow et al., 2013; Falkenström et al., 2013; Goldsmith et al., 2015; Henry, 1998; Klein et al., 2003; Luborsky et al., 1985; Norcross et al., 2005; Wallerstein, 1995). It has been found to be more important than any particular theory, technique, or protocol. It would make sense, then, that therapies that focus on this relationship, and make it an essential part of the therapy process, such as psychoanalysis and other psychodynamic therapies, would fare better regarding outcome.

Psychodynamic therapy, which includes psychoanalysis (these terms, as well as psychoanalytic psychotherapy, are often used interchangeably), refers to therapies that do not focus exclusively on diagnosable symptoms, but rather on the whole person who is manifesting the symptoms—on the person’s feelings in-the-moment as they arise in a therapy session, on fantasies, dreams, subtleties of reactions of body and mind to life events, and on relationships, including the intimate dynamics of the therapy relationship itself. This kind of therapy can best be described as a journey of sorts, akin to a spiritual quest in search of courage in the face of challenge, a deep sense of purpose, meaning, and vital participation in life, and, at best, profound personal evolution, often referred to as “structural change.” It is a journey in which the therapist, in alliance with the patient, functions both as guide and participant, an authentic two-person endeavor.

To provide context for this discussion, it is important to dispel some of the media and insurance-driven myths regarding therapeutic efficacy. Though cognitive behavioral therapy (CBT) has been anointed the “gold standard” of evidence-based therapeutic modalities, there is a substantial body of evidence accumulating from studies in the last 15 years that not only challenge this belief but also, in many cases, demonstrate the greater efficacy and larger effect sizes of psychoanalysis and other psychodynamic therapies in the treatment of depression, anxiety, somatic symptom disorders, some personality disorders, including borderline, complex mental health disorders, substance-abuse, and panic disorder (Abbas et al., 2006; Driessen et al., 2013; Huber et al., 2012; Leichsenring et al., 2014; Leichsenring & Klein, 2014; Shedler, 2010, 2015; Turner et al., 2008; Yakeley, 2014). In psychodynamic therapies, clinicians include attention to dysfunctional habits of thought, as one does in CBT and other protocol-based therapies, but more attention is

placed on the therapeutic relationship, on the intersubjective nature of transference and countertransference, and on the subtle openings onto unexpected possibilities for growth that emerge from the conscious and unconscious meeting of minds.

The evidence for the greater efficacy of psychodynamic therapies (both short and long term) has emerged due to changes in study design that include longer follow-up periods and a focus on what actually goes on in therapy sessions. For instance, consider the growing discrepancy between CBT's enduring reputation for its solid evidence base and more recent studies that demonstrate psychodynamic therapy's greater efficacy. When more thorough research was conducted, it was revealed that when CBT was rated as effective, it was in cases where the practitioner actually integrated psychodynamic approaches along with CBT. When CBT protocol alone was followed, outcome was poor (Shedler, 2010, p. 104).

A clue to the transformative potential of emotional intimacy in the context of an alliance directed toward a common goal emerged from the PEAR Laboratory random event generator (REG) studies described above. It was found that two people working together with the same mental intention to influence the output of the machine produced a larger effect than a single person working alone, and, in an even more significant parallel to therapeutic work, the pairs who shared a strong emotional bond (married couples, friends, lovers) "achieved an effect size nearly seven times larger than that produced by those same people as individual operators" (Dunne & Jahn, 2005 p. 709). One can speculate that anomalous events are more likely to occur in a closely bonded relationship, such as the patient–therapist relationship, and that a powerful attunement or resonance between people—a feature of intimacy—may heighten the likelihood of exceeding chance expectations, whether it be in the case of a random event generator's output, or in the case of a patient trying to change repetitive, predictable, limiting patterns in life. Freud, too, was aware that the effects of his new analytic therapy drew from a deeper source than even the most brilliant interpretations. In a letter to Carl Jung in 1906, Freud wrote: "Psychoanalysis is in essence a cure through love" (p. 12).

Perhaps the most significant finding in recent efficacy research that has important implications for mental health care is the fact that psychodynamic therapies not only yield greater positive outcome, greater effect sizes, and more sustained positive effects over a longer period of the allotted study time than is generally found with manualized, protocol-based therapies, but also, when studies included post-therapy follow-ups, the positive change continued to increase well beyond the termination of the therapy—in some cases, for several years. "The consistent trend toward larger effect sizes at follow-up suggests that psychodynamic psychotherapy sets in motion psychological processes that lead to ongoing change, even after therapy has ended" (Shedler, 2010, p. 100).

Though further research is needed to determine how pervasive this "gift that keeps giving" effect is, there is enough evidence now to warrant cautious speculation as to the underlying mutative factor that fuels the healing power of the psychodynamic therapeutic

alliance and the intersubjective intimacy it engenders. Significant clues have emerged from the fields of the neurobiology of attachment and developmental neuropsychanalysis. Gainotti (2012) and Schore (2014) have emphasized the role of nonverbal communication between the right hemisphere of the mother's (or caregiver's) brain and that of the baby's in early developmental stages. As indicated earlier in this chapter, the brain's right hemisphere is associated with emotional processing and implicit, nonverbal, unconscious communication and is regarded by some neuroscientists as the "the seat of the unconscious". In contrast, the left hemisphere is responsible for logical, cognitive, verbal processing.

The right hemispheric, nonverbal, nonlinear processing shapes neural pathways in the brain that form an early template for relational and attachment patterning, as well as for self-regulation and resiliency in the face of challenges to the psychophysiological being. Right hemispheric resonance between patient and therapist may be analogous to the resonance that underlies the original developmental shaping of self-regulatory and relational templates that takes place in infancy. In its emphasis on unconscious processing and relational intimacy within a safe, exploratory, and nonjudgmental context, psychodynamic psychotherapy may offer a unique opportunity for the formation of healthier developmental circuits to replace those that are less functional, and may set in motion patterns of creative resiliency that continue to develop over time along new neuropsychological "tracks". Schore (2014) states that "effective psychotherapeutic treatment of early evolving self pathologies (including personality disorders) can facilitate neuroplastic changes in the right hemisphere . . ." (p.393), affecting relational growth and attachment patterns. In effect, he is commenting on what psychoanalysts call "structural change" and reiterates that the therapeutic alliance is the "major vector" of this change. Freud's voice, from more than 100 years ago, could have seamlessly entered into contemporary neurobiological discourse on right hemisphere to right hemisphere unconscious communication: "It is a very remarkable thing that the Ucs of one human being can react upon that of another without passing through the Cs." (Freud, 1915/1957, p. 194.). ("Ucs" is Freud's notation for the unconscious, as "Cs" is for the conscious mind.)

Personality Matters

In 2006, the APA Presidential Task Force on Evidence-Based Practice noted that "because of the importance of therapeutic alliance to outcome, an understanding of the personal attributes and interventions of therapists that strengthen the alliance is essential for maximizing the quality of patient care" (p. 278).

Schore (2006) speaks of the "therapist's ability to access the implicit realm" as the major catalyst for therapeutic change. He points to personal traits such as sensitivity, or the "capacity to register and respond to very slight differences or changes in emotion, the expression of affect, and a deep sense of devotion and commitment to the patient's well-being" as important attributes fostering receptivity to communications from the

nonverbal, implicit realm of the unconscious. Freud (1912) made this type of receptivity a foundation of psychoanalytic work in his exhortation that “the analyst should use his own unconscious like a receptive organ toward the transmitting unconscious of the patient” (p. 115).

Psychoanalytic training is somewhat unique among therapies in preparing students to refine and expand their ability to access the implicit realm. Students are required to be in extensive therapy over a period of several years, as well as in ongoing supervision. The in-depth study of different theoretical frameworks, practice modalities, and technique remains very important, but many contemporary psychoanalysts, including Beebe and Lachmann (2002), Gargiulo (2010), Kulka (1997), Orange et al. (1997), Rosenbaum (2011), and Stern (1989), have emphasized the essential role of nonlinear, nontechnical elements in psychoanalytic process, and the acceleration of growth that can emerge from in-the-moment unfolding of unexpected possibilities that transcend both the patient’s linear history and the linear history of the analysis. These moments of “deep contact” involve, according to neuropsychanalytic researchers such as Schore (2014) and Whitehead (2006), right hemispheric resonance between patient and therapist.

Since psi phenomena and spiritual experience (such as miracles, transcendent experiences, personal awakenings, and mystical revelations) also defy linear, probabilistic progressions, therapists may benefit from including these areas of human experience in their thinking about the scope of change that can be hoped for regarding their patients’ lives. Collaboration between psi researchers, psychotherapists, and neurobiologists could lead to useful studies that might reveal more about the personality traits that are conducive to psi experiencing, positive therapeutic outcome, and deep psychospiritual transformation.

The development of the therapist’s “receptive organ” and capacity to “listen with the third ear” (Reik, 1948) brings the therapist closer to the essence of how each individual patient experiences their experience. Although people who are anxious, or depressed, or who experience panic or eating disorders, may have many feelings and symptoms in common, their individual experience, associations, and physical reactions related to their problems vary not only from person to person but within the same person in different moments. Therefore, how a person’s depression or eating disorder or anxiety can be ameliorated or cured, and what therapeutic attunement might mean for different individuals, varies greatly. It may be that one reason for the efficacy of psychodynamic therapy is the attention paid to the aspects of a person’s experience that don’t fit into easy categories, that are highly individualized, including the “qualia” of experience.

Qualia are the subjective, personal qualities of experience, the “feel” of our experiences that, according to many philosophers, cannot be reduced to anything physical or measurable, and yet they comprise much of the actual, inner experience of our lives. For example, no two people experience the color “blue” in exactly the same way. The sensory experience, the emotional and experience-laden associations (conscious and unconscious), the inner visual picture, the exact shading perceived, and the memories that “color” the

color are as varied as are people. And the same person may have a different inner experience of the sight of the same “blue” at different moments.

Even what have been thought to be predictable activation patterns in the brain that we all share, and that have been associated with certain common feeling states, are being called into question. For example, it has been generally accepted that experiences of fear are accompanied by increased activity in the brain’s amygdala. Fear and activation of the amygdala go hand in hand, or so it has been thought (and taught). However, in recent studies at the Interdisciplinary Affective Science Laboratory at Northeastern University, in a thorough analysis of brain-imaging studies published from 1990 to 2011, only one-quarter showed an increase in activity in the amygdala during the experience of fear (Barrett, 2015).

The uniqueness and variability of even the biological reactions to the “feel” of our experience underscores how difficult it is for any of us to be completely known by another. Yet, for many people, there is an underlying desire to be known and accepted for all that they are, and all that they feel, without shame or judgment. Because psychodynamic therapy, particularly psychoanalysis, trains students to hone their ability to receive the “qualia” of a patient’s experience at levels beneath and beyond words and diagnoses, it may facilitate a client’s feeling of being truly known in a safe, caring environment at a psychic depth that enables the draining of reservoirs of shame and residues of trauma that are often the most stubborn inhibitors of growth and change. Moreover, as in the caregiver’s right hemispheric attunement to the infant’s nonverbal, inchoate feelings, the therapist’s attention and intention to attune to the patient’s “qualia” may stimulate the reshaping of neural circuitry governing healthy developmental and relational capacity, as described by Schore and others.

Practical Concerns

Although studies have demonstrated greater positive outcome and greater effect sizes in psychodynamic therapy, there is understandable concern about the cost of the longer-term therapies. However, there are indications that these therapies could prove to be cost-effective. Given that the majority of patients who receive the shorter-term protocol-based therapies favored by insurance companies “seek treatment again within six to twelve months for the same condition” (Shedler, 2015, p. 52), the more in-depth therapies may, in the long run, be more cost-effective. Regarding another cost-benefit assessment, Leuzinger-Bohleber et al. (2003), report that “the evaluation of mental health costs showed a cost reduction through fewer days of sick leave during the seven years following the end of long-term psychoanalytic treatments” (p. 263).

Although further research is needed to solidify these findings, support can be found in decisions regarding mental health treatment made by countries outside the United States. For instance, in the Netherlands, guidelines for the treatment of depression now qualify psychodynamic therapy as an “evidence-based treatment” (Dekker et al.,

2014). England's Tavistock Clinic conducted a rigorous study of psychoanalytic therapy for chronic depression and found that for the severely depressed (one of the most treatment-resistant populations), patients who had 18 months of psychoanalytic treatment experienced a four-times-greater remission rate than those having either medicine or shorter-term treatments (Fonagy et al., 2015). Moreover, in 2012, the Swedish national health service discontinued the use of CBT, which had been the basis of its mental health program. After several years and a major financial investment, including the training of CBT practitioners, it was determined that CBT had "proved completely ineffective in meeting its goals" (Burkeman, 2016).

The point here is not to discredit CBT and other protocol-based therapies. There is no one therapy that fits all, and if a CBT practitioner includes some psychodynamic work, as mentioned above, it appears that outcome improves. The point is to highlight the relatively unexplored potential for effecting deep and lasting change, even ongoing positive change long after treatment ends, with therapies that prioritize attention to the relational intersubjective field and to the unconscious "unseen" elements of communication. Just as new study designs have revealed more about what appear to be crucial factors in psychotherapeutic healing, Luyten et al. (2012) suggest that yet newer paradigms for research need to be developed to further investigate more subtle, underlying, or structural personality changes that might not register on measures of assessment or questionnaires geared toward quantifying specific symptom improvement, or in studies with minimal follow-up periods.

Conclusion

When people seek psychoanalysis, they are hoping for a way to expand possibilities in their lives, and to find release from constraining patterns and self-limiting thoughts and behavior that might otherwise seem impossible to change. More than technique or theory, the intimate bond that forms in the intersubjective space that patient and therapist create and engage in together is the key to the emergence of new perspectives and transformation.

Intersubjective space is also the medium of psi phenomena and of spiritual experience. Experiments in psi phenomena illuminate this shared space and provide a glimpse into what is normally an unseen substrate of our interconnectedness with each other and with our environment, both spiritual and material. Psi studies, historically shunned by the scientific and psychoanalytic communities, ironically provide measurable, quantifiable evidence of manifestations of our shared space (even though the fundamental mechanism of the effects remain, and may always remain, a mystery).

Although most people cannot experience the fullness of interconnectedness that is a mystic's *raison d'être*, we are all products of mystical space in that our very development from infancy on depends on implicit, unconscious, and intersubjective modes of relating with others. The common ground of psi phenomena, spiritual space, and the psychoanalytic process points to the active role that this unseen space plays in every instant of

our lives, mostly outside our awareness. The field of psychoanalysis, clearly a denizen of unseen reality, could benefit, perhaps even renew itself, by embracing an exploration of the territories with which it shares space—psi phenomena and spirituality.

Notes

1. Recently the term “consciousness-related anomalies” has been used interchangeably with the term “psi phenomena,” since it captures the main essence of the various manifestations of psi—that is, the role of consciousness in imparting or extracting information from an otherwise random system. For instance, telepathy involves extracting information from another mind, clairvoyance from a random source in the environment, and psychokinesis points to the role of consciousness in transferring information into a physical process or other aspect of the physical world with which it is engaged.
2. Jung (1952/1973) described a case in which a similar kind of transformative process and change in a patient’s psychic structure was triggered by a startling synchronicity that emerged as the patient recounted a dream in a session with Jung (p. 23).
3. Anticipating questions regarding the quality of these studies, I refer the reader to *Foundations of Physics*, “Evidence for Consciousness-related Anomalies in Random Physical Systems,” (Radin & Nelson, December 1989) in which “virtually all methodological criticisms raised to date” (p. 1504) are addressed. The article demonstrates that the effects produced in these experiments “are not a function of experimental quality, and that the replication rate is as good as that found in exemplary experiments in psychology and physics” (p. 1510). Also, Dean Radin’s book, *Entangled Minds* (2006), presents a broad array of confirmations of the PEAR program’s results, and addresses many of the commonly raised methodological criticisms.
4. This phenomenon of entanglement, described by Bell’s theorem, of two initially paired particles separated by great distances, yet simultaneously correlating their behavior, was recently verified (Bouwmeester et al., 1997).
5. Jung (1952/1973) envisioned absolute knowledge existing “in a space-time continuum in which space is no longer space, nor time time” (p. 65). He theorized that the unconscious could engage with that continuum, and carry knowledge from it into consciousness, similar to what Jahn and Dunne speculate.

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Spiritual Aspects of Jungian Analytical Psychology: Individuation, Jung's Psychological Equivalent of a Spiritual Journey

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Abstract

This chapter includes a brief description of the life and work of Carl Gustav Jung, with particular attention to his personal experience of the objective psyche and its articulation into a theoretical framework. Special emphasis is placed upon the transpersonal/spiritual dimension of the psyche and the applicability of Jung's theory and practice to achieve a dynamic relationship with the self. The individual's experience with the transpersonal aspect of the psyche is illustrated with examples from symptoms, dreams, and the phenomenon of synchronicity. Jung's psychological equivalent of a spiritual journey, known as the individuation process, is described and illustrated as an option for those for whom other, perhaps more traditional religious faiths and practices are no longer meaningfully effective. In conclusion, recommendations are made for future study and research.

Key Words: active imagination, analysis, archetype, individuation, numinous, objective psyche, self, synchronicity, transcendent function

Introduction

Following a brief biographical sketch of the life and early work of C. G. Jung, this chapter places his contribution in the context of the scientific and cultural era in which the psychoanalytic movement began, in early 20th-century Europe.

Jung's work represents a combination of the influences of Schopenhauer, Carus, Nietzsche, Kant, and Freud, among others; his response to the psychiatric community of his time; and his own personal experiences of the depth of the psyche, which he called "a confrontation with the unconscious," along with his professional practice.

Jung's discovery of the transformative and healing power of the symbol is described and illustrated with the phenomena of myth and ritual.

His experiential understanding of the psyche in both the personal and transpersonal dimensions is described. Transpersonal aspects, such as dreams, symptoms, and the phenomenon of synchronicity are described and illustrated to delineate the spiritual,

purposeful, or prospective thrust of the self. The “self” is Jung’s term for the superordinating phenomenon that organizes and orchestrates the multidimensionality of the psyche as it guides the individual through the individuation process, the psychological equivalent of a spiritual journey.

Jung’s Life and Early Work

To appreciate Jung’s contribution, it is helpful to place him and his work in its historical and cultural setting, together with a little biographical information about the man, as his understanding of the psyche and his theoretical development grew out of experiences of the psyche, both his and those of others.

At the turn of the last century, when the psychoanalytic movement began in Europe, members of the psychiatric community had been trying to gain respectability for their specialty with their medical colleagues. Mental illness was still looked upon with abhorrence, fear, and judgment. Mental hospitals were still called insane asylums, and patients were treated cruelly and punitively. The psychiatric profession was emphasizing diseases of the brain and diagnostic skills; psychiatrists were concerned with making the profession of psychiatry scientifically respectable.

Culturally, turn-of-the-century Vienna was quite Victorian. Sexual repression was typical, as seen in the fact that Freud’s early cases were with patients diagnosed as hysterical. They were understood to be suffering from sexual repression. With the emphasis of psychoanalysis upon the unconscious, the nonrational, instinctive aspect of the personality and infantile sexuality, it is no surprise that the professional community and the culture at large found this very threatening and responded with resistance and hostility.

Carl Gustav Jung (July 26, 1875–June 6, 1961)

Jung was born in the rural farming community of Kesswil, Switzerland, where his father was a reformed Protestant minister. When Carl was six months of age, his family moved to Laufen, near the Rhine Falls. At an early age, he was intently occupied with trying to understand the larger questions of life, such as Truth, Eternity, and God. Carl’s early mind was shaped by these preoccupations. Although he listened attentively to his father’s religious teachings, he was confused by various ideas about Jesus in particular. He prayed to God and experienced God as trustworthy and without contradictions. Thus, his concern with spirituality was a lifelong preoccupation, with a very early beginning.

As he grew older, he questioned his father about certain theological teachings he found difficult to accept. It was a great disappointment to him that his father seemed attached to a traditional, orthodox understanding and was reluctant to think for himself. Jung was always questioning. He felt that his father was trapped in having to represent the conventional beliefs and that he was discouraged and despondent.

Jung described his mother as highly intuitive, mystical, and practically clairvoyant. As a boy, he often felt that she seemed to know what he was thinking and feeling before

he even expressed it. As he mentions in *Memories, Dreams, Reflections* (Jung & Jaffee, 1963), this often left him with a spooky feeling. She spent several summers in a mental hospital, which was very difficult for Carl, as he found her intermittent unavailability, both physically and psychologically, to be distressing. She had lost two sons in infancy, prior to Carl's birth.

These traits of his parents would characterize his subsequent concern with religious matters. He had little interest or patience with what he called "secondhand religion," a phrase he took from William James. He did not want to be told to believe someone else's experience. To him, direct experience was what he valued. His father represented second-hand religion, whereas his mother's experience was direct and mystical, more like his own.

A sister, Trudi, was born nine years after Carl. They did not share much of a life together.

There was a persistent family legend that Jung's grandfather, C. G. Jung, had been the natural son of Goethe. Irrespective of whether the story was literally true, it was meaningful to Jung, as he felt attuned to much of what Goethe had written. Goethe's work on Faust especially fascinated Jung, as he realized the archetypal dimension of the drama. In a similar manner, Jung was focused upon one main idea or goal, namely, "the secret of the personality."

His companions were largely farm children, whose interests and activities were very different from his emerging intelligence and inner experience. Thus, there was a natural setting in which he was quite unique among his peers. His memoirs tell us that he learned the early facts of sexuality from these children.

Jung's childhood experiences were such that he could not forget or ignore them. The fact that they seemed not to be understood or appreciated by others only made him lonelier and more isolated. This combination of factors contributed to a deep interiority. His early childhood was characterized by solitary play and a vivid imagination. His deep absorption in play was such that he was quite upset if interrupted.

As a child, Jung had many psychological experiences that left a lasting impression upon him. At the age of five, he had a dream that made such an impact on him that he puzzled over it for the rest of his life. Only much later did he grow to understand it. In the dream, he was in a meadow, where he discovered a stone-lined hole in the ground. Inside was a stone staircase. Descending to the bottom, he found a curtain, behind which was a room about 30 feet long. On a red carpet stood a platform on which was a golden throne.

Something was standing on it which I thought at first was a tree trunk twelve to fifteen feet high and about one and a half to two feet thick. It was a huge thing reaching almost to the ceiling. But it was of a curious composition: it was made of skin and naked flesh, and on top there was something like a rounded head with no face and no hair. On the very top of the head was a single eye, gazing motionlessly upward.

It was fairly light in the room, although there were no apparent windows and no apparent source of light. Above the head, however, was an aura of brightness. The thing did not move, yet I had the feeling that it might at any moment crawl off the throne like a worm and creep toward him. I was paralyzed with terror. At that moment I heard from outside and above me my mother's voice. She called out, "Yes, just look at him. That is the man-eater!" (Jung & Jaffe, 1963, pp. 11–12)

Many years later he realized that this was a phallus. Later still, he understood this to be a ritual phallus, which he took to be an underground nameless god related to initiation in the "secrets of the earth."

Other psychological phenomena from around this time included the carving of a small manikin, which he enclosed in a pencil case and hid in the attic. This secret gave him a sense of security, supporting his sense of identity and well-being at times when he felt the need of reassurance. He began to realize that he had two different personalities, one his conventional self-presentation, what he would later call the "persona," an extraverted aspect; and another, much deeper and wiser sense of self, which he would also later associate with the archetypal dimension of the psyche, an introverted experience of himself. This number two personality seemed to be of medieval times. In other words, from an early age, he had a sense of both the personal and transpersonal dimensions of his identity and the beginnings of the understanding and theory of the personality that would follow.

At the age of nine, he often liked to sit upon a particular stone and play an imaginary game, questioning his relationship to the stone, exploring what the stone meant to him and vice versa. His inner imaginative life often seemed more real to him than the outer life. He sensed that his experiences of the psyche were meaningful and to be honored. Jung held this regard for inner experience throughout his life. He valued it in every person he met and supported people to be true to their experience, not surrendering it to the collective beliefs of others. His lifelong motto was the importance of experiencing for oneself. This became the thread of his understanding of the spiritual dimension of the psyche and of the individuation process, the psychological equivalent of a spiritual journey. (For a full understanding of the relationship of Jung's life and work, the reader may wish to consult *Memories, Dreams, Reflections* [Jung & Jaffe, 1963]).

At the age of 12, Jung had a dream of God depositing a turd upon the dome of the Cathedral in Basel. He took this as a direct experience of God, who was above man-made religion. He felt a direct relationship with God. This became another secret that he thought others might have trouble accepting. He held these and other inner experiences as the beginnings of an inner life and personality formation that both gave him a sense of individuality and contributed to isolating him from others. Also at the age of 12, he was pushed one day by another boy, resulting in his falling and hitting his head. For six months after the incident, Jung had fainting spells. These interfered with his school attendance and caused great distress to his father.

Following private school education in Basel, Jung decided to attend medical school, where, after much consideration, he chose psychiatry as his specialty because it combined his interests in the scientific world around him and the inner world of the psyche, including his wide-ranging study of world religions and philosophy.

Jung's doctoral thesis was entitled *On the Psychology and Pathology of So-Called Occult Phenomena*, reflecting his early interest in altered states of consciousness and the spirit realm of the psyche. His work with Theodore Flournoy on the productions of the trance state of mediums contributed to his understanding of creative, nonpathological aspects of the psyche, as did his study of William James's *Varieties of Religious Experience* (1902/1990).

Jung and Freud

Around 1900, during his early years in the psychiatric profession, Jung worked at the Burgholtzli Clinic in Zurich with Eugen Bleuler, studying patients diagnosed with dementia praecox (schizophrenia). He developed the Word Association Test, originally discovered by Wilhelm Wundt, and applied it to both psychotic and normal individuals.

Following Jung's reading of Sigmund Freud's *The Interpretation of Dreams*, they corresponded for a year before Jung visited Freud in Vienna on February 27, 1907. That historic meeting and conversation lasted 13 hours. Both men were exploring the unconscious through the study of dreams. Jung had a particular interest in linking the thought formations of schizophrenia with dream formations. Freud had developed the method of free association. Jung had developed the Word Association Experiment. These two methods led them both to an understanding of "the complex," a largely unconscious psychodynamic, with a theme, or archetypal core, such as the Oedipus complex, a power complex, inferiority complex, or hero or victim complex. Jung called his early theory Complex Psychology, seeing the psyche as being comprised of many complexes, with the ego, the complex of identity, as the central one.

The two men became colleagues with great mutual respect. Jung tended to defer to Freud due to his age and greater experience. However, from the beginning there were important differences. Jung's early writing on Freud, from 1906 to 1916, defends Freud's theories on the sexual etiology of neurosis, theory of dreams, both manifest and latent content, wish fulfillment, condensation, and dream censor. However, as early as 1907, Jung expressed doubt about Freud's sexual theory, seeing it as only one of many components of the personality. Jung felt that Freud was dogmatic about the sexual theory and substituted sexuality for religion. Jung also commented upon the Oedipus complex, seeing it as only one of many complexes and not the sole root of all neurosis. While agreeing that the personal unconscious contained unacceptable aspects of the personality, he felt that it had a positive, creative, spiritual dimension as well. In *Memories, Dreams, Reflections*, Jung makes the point that he places great importance upon sexuality.

However, he saw it as the expression of the chthonic spirit, which he called “the other face of God” (Jung & Jaffe, 1963, p. 168) He was concerned with not only the personal meaning and biological function of sexuality but also its spiritual aspect and numinous meaning.

Following their early mutual enthusiasm, Freud considered Jung to be his “heir apparent” to lead the psychoanalytic movement. As Freud and most of his followers were Jewish, he was concerned that psychoanalysis not become identified with Judaism and welcomed Jung as a Protestant Christian, believing that Jung’s affiliation would be beneficial to the cause.

As Freud and Jung’s relationship evolved, Jung found Freud unyielding in his attitude toward the psychoanalytic movement. Freud was so dogmatic about his theories it seemed impossible to discuss them. On one occasion, they both heard a loud noise. Jung predicted it would happen again, which it did. It was caused by a splitting of a table, an instance of synchronicity, or meaningful coincidence. Jung suggested it might herald a split between them, but Freud dismissed the idea.

In 1909, Freud, Jung, and Ferenzi traveled to Clark University in Worcester, Massachusetts, at the invitation of A. A. Brill and Stanley Hall. There they lectured for seven weeks. American audiences were very interested in these early lectures about psychoanalysis, complexes, Freud’s conflict theory, libido, repression, and others. During this time, Freud and Jung analyzed each other’s dreams.

On one occasion, Freud was unwilling to offer any personal associations to his dream or to share the content of his personal life as it related to the dream, saying that it might undermine his authority within the psychoanalytic profession to do so. Jung was troubled at the thought that Freud’s authority was more important to him than the meaning of the dream. Jung’s idealization of Freud began to decline, as Freud seemed too one-sided and dogmatic. A dream of Jung’s that contained two skulls was interpreted by Freud to suggest that Jung had a death wish toward him.

There was a growing tension between the two men over their differences about libido and sexual theory. In 1916, Jung published *The Psychology of the Unconscious*, what is now called *Symbols of Transformation*. In this work, he offered an interpretation of a case presented by Theodore Flournoy. In so doing, Jung illustrated his archetypal perspective, his theory of libido transformation, and his symbolic understanding of incest, portraying it as having a spiritual meaning or rebirth. Jung introduced his understanding of the purposeful thrust of archetypal dynamics, pointing to the potentiality for personality development lying within the symptoms of the individual. While working on the theory, Jung entitled a chapter “The Sacrifice.” He knew that this chapter would cost him his friendship with Freud because of the archetypal perspective he included. Jung later realized that this was his own sacrifice. This was too much for Freud and amounted to the beginning of an irreparable break between them. Their friendship lasted from 1907 until 1913.

Psychological Types

From 1913 to 1917, Jung was engaged in the preparatory work for psychological types. He explains in *Memories, Dreams, Reflections* that this work initially came from his need to define how his outlook differed from Freud's and Adler's. Also, however, in response to the setting, Jung felt that the psychiatric profession of his day took too negative and pejorative a view of those seeking treatment. He thought that the prevailing attitude toward psychopathology tended to label patients with diagnostic terms that demeaned them. In contradistinction to the then current practice of diagnosis, he developed his theory of psychological types, in which he described a full spectrum of psychological qualities and attributes, without judgment. In developing this perspective, he offered an entirely new and nonjudgmental attitude toward the human psyche. This was his effort to deal with the relationship of the individual to the world of people, places, and things.

Jung suggested that all individuals have access to the full range of these functions, extraversion/introversion, thinking, feeling, sensation, and intuition. Each, however, has their unique combination, usually accenting certain qualities, while others are less accessible. For example, we all have a tendency to relate to the world around us, of people, places, and things. This is our extroverted side. We are also related to our "inner world" of sensations, feelings, imagination, and so on. This is our introverted side. Most of us tend to be more naturally at home in one or the other of these tendencies.

We also use four other functions: thinking, feeling, sensation, and intuition. Again, most of us tend to be stronger in certain of these functions and weaker in others. Each of these typologies, taken to an extreme, may very well appear as pathological. These tendencies can be worked with to arrive at a better balanced personality. One's typology is determined by a mixture of hereditary qualities and life experiences. Over the course of a lifetime, often more recessive functions become more available, especially at midlife and thereafter.

In addition to offering a positive perspective for individuals to understand themselves, Jung's theory of psychological types is now widely used to assist in career counseling and guidance, such as through the well-known Myers-Briggs survey. It is also used in helping couples and families understand and appreciate their differences, rather than judging their differences as superior or inferior.

To relate typology to spirituality, Jung would understand that one's inferior function connects to the transpersonal, or archetypal, dimension of the psyche, causing the individual to experience it as numinous, mystical, or awesome.

Jung's Midlife Experience: "Confrontation with the Unconscious" and Midlife Theory

Following Jung's separation from Freud, he encountered what he called a "confrontation with the unconscious" (1914–1918). During this time, he experienced powerful unconscious dynamics, constant inner pressure, uncertainty, and disorientation. He had archetypal dreams and experienced extrasensory phenomena, such as poltergeist, clairvoyance,

and others, which he later addressed in his theory of synchronicity. In 1913, he had a vision of a “monstrous flood covering the land between the North Sea and the Alps. As it approached Switzerland, the mountains grew higher and protected the country. The sea turned into blood” (Jung & Jaffe, 1963, p. 175). Jung thought this indicated a coming psychosis.

During this turbulent time, Jung carefully observed these phenomena and pondered their meaning. He describes all of this in *Memories, Dreams, Reflections*. As he was undergoing this experience, he felt that there was purposefulness to this chaos, as if his psyche was being reorganized. Coming out of this experience, which might be called a psychotic process or a creative reorganization of the psyche, depending on your point of view, he began to formulate his understanding of the dynamics of the psyche. (A thorough overview of Jung’s theory of the structure and dynamics of the psyche may be found in the section “References.”)

The Transformative and Healing Power of the Symbol

Jung once told a colleague, “If I am known for anything, it will be for the transformative and healing power of the symbol.” It was Jung’s discovery that symbolism, as the language of the unconscious, transforms libido, or psychic energy, from one state to another. Not only does this happen through dreams, but also through imaginative activity, such as guided imagination, active imagination, nonverbal expression, such as in art therapy and all of the expressive therapies, music, dance, poetry and sand play. Not only does the symbol transform imagery, but it also heals psychologically, emotionally, physically and spiritually.

SYMBOLS

Symbols emerge spontaneously from the unconscious. They are not consciously created but point beyond themselves to a larger reality which holds an element of mystery or numinosity. Symbols can be suggestive and inspirational. Examples include mandalas, tongues of flame, star-like images, the philosopher’s stone, the world tree, and so on (Wagenseller, 2012).

Symbolism, suggested Jung, is the psyche’s best effort to express what is moving from unconsciousness to consciousness. Since the whole person is much more than the conscious personality, the symbol relates us to the supra-personal forces which are the source of our being and our meaning. Imagery and feeling together bring about psychological transformation. The image is the meaning of the symbol and the affect is the symbol’s power. The ability to experience both brings about change.

As the psyche’s best effort to express its meaning, symbolism and metaphor are expressed in dreams, visions, myths, world religions and other symbol systems, such as astrology, alchemy, Gnosticism, and others (Wagenseller, 2012). As Jung had described, symbols, such as those above, come from the transpersonal layer of the psyche, which Jung

originally called the collective unconscious, later the objective psyche. They are not part of our personal experience, or personal unconscious.

MYTH

In many dreams and in certain psychoses we frequently come across archetypal material, i.e., ideas and associations whose exact equivalent can be found in mythology. From these parallels I have drawn the conclusion that there is a layer of the unconscious which functions in exactly the same way as the archaic psyche that produced the myths. (Jung 1934/1954 CW 17, para. 209)

From the turn of the last century, the originators of the psychoanalytic movement have been intrigued with mythology. Sigmund Freud suggested that the Oedipus myth depicts central and universal aspects of psychological development. Otto Rank wrote *The Myth of the Birth of the Hero*, which suggested that the birth experience, which is the individual's first experience of "fear of life," becomes reactivated each time we move from the security of the known to the unfamiliarity of the unknown. Later Rank stated that "the myth is to a culture what the dream is to the individual," hinting at, but not developing, the significance of the relationship between the two.

Carl Jung, as he developed his theory of the archetypes of the collective unconscious, expanded upon the relevance of the mythological motifs to personal psychology. An understanding of the relationship between an archetypal theme and the individual who encounters it in their dreams and life experience became a unique feature of analytical psychology. Erich Neumann (1976), in *The Origins and History of Consciousness*, advanced the theory that in the human species ontogeny recapitulates phylogeny, psychologically as well as biologically. As Neumann saw it a modern individual grows, over a lifetime, through the entire experience of the psychological evolution of the human race. Hence mythologems of all eras occur in the symbolic material of contemporary individuals and indicate psychological significance by the particular way in which they intersect with a person's current life.

Jung's suggestions that an archetypal dynamic, or mythologem, governs the person who becomes identified with it grew out of his discovery of his own version of a hero myth (the Siegfried dream). These phenomena take on the potency of a destiny motif in the individual's ego-self evolution. Jung's notion that each of us has a personal myth which will "live us" if we do not discover and relate to it consciously, has captivated the interest of many (Wagenseller, 2001).

As Jung was writing *Symbols of Transformation*, he became increasingly impressed with the mythological dimension of the psyche and pondered the notion of the "personal myth," considering the possibility that everyone has one. He began to wonder what his myth was.

Toward the end of 1913, Jung had a dream in which the figure of Siegfried was killed. Jung saw this as a representation of his unconscious identification with the hero myth or archetype. Seeing Siegfried as a Teutonic culture hero, representing the tendency to impose one's will upon others, he realized it was time to relinquish this attitude.

In abandoning the heroic attitude, which he equated with consciousness, Jung let himself experience the depths of the psyche. He returned to the imaginative play of his childhood experience, discovering the phenomenon of "active imagination" and the autonomy of the unconscious, the phenomenon that the unconscious has energy, initiative, and a life of its own.

In the experience of active imagination, he discovered that through an inner dialog with figures such as Philemon, an ancient wise man figure, who appeared to him in a dream, new and unexpected psychic phenomena occurred. These introduced him to the discovery that the unconscious, both personal and transpersonal, is autonomous and expresses its own point of view. The archetypal realm of the unconscious he initially called the collective unconscious, and later the objective psyche.

Jung was convinced that man can tolerate a great deal of suffering, but he cannot stand a meaningless life. He was impressed with his observations that individuals and groups who hold beliefs which connect them with transpersonal meaning suffer less neurosis.

In this context, he believed that Roman Catholics, who experience their lives as meaningfully embraced by the sacraments of the church, are a good example. To live a sacramental life, in which daily life is understood symbolically and sanctified through a meaningful relationship with God, is to live a meaningful life. In his visit with the Pueblo Indians of New Mexico, Jung was likewise impressed that the members of the tribe understood themselves to be the children of Father Sun. They believed it was their responsibility to accompany Father Sun in his journey across the sky each day, through their devotional practices (Jung, 1976, p. 274).

In examples such as these, Jung was convinced of the need for symbolic life, which connects us with the transpersonal.

RITUAL

Ritual might be considered symbolism in action. In ancient civilizations, ritual attached to myths and took on the function of initiation rites. Jung suggested that an archetype is the psychological equivalent, or analogue, of an instinct. Hence ritualistic behavior is seen in both animals and humans. The ancients experienced caves as spiritual, transformative places of worship, as suggested by their cave paintings and activities. Here we see an adumbration of the sanctuary, temple, or "archetype of the way." Nature rituals connected the individual and the tribe with the transformative powers of the seasons. The shaman, or medicine man, emerged as a leader of the group, believed to have healing powers and powers over death.

The “ritual of fate” occurs when an individual or group is threatened by a crisis, outer or inner, and responds with a sacrifice or some other ritual behavior. The numinous is no longer so much found in nature as it is now discovered everywhere.

Through individuation, the individual gradually emerges from the dynamics of the group. Leaders such as shamans, medicine men, prophets, or priests become representatives of the group and relate to the transpersonal powers, mediating them to the group. As the mediating function of the leader becomes attached to an external representation of what has been numinous, there emerges a static quality to the collective belief, or religion. Then the leader loses his creative function of being infused by the power of the objective psyche. As the priest becomes a functionary of the group, he becomes an impersonal instrument of the collective, losing his ongoing regenerativity. The inner process has become exteriorized. As the ritual becomes separated from the regeneration of the group, it becomes ritualism.

At this point a rigidity develops where the sacred has been. The ritual becomes fixated, a defense against the breaking through of new numinous experience. The leadership becomes identified with the ritual and the individual within the group is no longer inspired by it. As the effectiveness of the ritual declines, no longer affecting the onlooker with the experience of grace, antagonism against the “status quo” develops.

The modern individual experiences the phenomenon of the ritual in three places: the creative process, emotional illness, and the individuation process. In these three ways, although they may not have the power and splendor the collective ritual once had, the individual experiences genuineness and effectiveness. In illness and the individuation process, it becomes clear that the collective ritual has carried a defensive, warding-off function, as in an obsessive–compulsive neurosis, and is no longer efficacious, whereas in the individuation process, one experiences a creative process, offering new inspiration and understanding.

Sigmund Freud and Karl Abraham both offered examples of individual rituals as religious-like defenses against anxiety and fear of the unknown. Freud compared the compulsion neurosis to the “caricature of a private religion” affecting only one’s solitary activity. The presence of others is excluded. Abraham described a ritual he called the “bride of death” ceremony. This ritual consisted of special preparations for going to bed, especially careful adornment and compulsory behavior related to the fear of sudden death during the night (Jones et al., 1927).

The experience of these individual rituals connects the person with an archetypal meaning, namely, the collective within the psyche. Once the defensive aspects of the ritual have lost their effectiveness and the meaning of the ritual has become conscious, its compulsive nature dissolves. With this resolution comes a spiritual ordering which characterizes the archetype upon which the ritual has depended. By means of the ritual, the spiritual side of the unconscious enables the individual to contain a level of energy that

would not have been possible without it, thus engaging an archetypal revelation he could not have otherwise endured.

The phenomena of the personal myth and the destiny motif (discussed later in this chapter) are integral to this experience.

Relevance of Jungian Analysis, or Jungian-Oriented Psychotherapy

For 15 years, I served as coordinator of the low-fee clinic operated by the C. G. Jung Institute of New York City. During that time the medical director and I met with a wide range of applicants seeking Jungian-oriented treatment for their many and diverse forms of psychological suffering. They were continually impressed by the applicability of Jung's theory and practice with adults from their 20s to those in their 70s. Thus, unlike some methods of treatment, Jungians experience psychological growth, healing, and transformation throughout the life cycle.

Many applicants sought Jungian therapy having felt not well understood in other forms of treatment. Jung's understanding of the symbolic meaning of symptoms and the prospective view of psychological change appeal to many. Included in the search of those patients has been the desire to have their belief systems respected, understood, and taken seriously. Jung's respect for an individual's spirituality is an especially valued motivation in their choice of therapy.

Application of Jung's Discoveries to Those Experiencing a Psychotic Process

John Weir Perry was a psychiatrist and Jungian Analyst in San Francisco who was impressed by the way in which Jung subjected himself to the journey through the unconscious. As we know from *Memories, Dreams, Reflections*, when Jung began to experience the archetypes of the collective unconscious and other parapsychic phenomena such as telepathic experiences and poltergeist and a vision of the whole of Europe being covered in blood, he began to be concerned that he might be entering a psychotic episode. However, he intuitively sensed that his psyche was being reorganized by a higher power which he came to call the Self.

Perry, influenced by his psychiatric residency, became interested in working with a small population of young adults and helping them through their psychotic episodes with the application of Jung's understanding. Perry sensed that the experience of the Hero's Journey might be the antidote to the psychotic episode.

John Perry and Joseph Campbell discovered their mutual interest in the hero myth and its relation to the individuation process. They lectured and taught together at the Esalen Institute at Big Sur and elsewhere. Just as Otto Rank saw the hero myth as a paradigm for everyone's life journey, so Perry began to see that for many young adults whose lives had been interrupted by a psychotic episode, the antidote was the successful completion of a hero's journey experience to put them back on the track of their individuation.

Dr. Perry obtained the use of a floor of a hospital in San Francisco. There he worked with a staff of associates whom he trained to assist him in the method he developed, caring for the patient's needs rather than trying to control their behavior. Perry's work was known as "the Agnew's Project."

The patients accepted for treatment were between the ages of 18 and 30, experiencing a psychotic episode for the first time. No medication was used during the treatment. Sensitive, caring relationships were established with the treatment team. A variety of therapeutic approaches included individual and group therapy and the expressive therapies.

Dr. Perry considered the patients to be undergoing a "developmental crisis" and saw the psychosis as a turbulent effort of the psyche to heal itself through a reorganization of the personality.

In general, these patients had been feeling isolated. Corrective impulses, or compensations, were breaking through but not being integrated because they were unacceptable to the conscious mind.

Perry discovered that in the symbolic material of many of these patients was the archetypal theme of archaic sacral kingship rites, especially those of the ancient New Years' festivals of renewal of the king and the kingdom and of the year and the cosmos (Perry, 1974). This archetype of renewal heralded the reorganization of the personality.

Following Jung, Perry considered the psychotic episode to be nature's attempt to heal a prepsychotic state of the personality. How successful the reorganizational process turns out to be is dependent upon how it is regarded and handled by those around the patient. If the condition is regarded as an illness to be eradicated by medication, the individual may feel themselves to be in a "wrong" state and feel and act "crazy." If, on the other hand, the process is held in high esteem as a turbulent inner journey of some worth, the patient usually feels relieved of the burden of craziness, less isolated, and more able to communicate coherently (Adler, 1974, p. 131.)

The patient becomes more coherent as they feel related to the therapist. It is not enough to just hear the inner experiences of the patient. They need to be helped to grasp their meaning for their life. The imagery is the pictorial representation of the emotional dynamic. Behind the imagery usually lies the personal context of suffering. (For find more of Perry's work, see "References.")

Jung's theory is often referred to as a therapy for the second half of life. It grew out of his experience. As previously mentioned, he felt that the theories of Freud and Adler, dealing with the development of personality, identity, career, relationships, and the resolution of sexual and power drives, were good for the first half of life. In his *Collected Works*, Jung also described how all psychological theories tend to reflect the typologies of their originators. He compared the theories of Freud, introverted thinking; Adler, extraverted feeling; and himself, introverted intuition, in this regard.

Initially, he saw the individuation process as an experience of the second half of life. Later he revised this, recognizing that the process is lifelong. What has popularly become known as the “midlife crisis” has worked its way into common parlance. Today, everyone has some idea of this phenomenon. For some people it is a gradual process, not necessarily a crisis at all but simply a coming to terms, more realistically, with one’s mortality and limited time and the importance of a larger perspective for one’s life, such as has traditionally been offered by the religions of the world. Somewhere between the ages of 35 and 50 some people begin to feel a sense of restlessness, wanderlust, a quest for adventure, release from responsibility, redemption of lost childhood, or a desire for leisure and creativity.

Others may experience more of an upheaval. This is especially true of individuals whose personalities have become more one-sided. It might be said that the second half of life offers us the opportunity to rediscover those aspects of ourselves that have been lost. Where did we lose our path? Where did we diverge from being true to ourselves? Often these experiences take the form of a call or vocation or value in one’s life.

One woman dreamed that she discovered in her attic a chest containing the dreams and poems of her youth; for her, this represents lost or abandoned idealism and creativity.

Another man, at retirement age, had a series of dreams in which he was taken back to his senior year in college, as if that point in time were a crossroads, there for him to consider a different path.

Paradigm of the Religious Leader

As I thought about Jung’s experiences of midlife renewal, it occurred to me that the experience of many religious leaders offers an excellent paradigm for all of us. We see a pattern emerging. Moses, the prophets of the Old Testament, John the Baptist, Jesus, St. Paul, Mohammed, the Buddha, and others of that stature all had such experiences.

Each of them in midlife withdrew from the day-to-day life of the community. Each went off into solitude; to think, to meditate, to pray, to try to discern God’s will. They went to the mountaintop, the desert, the wilderness. Each had some sort of experience which seemed to be an encounter with God. Each came away with a new understanding: the Ten Commandments, the teachings of the prophets, the sacrament of baptism, repentance. Each found a new view of what he understood as God’s will.

Each of these men was transformed by his experience and by the understanding that he arrived at about the meaning of the experience. Each returned to the people of his community with a new vision, a new sense of purpose, a new mission. Each had found a new identity, tantamount to a rebirth. Often a new name was chosen to accent and identify this rebirth. This is a common practice among monks, nuns, and some Native Americans, where individuals assume a new name and identity as they respond to a new calling, take up what looks like a new vocation.

In returning to the people, these spiritual leaders did not keep their experiences to themselves. They felt a responsibility to share it with others; a social responsibility; a moral

imperative. In contemporary parlance, we might say that these leaders had experienced an altered state of consciousness which transformed their whole manner of living their lives.

We must move now from the experience of these religious leaders to see how they were received by their communities when they returned. In a sense, all religious experience springs from one individual at a time. To the extent that the experience is received and becomes meaningful to others, it speaks convincingly of the psyche which experienced it. When a community, therefore, is touched and moved by the message of a Moses, a John the Baptist, Jesus, or Mohammed, a level of the collective psyche is awakened, a universal dimension of human experience is defined. This spiritual awakening needs continually to be renewed in order to remain vital. Each generation, each individual, has to find it alive and with special meaning. How then does the individual partake meaningfully of the religious experience and become transformed by it?

Greek Mystery Religions

The great mystery religions of ancient Greece and the Near East provide excellent examples for us. In these mystery religions there were initiation rites which at their core had the myth of a god or goddess. Initiated into the religion, an individual identified with the mythological experience of a particular god or goddess such as Persephone, Dionysos, or Orpheus. One appropriated the experience of the god or goddess and through identification underwent a transforming, transpersonal, religious experience. This was not just an intellectual experience, but a totally moving one which affected individuals emotionally, physically, and spiritually. The Greek word for mystery, *mysterion*, means to be initiated, to be moved to give witness.

For many people in today's world, the appropriation of religious experience or tradition through faith is not enough. Many do not feel sufficiently moved, touched, or transformed by the experience. They want to feel emotionally affected, cleansed, renewed by the experience. Some seek a conversion experience; others seek some new insight or mystical understanding.

Individuation Process as a Spiritual Journey

If one is able to let go of the old self, loosen one's grip on it, grieve over its death and bury it, and if one is able and willing to be open to the voice of the Self, or the experience of God's will, then the process of individuation can continue. That process is the process through which each one of us becomes the particular form of human being that we are—each of us—capable of becoming, actualizing a particular oak tree from a specific acorn.

The theological concept of the Imago Dei, the Image of God in each individual, is pertinent here. Each of us is a unique version or incarnation of the spirit. Each person has the opportunity to live a human life that has never been lived before and will never be lived again. It is said that many of us lack the imagination, courage, or creativeness to live it in our own special way, each individually. For too many of us, our lives borrow too

much from the imitation of others; we do not find our own way. I am reminded of the words of an ancient rabbi, Rabbi Zuzya, who said, “When I die and meet my Maker, I will not be asked, ‘Why were you not Moses?’ I will be asked, ‘Why were you not Zuzya?’”

The challenge of individuation, of discovering and affirming the unique human being each of us is potentially, is the challenge of being open to experience, of being able and willing to be touched by life and affected by others. It means being touched by all the opposites within us and coming to terms with the tensions created by those polarities, such as those of honesty and deceit, courage and cowardice, strength and weakness, independence and neediness, sexuality and spirituality. We often identify with one attribute and deny the other in an effort to escape the tension. At midlife, we are challenged again not to do this but rather to hold such opposites in creative tension. Out of this tension of opposites emerges what Jung called the transcendent function. Like the Zen experience, it marks the emergence of a new perspective which transcends conflict and moves us to an entirely different level of concern.

This process of individuation, through which we achieve our own patterns of personality through the progressive integration of unconscious contents, is a process of growth in wholeness. Through this process, we arrive at a new center of the personality, which Jung described as the Self; a sort of midpoint of the personality, between the ego and the unconscious.

The concept of autonomy is of special interest here, describing as it does something in us that is “a law unto itself.” Through the process of individuation, one becomes autonomous, discovering and affirming one’s uniqueness and finding the courage to become one’s own person, true to the law of his or her own being.

Individuation Process

Jung called his concept of the individuation process a “psychological equivalent of a spiritual journey.” It includes several components such as his understanding of the personal myth, the hero’s journey, the archetype of vocation, and the destiny motif. Each of these accents different qualities of the ego’s experience of the self.

Jungian thought has always taken seriously the spiritual dimension of the psyche and the importance of spirituality in the lives of human beings. This was one of the major differences between Freud and Jung. Jung was interested in the belief systems of men and women, of whatever faith, as they enriched their lives with meaning and purpose and connected individuals with a Higher Power.

Spirituality, in broad terms, is meant as the inner life as it relates to what has been called the life of the soul—thoughts, feelings, imagination; images, insights, perceptions that pertain to and connect us with the transcendent. The more general term of “spiritual,” rather than “religious,” is being used in order to be inclusive and not limit our consideration to the major bodies of faith or great world religions. Nevertheless, many of these experiences may fit very well within one’s particular experience of a traditional

religion. Others of these experiences may not seem to do so, but they definitely get one's attention as coming from another realm of being, not under the control of the individual.

As Jung studied the many faiths of the world, he became convinced that there is a dimension of the psyche beyond the ego, or the conscious personality, which is universal and the source of spiritual experiences. He called this the Self, that superordinating center of the personality which includes the entire psyche, conscious, and unconscious. The Self makes itself known to individuals in a variety of ways, which can be experienced directly. Some of these are dreams; symptoms, both physical and psychological; and experiences of synchronicity, or meaningful coincidences.

Jung discovered that the Self has a larger perspective than the ego and often brings to our attention a different point of view for consideration. He recognized a purposeful orientation, or what philosophers would call a teleological function of the Self. In other words, there is an inner force guiding us. Experiences such as dreams, symptoms, and synchronicities call this to our attention and reorient us, if we can discern their meaning.

Many people consulted Jung because they had lost their faith; or the way in which they had understood it was no longer meaningful. Jung encouraged them to return to the religion of their earlier life, if they could, to deepen it or re-relate to it. For those who are not able, or do not wish to find such a perspective through religion, they may do so through what Jung called a psychological equivalent, the individuation process, which relates us to transpersonal phenomena and values.

Some individuals discover this inner orientation for themselves during their life experience. Many recognize this experience when they encounter Jung's articulation of it and feel affirmed. Others find their way to Jungian analysis, drawn by a search for greater transpersonal meaning and purpose and access to more of their potential.

Through the lifelong process by which we become the unique individuals we were created to be, we actualize our potentiality. It is a process through which, by integrating increasingly the unconscious aspects of the personality, the conscious personality gains more and more access to the Self. The center of the personality shifts from ego to mid-point between the ego and the Self.

Spiritual Experience and Depth Psychology

Regardless of what motivates an individual to pursue an inner path, spiritually or psychologically, the process has certain discernable stages. This "inner journey" provides meaning, purpose, and empowerment to the one who opens themselves to the experience.

As the canons of a culture break down, the individual and the group are affected. Stability is shaken. The ensuing chaos and confusion have been stabilized by the emergence of depth psychology. Through a process of introversion the ego and Self are transformed.

The depth process usually begins with the experience of an illness or crisis. A reflective, evaluative exploration considers the "ego-world" of the individual's profession, marriage,

friends, relations, memories of the past, and evolution of one's life. The search for "the hidden cause" investigates the ego's dependencies.

Early dreams often show that the individual is "not the master of his own house." Images of intruders, interlopers, and thieves are common themes. The ego, or conscious personality, is gradually devalued. Often, for a time, the unconscious is overvalued. Shadow qualities emerge.

Gradually the individual recognizes that a new understanding is being described, through a series of dreams which lead to an encounter with the suprapersonal; which Jung called the "dominants" of the psyche. As this process unfolds, the ego frequently resists. As archetypal dreams and motifs are experienced, it becomes apparent that all of these stages of the soul's evolution exist in everyone and are still alive and potent today. Healing, regeneration, and rebirth are experienced.

Through the ego's encounter with "the other," one realizes that a task, or "call" is being offered, or required. The individual begins to take themselves more seriously. With a new earnestness they take more responsibility. Life becomes less "accidental" and more purposeful. As a sense of fate and destiny emerge, one's personality shifts from an ego-orientation to more of what Jungians understand to be a Self-orientation. The experience of this shift is analogous to what has been understood as an individual's relationship with God. The encounter with the "other," however, only happens when the ego is doing its work. Waiting for the unconscious to lead the way is not effective.

Jung spoke of a spiritual dimension of the psyche from which people have powerful, transformative experiences that they formulate into various belief systems. He said that there are several elements to this dimension. The spiritual element, he suggested, is an organic aspect of the psyche that is expressed in symbols, which reveal a path of psychological development that points in a direction toward a goal. The goal is expressed in images of completion in a whole, which Jung called the Self. The Self is unique for each individual. It is found through the integration of the ego and the unconscious characterized by qualities of awe and wonder, which might be called numinous qualities of unconditional authority, power, and value. These qualities also belong to the various images of God that have been enshrined in the great world religions of different cultures.

All spiritual experience is initially an individual's experience. Thus, Jung made the point that all such experience is also psychological experience, as it is the individual's psyche that has the experience. He coined the term "God-Image" to describe that aspect of the psyche that receives the experience of God. His study of William James's *The Varieties of Religious Experience* (1902/1990) and Rudolph Otto's *The Idea of the Holy* (1923/1958) helped him with the articulation of these life-changing experiences.

In saying that the subjective experience of the Self and that of God are so similar that they cannot be distinguished, Jung aroused considerable controversy. This remark led to misunderstanding. He did not mean that the experience of God is only a psychological

phenomenon but that it is always through the psyche that we experience everything, including the Divine. He introduced the concept of the God-Image to discuss this, suggesting that the God-Image evolves in human consciousness.

The term “individuation” is used in a particular way by Jung and Jungians. Among some psychological orientations, individuation refers to the process of an infant and young child’s separation from the mother, which takes place during the early period of a child’s life. For Jung, however, the individuation process refers to the lifelong journey that each of us takes, during which we seek to fulfill, as much as possible, our potential. Just as the potential oak tree lies within each acorn, so the unique potential of each of us lies within the newborn infant.

Aristotle’s concept of entelechy was influential in Jung’s understanding that there is a unique pattern within the seed of each living being. Each of us is a unique incarnation of what it is to be a human being. Each individual has the opportunity to discover the particular man or woman he or she will be. Jung thought of this as a manner of understanding the “Imago Dei,” the manner in which humankind is created in the image of God. He offered a corresponding way of considering the “imitation of Christ,” namely, to seek to be as true to one’s own unique incarnation of the spirit as Christ was to his (Jung, 1958, p. 340).

Over the course of a lifetime, through an intricate combination of the unfolding of our genetic makeup, our life experience, including the formative experiences of our families of origin and other significant relationships and experiences and what we make of them, we individuate. For Jungians, then, unlike some schools of thought, we are all capable of significant growth and change all of our lives.

Jung’s New Myth of Man

As it gradually dawns on people, one by one, that the idea of the evolution of the God-image is not just an interesting idea but a living reality, it may become a new myth. Whoever recognizes this myth as their own personal reality will put their life in the service of this process. They will reflect upon their own unique incarnation of deity, experiencing life as meaningful and an example of Jung’s understanding of the indwelling of the Holy Spirit and of St. Paul’s “Christification of the many” (Edinger, 1984, p. 113).

As mentioned, some elements of the individuation process include the phenomenon of the personal myth, the hero’s journey, the archetype of vocation, and the destiny motif. These are all variations on the ego’s experience of the self. Brief descriptions follow.

The Personal Myth

The personal myth was first discussed by Jung, who suggested that everyone has a personal myth, irrespective of whether one is aware of it. By this he meant that there is at least one archetypal dynamic that is a dominant dynamic of each individual’s psychology.

(Theoretically, there could be more than one dominant archetype directing an individual's life.) This dynamic will be expressed symbolically in dreams or other forms as a mythological motif, such as the hero, the victim, religious leader or healer, to name a few.

To the extent that the individual is unaware of this mythic dynamic affecting their life, they will be in its grips. Anything that we are identified with has power over us. If one is identified with an archetypal motif, one is being lived by it. Identification with the archetype will inflate the individual, causing them to appear grandiose, although often charismatic and attracting followers.

The idea of the personal myth was one that Jung first began to discover in some of his patients. He wondered why a particular individual would be connected with a particular mythological motif. They occurred, he discovered, because they are pertinent to the individual's psychology at a particular moment in their life. They represent something with which the individual needs to come to terms. Frequently, when an individual is challenged with an unfamiliar situation, they will discover within themselves an effective response (Jung, 1988, p. 22). Later, they may wonder where that ability came from. Jung would suggest that the archetype was constellated to support them at that moment; as if to say, "This is how humankind has dealt with this matter universally, from all times." Jung began to wonder what his personal myth was.

Jung, himself, had a dream in which Siegfried was killed. In contemplating that dream, he realized that Siegfried is a cultural hero. He is one of the culture heroes of the culture in which Jung grew up—the culture of Germanic mythology. What Jung began to consider was that he had been unconsciously identified with the heroic attitude. The heroic attitude is one typically found in hero myths, in which the individual is growing in strength and mastery. It is an ego-centered style of life, appropriate to the first half of life. He realized that it was time for him to relinquish this attitude.

Jung recognized, from his experience of the Siegfried dream, and others, that often people are identified with the myth, unconsciously fused with a certain dynamic of the unconscious and in its control. In the following, I briefly illustrate the phenomenon of identification.

It is not uncommon, for example, for someone to say, "I don't want to be anything like my father or my mother," yet they discover that they are nevertheless unconsciously just the same in some way. One man changed his name. He was originally named A. B., the same as his father. Wanting to be nothing like his father, he changed his name to B. A. What a surprise it was when he dreamed that "not until you claim your given name will you resolve your father complex." Again, in many cases, young persons live out the unconscious of their parents.

Francis Wickes, an early Jungian analyst in New York City, was one of the first to write about this phenomenon. She started out as an elementary school teacher and became a Jungian analyst, working with children and their parents. She discovered that troubled

children were frequently living out the unresolved conflicts of their parents. Children are very susceptible to the unconscious and absorb the emotions and traumas of others. Often, they suffer from what the parents are not dealing with. Frequently they suffer from things that the parents need to become more responsible for, so that they are not unwittingly inflicted on the child. In her work with families, Mrs. Wickes began to delineate these dynamics and help parents take back their issues for themselves. Then, their children could be relieved of that unnecessary suffering.

Hans Dieckman, from Berlin, had a similar but slightly different approach. He wrote about what he called *The Favorite Fairytale of Childhood* (Dieckmann, 1971). He discovered that, particularly in Europe, where fairy tales are much more a part of children's experience, many people have a favorite fairy tale. What he learned was that the dynamics of that fairy tale, if you look at it and analyze it as if it were a dream, mirrors the psychology of the individual. If the individual's psychology has as one of its core challenges, the very motif of that fairy tale, then that becomes a central issue of that individual's individuation process.

This idea of the favorite fairy tale of childhood has within it the destiny motif. In symbolic, mythological language, as early as childhood one is called by what is part of one's life task. It is not uncommon to recognize that at an early age a young person has an intuitive notion of something that they are going to deal with later in life. Or, if they don't recognize it, in retrospect, it begins to become clearer.

That is just another way in which someone recognized, clarified, and wrote about the theme of the personal myth. Fairy tales are very similar to myths. They are made up of the same symbolic, archetypal motifs.

Joseph Campbell also became very interested in the idea of the personal myth. He encountered it originally from Jung. Part of Campbell's idea was that if one is growing up in a culture, as long as that culture's belief system is meaningful, the individual can just grow up in it and find support for life, being embraced by the mythology.

You can use it, believe it, have initiations in it, and it will help move you along through life. But if it is no longer meaningful or viable for you, and if you are not at home with it, then you have to find your own individual belief system. This is true both for the personal myth and for one's personal spirituality.

The Destiny Motif

Closely related to, and integral to the ego-Self dialog of the individuation process, over a lifetime, is the destiny motif, which occurs frequently in mythology, especially in the mythology of the hero. The myth of the hero has been called the mythological and cultural equivalent of the development of the ego (Campbell, 1949).

The destiny motif also occurs frequently in the stories of the great world religions and their leaders. Running through the destiny theme is the experience of synchronicity. Biblical examples include Moses, with the experience of the "Burning Bush," the

Ten Commandments, and the Exodus; experiences of the prophets and their “Calls”; and the baptism of Christ and his experience in the wilderness (Wagenseller, 1995, pp. 167–172).

Both synchronicity and the destiny motif are very much part of the experience of modern-day men and women. The metaphor of the religious leader can also be seen as describing a particular process of midlife transformation for contemporary individuals, as described in my previously mentioned article.

Powerful, life-changing experiences, which are often encountered by individuals during midlife transformation, include a new vocation (Jung, 1954, pp. 175–186). The archetype of the call or vocation is an example of the phenomenology of the self that is experienced by the individual; moving them to redirect or rededicate their purpose. An example of this is the experience of my classmate, Tom, mentioned later in the section on synchronicity, who left his work on creating bombs to become a cardiologist and establish cardiology centers in third world countries.

Three frequently experienced phenomena of the individuation process that result from the activity of the Self are symptoms, dreams, and synchronicity. Symptoms, dreams, and synchronistic experiences may or may not be believed to be spiritual, but they do emanate from what we call a transpersonal dimension of one’s being or psyche. They are beyond the will or control of the ego and often at odds with it, as if they came from another consciousness and have a purpose within the personality.

Symptoms

Once the personality is fairly well established, there begins to be, either forcefully or more gradually, a reorganization of the personality. Elements that have not been included begin to surface and make a bid for integration. What has been repressed begins to surface; feelings, unmet needs, and distressing symptoms intrude upon one’s awareness. Sometimes the need for change is more conscious. An individual may experience a general dissatisfaction with themselves or their life. For others, more acute symptoms may occur: anxiety; depression; unwanted, intrusive, obsessional thoughts, including suicidal thoughts; compulsions and addictions; eating disorders; alcoholism; and so on will present themselves for consideration. Somewhere between the ages of 35 and 50 these changes begin to make themselves known.

In keeping with Jung’s interest in taking a non-pejorative view of all psychological productions of the psyche, he studied symbol systems such as mythology and world religions, looking for patterns that were expressed similarly in them. Taking a symbolic view of the symptoms of his patients, he suggested that the symptom has within it the seeds of the cure. “A psychoneurosis,” he suggested, “must be understood, ultimately, as the suffering of a soul which has not discovered its meaning” (Jung, 1958, pp. 330–331). On another occasion, he suggested that the gods and goddesses of the Pantheon have become the diseases of modern-day men and women. He saw these gods and goddesses as

symbolic projections of subpersonalities. By no longer honoring the transpersonal dynamics of Aphrodite (love), Ares (aggression), Dionysus (ecstasy), and Hera (domesticity), individuals were either possessed by identification with these complexes or dissociated from them (Bolen, 1984, 1989).

Jung claimed that of all those who ever consulted him in the second half of life, no one was ever cured who did not achieve a spiritual outlook on life (Jung, 1958, p. 334). By this he meant not necessarily an orthodox religious point of view, although that may be the case for some, but its psychological equivalent, that which has been provided by the great world religions of various cultures—a depth or a height dimension that gives perspective to an individual's life, giving it meaning by placing it in a larger perspective.

By listening to the unpleasant symptoms of midlife challenge, taking a symbolic approach to them, and finding a more receptive attitude toward the rejected values within them, these neglected or rejected aspects of the personality become integrated. Through the application of the “redemptive attitude,” sometimes referred to as “befriending the shadow,” devalued elements of the personality, such as aggression, sexuality, spirituality, neediness, vocational issues, and others, are met and included. As a result of this process, new life flowers; needs are met, vocational issues clarify, and spirituality blossoms.

Jung's approach toward the symbolic understanding of the meaning of symptoms is consistent with his view of the purposefulness of the self. The Self manifests a wisdom beyond that of the ego and seems to know better what is needed. In other words, the meaning of the symptom discloses that a basic human need is being related to maladaptively, resulting in unnecessary suffering. This understanding goes right to the heart of all psychosomatic medicine, the mind–body connection, and often what it is that needs to be related to differently.

For example, when the founders of Alcoholics Anonymous were starting the organization, they consulted Jung. Essentially, his idea was that people who are caught in a compulsion for spirits need to find a different relation to the spiritual dimension of life. This is the principal of homeopathic medicine, “Like cures like.” It was out of this advice and guidance that the founders of Alcoholics Anonymous included the spiritual dimension of the recovery process, referred to as the need for a “Higher Power.” This has also been included in other 12-step, self-help programs such as Overeaters Anonymous.

Similar changes of attitude are helpful with other compulsions. As Jung has pointed out, compulsions are what once were known as “possessions.” These are agonizing experiences in which one is controlled by the unconscious dynamic of a complex. Frequently it is such experiences that bring people into therapy. Usually what is needed is a different relationship to the particular dynamic by which the individual is gripped, whether it is one's sexuality, one's dependency needs, one's creativity, or one's power complex. Whatever the compulsion is, the individual needs a more accepting attitude toward the value and power embedded in the symptom. Usually the problem lies in the fact that the individual unconsciously judges the quality and devalues it.

In sexual addictions, he saw the need for a more conscious acceptance and integration of one's sexuality. In gambling and kleptomania, he might have suggested a more conscious acceptance of one's ambition and desire for material substance, as well as a willingness to work for it.

In short, when there is some aspect of our human nature that we do not accept and come to terms with in our personality, we are usually troubled by it eventually; frequently by being caught in the grips of unconscious dynamics such as obsessions and compulsions. Jungians view such troubling sufferings as eating disorders, sexual addictions and deviations, and other addictions as symbolic/symptomatic manifestations of undervalued, natural human attributes.

All of the old seven deadly sins, for example, can be seen as natural, healthy components of the personality, when they are valued and integrated. They become problematic only to the extent that they are denied or repressed and gain an unconscious grasp on the individual. Two examples will help to illustrate this process.

A woman was attacked by a man in a park and fought him off with a violence she had never experienced before. She was so frightened of her power that she never wanted to feel it again. When it was pointed out to her that this power had effectively saved her from an unwanted experience, she began to see it as the antidote to her general dissatisfaction with her "lukewarm" life. The analyst used the myth of Heracles's Twelve Labors to illustrate the transformation of energy from murderous rage to the civilizing experiences resulting from the refinement of libido. The integration of her aggression was exactly what she needed to energize her life into one of greater fulfillment.

In another situation, a man who was in recovery from alcohol and drug addiction began to experience feelings of what he called "lust." By taking the "redemptive attitude" toward his sexuality, it became the antidote to his isolation and loneliness, leading to marriage and a family. "Behind the neurotic perversion is concealed his vocation, his destiny; the growth of personality, the full realization of the life-will that is born with the individual. It is the man without *amor fati* who is the neurotic" (Jung, 1954, p. 185).

Illness as Vocation

Most illnesses bring with them emotional responses such as discouragement or depression. By applying Jung's prospective method to the experience, we can ask, "What is being asked of me in this suffering?" Depression, for example, can be understood as a call to go more deeply into ourselves in order to find another level of meaning from which to be living our lives (Harding 1981).

If each of us, in our own individual way, is trying to become the best they can be and to put together the best life that they can, then our sufferings and illnesses might be considered in the context of our best efforts. Illness may then be a compromise or a less than successful adaptation to some challenge of life, inviting us to consider a different view.

In other words, if all forms of illness, psychological and physical, are considered maladaptive responses to some aspect of life, then we can see how these various instances of suffering participate in our experience of destiny and individuation. In this context, it will be important to reflect upon just what it might mean that one became ill with a particular form of suffering at a particular time in life. How is it that this is the best response I could make to the challenges of my life at this time? Illness can be seen then as a call, or vocation, to a change of life. (For more on the “archetype of vocation,” see works by Wagenseller, listed in the section “References.”)

Often religious and charismatic leaders experience a serious, life-threatening illness as an aspect of a conversion. St. Paul is an excellent example of this, being struck blind at the time of his conversion. Shamans typically undergo such physical and/or psychological, spiritual ordeals as an aspect of their calling. Many men and women today undergo such upheavals during the midlife years, as did Jung. One individual, for example, during the early period of his analysis, was experiencing difficulties with vision, hearing, and balance. These symptoms disappeared miraculously, he felt, as he realized the maladaptiveness of the attitudes that brought him to analysis.

Dreams

When Sigmund Freud discovered what he called “The Royal Road to the Unconscious,” his theory of dream analysis, many colleagues gathered around him to form the beginnings of the psychoanalytic movement. One of these was Carl Jung, who brought new dimensions to the understanding of dreams.

From early in their relationship, Jung differed from Freud with regard to their understanding of the unconscious and dreams. For Jung, in addition to dreams expressing repressed aspects of the personal unconscious, they also conveyed creative potential within the dreamer and offered a purposeful thrust connecting him and moving him toward the fulfillment of that potential.

This view became fully articulated in his commentary on a case of Theodore Flournoy, referred to as Miss Miller, published in *Symbols of Transformation* (Jung, 1967). Jung was struck by the mythological character of many of these fantasies. While working on this case, he had several dreams of his own, suggesting that a break with Freud was emerging. (For a thorough coverage of Jungian dream theory and practice, consult his works in the section “References.”)

Some people begin to be attentive to their dreams in childhood and intuitively grasp that they have meaning. Some never remember their dreams. Others are engaged by them at a particular time in their lives. Following are examples of each.

There is a remarkable account, in *Man and His Symbols* (Jung, 1964, pp. 50–60), of a 10-year-old girl who wrote down a series of dreams that so captured her attention that she drew pictures of them and presented them to her father for Christmas. The father brought them to Jung, who had the sad task of telling him that they heralded his daughter’s death.

She died shortly thereafter. It has been observed and documented that when an individual's life is pressured by impending death, the preparation process may be telescoped, as is seen in this case.

Personally, although I have been aware of dreams throughout my lifetime, it was a series of three dreams within a week, when I was 25 years old, that made it clear to me that there were inner matters of a spiritual nature that needed attention before proceeding to my ordination to the priesthood. They engaged me and sent me off to do more inner work before returning to be ordained.

A man of 64 years of age was about to retire from a company he had worked for all of his adult life. He had been a hard-working, conscientious person, loyal to his employer and family. Just as he was about to retire, his company was taken over by another and he was left with much more reduced benefits than he had anticipated. His wife left him, and one of his sons deeply disappointed him. His distress was such that he had nothing to look forward to; he could see no reason to live. However, he began to remember vivid and powerful dreams for the first time in his life. Working with those dreams led him to a dramatic change of outlook and a remarkable new life, which included meeting, quite by chance, it seemed, a much younger woman from another part of the world and very different culture, and marrying her. This was an event he would never have expected. He also made his peace with those whom, he felt, had done him wrong, and he entered into a postretirement career full of traveling and writing, which he fully enjoyed.

As we begin to observe and attend to our dreams more closely and carefully, we may become deeply impressed by the intricacy of them. We begin to wonder, "Where do these dreams come from? Who is the author of my dreams? I could not have thought up this dream with my waking mind; I would never have imagined it." We develop a profound respect for this dimension, the transpersonal, or the source that is beyond our individual personal experiences.

Gradually, it dawns upon us that the author of our dreams is remarkably creative. We realize that the author knows things that we do not know. There are perceptions of ourselves and others that are astoundingly insightful. A dream may offer an observation, from its perspective, on a situation that we had not considered. Some people are led through dreams back into their ancestry to discover meaningful information. In two instances known to me, individuals discovered their biological fathers as a result of their dreams. In both instances, the dreamers dreamed of men whom they knew but had not known to have been their biological fathers. The dreams identified these men as such.

We recognize that these dreams come from another dimension. They have a mind of their own, meaning that they are evidence of the autonomy of the unconscious. Often people have dreams they would prefer not to have. Sometimes people even dread sleep, anticipating disturbing dreams. Sometimes one may be awakened by a dream that is so upsetting that they are reluctant to return to sleep, out of concern that the dream may be continued; often it is.

Throughout this chapter, I illustrate dreams from already published books, and some from former analysands, who gave me permission to use them. All of what follows illustrate the purposeful thrust of the Self as it orchestrates the unconscious through dreams to awaken the dreamer to a new understanding and change of life.

In the Jungian approach to dream analysis, the dreamer is first asked their associations to the various elements of the dream, such as the setting, the people, action, and so forth. The dream can be understood both on what is called the objective, or outer level, or on the subjective level, in which all of the elements of the dream are understood as aspects of the dreamer's inner life. In addition to the dreamer's personal associations, Jungians are also attuned to what are known as archetypal motifs in a dream, such as the hero motif, or an initiation motif, or the theme of transformation, or Creation.

For Jungian analysts, dreams can do a number of things: A dream can be therapeutically beneficial, even if it is not understood. The more a dream can be understood, however, the better. As new awareness brought by the dream becomes integrated into consciousness, the dynamic relationship between the dreamer and the unconscious changes. There is an ongoing dialog between the waking personality and the unconscious. The Self is the author of our dreams and our life's destiny.

Second, a dream can be diagnostically informative. Frequently a dream, told at the beginning of a therapeutic course of treatment, picturing the dynamic of the unconsciousness, helps inform the diagnostician. Often in the initial interview, a dream is reported that offers very helpful diagnostic and prognostic information. Here are two examples.

A young man in his early 30s, who had earned two master's degrees but felt stuck and unable to engage with his life in any effective way, had this dream: "I am presented with a butterfly and told I have to choose between the wings and the body."

It was clear to him in the dream that whichever he chose would result in killing the butterfly. Interestingly, the Greek word for butterfly is *psyche*. It is not uncommon for dreams to offer etymological information. The dream pointed up in a succinct, metaphorical image of his body-spirit conflict.

In another instance, a dreamer presented this dream: "I am walking on the moon with a race of giants. The moon explodes and burns out my eyes." Within a week, the dreamer was hospitalized with a psychosis.

Third, a dream can indicate the prognosis of the therapy. It can indicate the transference disposition of the individual through the characterization of the therapist or therapy, such as portraying them as educational or legalistic, or similar to someone known from the past. Or it may suggest resistance through the unavailability of either the therapist or applicant. Dreams can alert the dreamer to physical illness as well as provide pre-cognitive information.

There are also various types of dreams. Childhood dreams make a lasting impression; some of these are analogous to the favorite fairy tale of childhood and have embedded within them the life task of the individual.

Nightmares threaten the dreamer both during the dream and upon awakening because they threaten the individual's sense of identity and security. Here is an example. A huge gorilla is breaking down the door of the dreamer's bedroom. He had been so depressed he had been unable to get out of bed. The dream alerted him to the need to integrate his aggression.

Recurrent dreams: some dreams recur until the dreamer gets the message. One woman who repeatedly dreamed of herself as a prostitute finally realized that she had been devaluing herself as a woman, continually deferring to the masculine.

Dream series: I will illustrate a dream series of my own.

Perhaps the main issue early in analysis was to sort out the impact of my relationship with my father and his sudden and traumatic death. Early dreams told me that he was not dead, but still alive and at someone else's house. I (the dreamer) was to go and bring him home. Once there, happy to have learned that my father was still alive, I found him grotesquely deformed as he had been for the day he lived after his stroke. Versions of this dream were repeated several times, until, in one of these dreams, my father sat up and said, "This means that the father in you is paralyzed." Just in case I (the dreamer) did not understand.

Then, there was a series of dreams in which my father would come to visit to see how I was getting along in life. In one dream, my father was interested in analysis. Interestingly to me, Jung describes in *Memories, Dreams, Reflections* that his father visited him after his death. In the last of this series, my father was my age and size, although he had been considerably smaller. He visited my family to meet them and embraced me.

A subset of these father dreams involved my own voice.

In the first, I was told that singing would help to resolve my father's issues by finding his own voice. Although understanding that this was not to be taken literally, I took voice lessons for 10 years with a teacher who taught from a psychological perspective. For many years, my voice was one of the metaphors of this unconscious process until finally there was a dream in which I was singing in a choir of peoples of all nations in the ruins of the Temple of Jerusalem. I could hear the voices singing in their own languages and could hear my own in harmony with them.

The reader may be interested to know that, during the writing of this chapter, I had another dream that, after many years, again involved my voice and seemed to suggest the integration of various time periods in my life, singing the tune of a song learned in childhood ("The Ash Grove") but with words that wove together my boyhood and made reference to my early ministry and analytic training. It seemed as if the work on this section stirred me to present another singing dream that partnered feeling with understanding.

The series illustrates the progressive movement of the unconscious, as it symbolically represents the healing and integration process. In closing this section, I will recommend to the reader a section of *Ego and Archetype*, in which Edinger (1973, pp. 196 & ff) presents dreams of a metaphysical nature, preparing the dreamers for their deaths.

Synchronicity as Grace

“To this day God is the name by which I designate all things which cross my willful path violently and recklessly, all things which upset my subjective views, plans and intentions and change the course of my life, for better or worse” (Jung’s correspondence with a man in Cambridge, England).

Synchronicity

Our attention may be drawn to the activity of the self in a number of ways. Two of these have already been mentioned, namely, symptoms and dreams. A third is synchronicity, or other versions of what are often called paranormal or parapsychological experiences. All of these have the capacity to disrupt our lives, as Jung said in the earlier quote. They can change our intentions and plans completely.

Jung’s theory of synchronicity was his effort to provide a theoretical overview for these experiences that connect an individual’s psyche with unusual psychic events, such as clairvoyance, extrasensory perception, and others, such as numinous spiritual experiences, which seem to relate them to the cosmos and the transcendent.

By synchronicity, Jung meant the meaningful intersection or connection between two or more events, one inner and the other(s) outer, which cannot be proven to be causally connected but which are meaningfully related. Usually there is a meaningful connection between one’s subjective psychological experience, such as one’s inner preoccupation, and the experiences that one encounters in life-meaningful coincidences.

A common example might be to think of someone one has not seen for some time. Suddenly the phone rings and that person has called. Or two people are recalling a third person whom neither has heard from in a long time, when suddenly that third person is in contact. Such an event catches our attention. Some people have these experiences frequently, others less so, but they make an impression.

I recently had such an experience, when approaching my 50th high school reunion; I pondered the fact that I had heard nothing of one of my classmates since graduation day. This friend, named Tom, had been a classmate since first grade. I had seen or heard about many other classmates, but Tom was conspicuously missing.

Within a day of wondering what had become of Tom, he called me. No one else from the class called, but Tom did. It turned out that he had been a scientist making bombs, but one evening he decided to change and become a physician. He had become a cardiologist and had been establishing cardiology centers in third world countries.

Synchronicity is the meaningful intersection between our own psychological condition and our experiences in life. Why is it that at a particular moment in my life I happen to have a certain experience that turns me in a certain direction, which makes a great difference in my life, which might have gone very differently? If I hadn’t been open to or responded to the moment with a certain attitude, which might have been uncharacteristic

of me, the whole experience would not have happened. This is the kind of experience that many people call “grace.”

You begin to attend to what gets your attention. It begins to make sense. Something clicks, and, like the subtle shift of a kaleidoscope, you shift into a different frame of mind and state of being. In Jungian terms, a different rapport is established between the ego and the Self. Something is offered; you respond and cooperate. As a result, you and your life are changed.

For some people, these experiences of synchronicity occur at transition points in their lives. Often, when this is the case, they carry something of the destiny motif or archetype. People who are attuned to synchronicity in their lives tend to be more open to life’s meaningful interruptions. They recognize the relationship between their psyches and the way in which their lives are encountered—the way in which they are able to respond to them, engage with them, and work out some degree of partnership with their destiny.

By way of illustration, I will share several such experiences. I went off to college, thinking I would become a clergyman. Part way through college, I was not so sure. The month before my senior year, my father died suddenly of a stroke.

Two days later I was walking along the river thinking about what I was going to do. I decided that I would “walk in my father’s footsteps” in the hope that they would lead me to a deeper relationship with my heavenly Father, in relation to Whom I would discover more clearly who I was and what was to be my purpose and path in life. At that time, I knew nothing of Jung’s work, but intuitively, I sensed the connection between the personal and archetypal father and its meaning for my destiny.

(Later, during my analysis, I came to understand the extent to which I had been identified with my father. I was not sure whether my vocation was really mine or a continuation of his.)

This was a kind of poetic, intuitive way of forming a plan or direction. After my graduation from college, I went on to the same seminary he had attended. Upon graduation, I went to my first parish in Richmond, Virginia, where I agreed, as a part of my work, to minister to a small group of deaf persons, who met there for worship. I went to Gallaudet College, in Washington, and learned sign language sufficiently to conduct services and engage in a pastoral ministry with them. By the end of my first year, the small group of about a dozen had grown to 60 families.

Around the end of my first year there, I was to be ordained as a priest, having been a deacon for a year. The Feast of Pentecost was approaching, and I was preparing a sermon on it, trying to think about how to make sense of phrases like “a rushing mighty wind” and “tongues of flame” to a group of people who might have some difficulty understanding them. Had I been preaching to the “hearing congregation” upstairs, I would have thought I knew just what I was talking about.

However, I was led back to explore just what was Pentecost in the first century. Clearly it was a pre-Christian celebration. I was reminded that Pentecost was a harvest festival,

50 days after the giving of the Law to Moses. I began to speculate that the Disciples, who were still hiding in the Upper Room, in fear, were celebrating this Jewish festival probably in connection with a commemoration of the Lord's Supper, as he had taught them, when they were transformed. What was described in these powerfully symbolic images gave them the conviction and the courage to overcome their fear and be empowered.

My thoughts further developed to the point that I felt they were no longer "orthodox," leaving me conflicted. These feelings and thoughts were powerfully underscored by a series of three dreams I had within one week. I had not paid a great deal of attention to my dreams before, but I knew intuitively that they meant that I was not ready to be ordained. I postponed my ordination indefinitely and took a leave of absence to go off and contemplate.

My first stop was to attend a weekend conference in Triangle, Virginia, entitled "The Apple and the Silver Cord." This was a series of dialogs between an Episcopal clergyman and the president of the C. G. Jung Foundation of New York City. These dialogs helped me gain a freer and more symbolic understanding of what I had felt I needed to espouse too concretely. People I met at the conference invited me to visit with them on Bailey Island, Maine, where I met and had my first analytic sessions with Dr. Esther Harding.

In discussing some of my dreams with her, she was able to shed light on my conflicts and help me to see a way through them. In one dream, I wanted to make love with a woman with whom I had had a relationship. She said, "Not until you have resolved your vocational problem." In response to this dream, Dr. Harding pointed out succinctly, "You cannot have your soul (*anima*) until you resolve your vocational dilemma." This happened remarkably to me in two sessions.

Dr. Harding referred me to a Jungian analyst named Elined Kotchnig, who lived and practiced in Chevy Chase, Maryland. I saw her on my day off, a trip of approximately 120 miles each way. By the way, Mrs. Kotchnig was a Quaker, very active in Quaker retreats and studies at Pendle Hill, near Haverford, Pennsylvania, where my father had been so moved by Quaker mysticism. My analytic work enabled me to resolve my theological conflicts and return to my position in Richmond and be ordained.

The next summer, I attended a week-long conference sponsored by the Jung Foundation and the Educational Center of St. Louis, intended for those in religious education. There I met people from all over the country and Canada. I stayed in touch with many of them for many years. The conference included presentations such as Dr. Edinger's "Christ as Paradigm of the Individuating Ego" (the first time he presented it; see Edinger, 1973); Esther Harding's "The Psychological Meaning of the Crucifixion"; Edward Whitmont's "The Redemption of Satan"; Ross Hainline's "The Unconscious Experienced as Fate"; and others. This was a very powerful week and it stirred my dream life deeply. It was clear to me that Dr. Edinger was the person with whom I wanted to work analytically. I spoke to him about it and he told me to contact him when I moved to New York City.

Within a few months, I was offered a position in Connecticut, which enabled me to move and begin my analysis, and later my training, at the Jung Institute. Around this time, I met the young woman who became my wife. We married, she completed her nursing training, I completed my analytic training, and we decided to begin a family.

However, eight years later, we had still been unable to conceive. Then, one day in the spring of 1978, someone asked me if I would be the speaker on Mother's Day at a Mothers and Daughters Communion Breakfast at a church in another community. In accepting the invitation, I was intrigued by the fact (coincidence, maybe to become a "meaningful coincidence?") that in 1978 Pentecost and Mother's Day were being celebrated on the same day. I thought about that and spoke about how sometimes with our preconceived notions about such things as beliefs and theology, we miss what is before us.

I spoke about how the biblical tradition of the Old and New Testament and the Judeo-Christian tradition tended to think of God in masculine terms—a patriarchal god of Father, Son, and Holy Spirit. I reminded us of how earlier cultures had valued female goddesses. For example, the religion of Demeter and Persephone had been a very powerful one in Greek culture for centuries. I spoke about the uniqueness of the mother–daughter relationship. And I spoke about Sophia, who was described in the wisdom literature of the late Old Testament era, as a feminine counterpart of God, a feminine version of the Holy Spirit. I spoke of Jung's emphasis upon the missing feminine in the Godhead of Western religions. I spoke of being receptive and open to the unexpected encounters with the divine, not only in the Burning Bush and the Manger, but in other unexpected places. That afternoon, our daughter was conceived—a little feminine form of the spirit.

That was in May 1978. On August 23 of that year, I was driving around Westport, Connecticut, when I passed a building I had passed many times before but to which I had never paid much attention. I thought to myself, "Someday I might like to start a center, where I could do my work of psychotherapy and Jungian analysis, share it with a group of colleagues, and invite others to teach and present their work. Maybe a building like that would lend itself to the purpose."

I was anticipating becoming a father and contemplating what sort of a father I wanted to be. I thought of my own father, as it was the anniversary of his death. I thought about what I had loved and admired about him and what I would want to develop differently in myself. One thing I knew was that I would like to become a better provider, in material terms, since, with his sudden death, our family lost our home and had only enough money to pay for his funeral.

I decided to stop in at a real estate office to speak with a broker I knew, just to speak about the idea and ask about its feasibility. I was thinking about a project, perhaps 10 years in the future. The woman I was looking for was not there, but her partner was. I shared my thoughts with him. He asked me if I had a few minutes, which I did. He drove me to the very building in town that had caught my attention. He told me that this building was not yet on the market, but that it would be coming on the market soon. He said

that he thought it would suit my purposes very well. I told him that I wasn't prepared to buy anything just yet; I was thinking of some years ahead. He told me that, if I could come up with the down payment, he was confident that he could fill the building with tenants within a month.

Within an hour, the challenge had been resolved. A second mortgage on our home provided the down payment and, true to his word, the broker filled the building with tenants, sufficiently to carry the cost.

In recent years, I have become more attuned to those experiences of synchronicity. I had three experiences within a 24-hour period that caught my attention.

I came out of a CVS pharmacy and paused on the sidewalk, when a woman drove up in a car, got out, and came directly up to me, holding out a magazine and asked me, "Are you interested in physical therapy?" I said, "Yes, but I don't think I need it just now." She said, "Alright," then got back in her car and drove away, not speaking to anyone else. That seemed odd to me. That was in Westport, Connecticut.

The next morning, walking to my office in Manhattan, a woman came up to me on the sidewalk, held out a magazine and said, "Do you want to be saved?" I said, "Yes, I think so, but not just at this moment."

Within five minutes, I walked into my office to find my phone ringing. It was the director of the Jung Foundation, who said, "We are planning the Summer Studies Program at the Foundation on the theme of 'Staying Sane in an Insane World.' We would like you to be the speaker on the last day on the subject of 'Keeping the Faith.'" I paused for a moment and said, "Let me think about it."

As I reflected upon the invitation and these incidents, it felt as if something was beckoning me. I wasn't sure what to make of this but felt that somehow life was addressing me and inviting me to respond in some way. I didn't want to speak on "Keeping the Faith" as such but offered a modified version, "Keeping Our Equilibrium During Turbulent Times." It afforded me an opportunity to reflect upon just where I was then.

As I was thinking about what I wanted to speak about, more experiences occurred.

I received a phone call from another high school classmate, George Krevsky, whom I hadn't seen in 40 years. He told me how his life had evolved and of the chance meeting with Esther Smith. He spoke of how his conversation with this artist had resulted in his leaving his work as the director of Jewish Community Centers and establishing an art gallery in San Francisco.

The next week, Clyde Smith, another friend since age five, called to tell me his mother had died. His mother was Esther Smith, the very woman about whom George had spoken the week before. A few years earlier Clyde had attended my mother's funeral; this had meant a lot to me. I told him to let me know when and where the memorial service would be and that I would be there. He expressed surprise and pleasure and asked if I would perform the service. I said, "Of course I would." We agreed to speak further in a few days. When we spoke, it turned out that his sister felt that her mother's memorial service should

not be a Christian one, since she was Jewish and probably not even a religious service, since she was really more of a humanitarian. Clyde asked if I would still conduct the service. I said that I would, although we would need to reconsider it.

As I thought about Esther, I realized that her religion was her art and the appreciation and expression of beauty. I was reminded of John Keats's poem "Ode to a Grecian Urn." "Beauty is truth and truth beauty. That's all we know on earth and we need to know." That became the theme of the service. People attending stood up one at a time and told stories of how she had touched their lives, caringly and courageously. In one story, Esther had been attending a concert to which some soldiers stationed nearby had been given tickets. They began to heckle one of the performers. Esther, five feet tall, stood up, stopped the concert, with about 500 people present, spoke about respect for difference, and sat down as the concert continued with no further heckling.

As we have heard, Jung discovered the meaningful and purposeful thrust of the disconcerting and disruptive events of his life. His conviction that he was being engaged by a call he did not yet understand helped him to persevere through chaos to a new order. He experienced the reordering phenomenon of the self. Out of this reorganization of his personality, he discovered the individuation process, his own psychological equivalent of a spiritual journey, available to everyone in search of their path. The best way to lose oneself is by following someone else's path.

Is Analytical Psychology a Religion?

In 1937, following a public presentation in which Jung spoke of his theory of the collective unconscious at the Plaza Hotel in New York City, he was asked whether analytical psychology is a religion. Unprepared for the question, he spoke spontaneously. His remarks were not recorded. However, several of his colleagues took notes. What follows is a summary of an "Internet Discussion Forum" on the subject, as published in *The Journal of Analytical Psychology* (1999, pp. 531–570) including a summary of the notes of Jane Pratt, Esther Harding, and Eleanor Bertine.

To summarize Jung's attitude, "Of all those who ever consulted me who were in the second half of life, no one was ever cured who did not achieve a spiritual outlook on life." (Jung, 1958, p. 334) By this he meant, not the teachings of any particular religion, although he did not rule that out, but an attitude which put their concerns into a larger perspective. Jung was not interested in addressing the symptoms, such as anxiety, depression and others, which distress people.

Applying the discovery of physiology, that the body is a self-regulating entity, to the psyche, he found the same to be true. Psychologically, he found that an unbalanced psyche responded to compensation in a self-regulatory manner. The unconscious compensates the imbalanced conscious personality. He observed that fundamentally unresolved problems are not cured but outgrown. They fade out when confronted with a new and stronger life urge.

For Jung, the primary task of psychotherapy is to help patients to accept their whole nature, including their pathology (which may be genetically inherited), rather than trying to cure symptoms. For Jung, the process is like making one's peace with God and submitting oneself to the will of God.

Analytical psychology does not aim at curing neurotic symptoms but at bringing about a change in the patient's attitude to themselves and therefore to life in general. This new attitude can be described as "religious" but it has nothing to do with creeds or conventional forms of worship. Analytical psychology is not a religion but can be described as a prolegomena to religion or religion in *statu nascendi*, in a state of being born. (For a full discussion of this subject, see Shamdasani, 1999).

Future Directions

Through Jung's experience of the "confrontation with the unconscious" and the creative reorganization of his psyche, he discovered the universal relevance and applicability of that phenomenon in his psychotherapeutic work with others.

Because of the very nature and emphasis of Jung's work on the sanctity of individual experience, it does not lend itself easily to research, which, by its very nature is concerned with the collective, numbers, statistics, percentages, and nonindividual data.

Future study might address a statistical analysis.

Conclusion

Tracing the spiritual dimension of life and the psyche throughout Jung's life and work, this chapter has illustrated his passion for the direct experience of God. Beginning with his exceptional childhood experiences of the depth of the psyche, his personal experiences were discovered to be individual versions of universal phenomena, which he later termed "archetypal."

For Jung, the real question is, "Is man related to anything greater than himself?" His understanding of the "secret of the personality" evolved through his lifetime as his "main business," a term he took from Goethe. This refers to the relationship between the individual's experience of the transpersonal and those of others at all times and places, that which connects us with others and the universe. The discovery of the individuation process became the opportunity for the individual to find an attunement with the self and a dynamic spiritual journey unfolding from within. As the individuation process awakens through symptoms, dreams, and synchronicity, the individual discovers a relationship with the spiritual aspect of the personality.

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Psychology, Meditation, and the Brain Across Contemplative Traditions

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Abstract

Virtually all of the world's major spiritual and religious traditions incorporate elements of meditation or contemplative prayer, although the nature, prominence, and precise features of such practices vary between traditions. Neuroscientific findings indicate that meditation is associated with significant, enduring alterations in patterns of activity in specific brain areas. These, in turn, are linked with the increased attention and alterations in experience of self associated with contemplative practice. Neuroscientific findings are complemented by clinical evidence of relationships between contemplative practice and positive psychological change, leading, for example, to the use of "mindfulness-based cognitive therapy" for depression (combining mindfulness-based techniques from Buddhist tradition with Western cognitive therapeutic approaches). Notwithstanding recent work, substantial potential remains for further research and ongoing dialogue aimed at developing deeper, more integrated understandings of the spiritual, psychological, and biological effects of contemplative practice.

Key Words: meditation, spirituality, religion, Buddhism, Christianity, cross-cultural comparison, neurosciences, psychology, psychotherapy, mental disorders

Introduction

The word "meditate" is derived from the Latin word *meditari* (contemplate) and means to exercise the mind in contemplation, especially religious contemplation (Pearsall & Trumble, 1996, p. 898). Most of the world's major religious and spiritual traditions include elements of contemplative prayer or meditation as part of their practices, although the nature, prominence, and precise features of such contemplative practices vary significantly between traditions.

In the early 21st century, the practice of meditation is most immediately associated with Buddhist tradition in many parts of the world, although there are also substantial, often neglected elements of contemplation and meditation within Christianity, Islam, Hinduism, Judaism, and Taoism. There are also many nonspiritual, nonreligious traditions involving practices of contemplation and meditation, most of which resemble spiritual or

religious contemplative practices in certain procedural respects but do not have explicitly religious or spiritual frameworks surrounding their practices.

This chapter aims to explore meditative practices within a range of contemplative religious or spiritual traditions, with particular focuses on Buddhism and Christianity.

Meditative Practices in Buddhist Tradition

Meditation is central to Buddhist thought and practice.

The Foundations of Buddhist Meditation

Buddhism is a spiritual, psychological, philosophical, and cultural tradition which has its roots in the story of Buddha or “awakened one” (Gethin, 1998; Harvey, 1990). The historical Buddha, Siddhārtha Gautama, was born in India around 566 BC, the protected son of a chieftan. Siddhārtha, however, became dissatisfied with his life of privilege and left home to become a wandering ascetic. After years of self-mortification and meditation, Siddhārtha sat in prolonged meditation beneath a sacred Bodhi tree, and, after resisting many forms of temptation and attack, achieved enlightenment, whereby he finally beheld the exact condition of all living beings and saw the cause and solution to suffering.

Many of the central principles of the Buddha’s subsequent teachings are reflected in the Buddha’s “four truths” and “eightfold path,” both of which are central to the development of Buddhist psychology and, in turn, Buddhist contemplative practice. The four truths are concerned with human suffering (*dukkha*) and the way to overcome suffering:

- (a) *Dukkha* refers to the unsatisfactoriness of human experience and behavior, highlighting a need to identify the root cause of *dukkha* and overcome it.
- (b) *The roots of dukkha* lie in attachment (also translated as craving and “grasping” or “attachment”), hatred and delusion, all three of which are implicit in human responses to sensory phenomena; this truth provides many of the underpinnings for Buddhism’s focus on cognitive training, contemplative practice, and meditation.
- (c) *The cessation of suffering* can be attained by conquering attachment, aversion, and delusion; this is known as *nirvāna* or *nibbāna*.
- (d) *How to overcome dukkha*: The way to overcome *dukkha* is through Buddhism’s eightfold path, based on the principles of wisdom, moral virtue, and meditation.

The eightfold path is chiefly concerned with achieving the cessation of suffering and is centered on the concepts of wisdom, moral virtue, and mediation:

WISDOM

- (a) *Right view* refers to understanding things as they really are, based on the four truths; right view fundamentally informs all other elements of the eightfold path.
- (b) *Right intention* refers to the volitional dimensions of wisdom (i.e., a commitment to renunciation, goodwill, and development of compassion).

MORAL VIRTUE

- (c) *Right speech* refers to abstaining from false or slanderous speech, harsh words and idle, purposeless chatter; i.e., engaging in friendly, gentle, true speech;
- (d) *Right action* refers to abstaining from actions that are harmful, deceitful or dishonest, including harmful or dishonest sexual behaviour; i.e., engaging in kind, honest and compassionate actions at all times;
- (e) *Right livelihood* refers to earning one's living in a fashion consistent with the eightfold path; i.e., avoiding, in particular, butchery, dealing in living creatures, and selling weapons or intoxicants.

MEDITATION

- (f) *Right effort* refers to focusing one's mental efforts on achieving the goals set out in the eightfold path, promoting "wholesome" states and avoiding "unwholesome" ones.
- (g) *Right mindfulness* refers to controlling cognition to see things as they really are—that is, clear-sighted and concentrated contemplation of body, feelings, state of mind, and phenomena.
- (h) *Right concentration* refers to the development of mental "one-pointedness" or "wholesome concentration"; in Buddhist tradition, the key element in achieving this is the practice of meditation.

These eight elements are not sequential steps but interdependent principles which, when taken together and skilfully applied within one's life, will lead one toward the end of suffering (*dukkha*) and the attainment of *nirvāṇa*, which is the ultimate and logical culmination of Buddhist practice (Das, 1997; Gethin, 1998).

Buddhist Meditation

The practice of meditation is a key component of the Buddhist eightfold path and, for many people, meditation forms the central and defining element of Buddhist spirituality and psychology. Consistent with this, Buddhist spirituality and psychology are deeply enmeshed with each other in both theory and practice, as reflected in the unsurpassed

spiritual significance that Buddhism accords to the practice of meditation, and the elaborate psychological framework that surrounds both the theory and practice of Buddhist meditation (Bodhi, 1999).

In psychological terms, the most detailed enunciation of the framework of Buddhist psychology is to be found in the *Abhidharma*, or “higher teaching,” and described in detail in the seven books of *Abhidharma* which the Buddha conceived 21 days after his awakening (Gethin, 1998). The indicative contents of the seven books of the Theravada *Abhidharma* (the oldest Buddhist tradition, which emerged from India) provide a clear demonstration of Buddhism’s emphasis on a range of specific psychological concepts, including the definition and attainment of various states of consciousness, the significance of a range of specific cognitive practices, and the centrality of meditation to Buddhist spirituality *and* psychology:

- (a) *Dhammasangani*: This book provides an overview or framework for the entire *Abhidharma*, outlining the overall categorization of states of consciousness and material phenomena, as well as explanations of important *Abhidharma* terminology.
- (b) *Vibhanga*: This book provides detailed analyses of a range of important Buddhist concepts such as sense bases, dependent arising, mindfulness, the eightfold path, types of knowledge and *dhammahadaya* (the essence of the doctrine).
- (c) *Dhātukathā*: This book provides an analysis of all phenomena in relation to the essential Buddhist concepts of sense bases, aggregates and elements.
- (d) *Puggalapannatti*: This book examines different kinds of individuals and different levels of spiritual development, using an approach more similar to that of the *Suttas* (or more general teachings) than that of the traditional *Abhidharma*.
- (e) *Kathāvatthu*: This book comprises a manual of debatable or undecided points in *Abhidharma* teachings and is generally ascribed to the Elder Moggaliputta Tissa.
- (f) *Yamaka*: This book is concerned with the use of *Abhidharma* terminology and the resolution of ambiguities in relation to a range of areas, including sense bases, latent dispositions and consciousness.
- (g) *Patthāna*: This lengthy book, also known as the “Great Treatise,” provides an analysis of the interrelations between different teachings within the *Abhidharma*, according to 24 varieties of conditional relations. The *Patthāna* presents an enormously detailed, systematic overview of much of Buddhist psychology and, in many ways, forms the heart of the teachings of the *Abhidharma* (Bodhi, 1999).

Consistent with this elaborate, detailed engagement with psychological processes and cognitive states, Buddhist tradition accords unsurpassed importance to the practice of meditation, including meditation for the attainment of calm (*samatha*) and meditation for the development of insight (*vipassanā*). Buddhist thought holds that the human mind is fundamentally pure but has become defiled; the purpose of meditation is to remove these defilements and see things as they really are. The five hindrances that most immediately require removal to this end are sense-desire, anger, torpor, restlessness, and doubt.

In practical terms, meditation for the attainment of calm (*samatha*) is generally commenced before development of insight (*vipassanā*), often by focusing meditative concentration on a single phenomenon (e.g., one's own breath). There are many accounts of the states of consciousness into which the meditative mind can then enter, and these are commonly described as the five *dhyānas*:

- (a) *Vitarka*: The application of thought;
- (b) *Vicāra*: Examining;
- (c) *Prīti*: Joy;
- (d) *Sukha*: Happiness; and
- (e) *Cittāikagrata*: One-pointedness of mind (Gethin, 1998).

At the point of attaining the fourth *dhyāna* (*Sukha* or happiness), the meditator can start to focus on the development of insight (*vipassanā*). The initial stages of this process can be conceptualized using the paradigm of the seven purifications:

- (a) Purification of conduct;
- (b) Purification of consciousness;
- (c) Purification of view;
- (d) Purification by overcoming doubt;
- (e) Purification by knowledge and vision of what is path and not-path;
- (f) Purification by knowledge and vision of the way; and
- (g) Purification by knowledge and vision.

At this point, there are numerous other ways in which further meditative progress can be conceptualized, but all, if skillfully pursued, lead to the point of becoming an *arhat*, an individual who sees things as they really are, and has attained *nirvāṇa* or *nibbāna*. Some of these accounts of various stages, paths, and purifications can appear complex and convoluted to some readers and practitioners. Many of these schemes, however, evolved into their present forms over centuries of Buddhist practice and may now serve multiple purposes. Not least among these purposes is their usefulness in affording milestones of progress for the meditator: following the Buddhist path can involve lengthy meditative

commitment which may seem time-consuming and repetitive; detectable milestones along the way can act as invaluable sources of encouragement for the weary or for those losing hope along the way.

A more detailed account of, and introduction to, broader themes in Buddhist psychology is provided by De Silva (2005), and a more focused account of Buddhist psychology in relation to Western psychology and psychiatry is provided by Kelly (2008).

One of the key concepts in much Buddhist psychology and spirituality, and, especially, Buddhist meditation, is “mindfulness,” which refers to a careful awareness of one’s own thoughts and feelings (Wright, 2017). In Buddhist psychology, this concept is also known as *sati* and forms an important element of much meditative practice (Brazier, 2003). The aim of mindfulness practice is to promote awareness of, and connection with, cognitive and bodily states and processes. The emphasis remains on observation and labeling, rather than judging, changing, or acting. There are numerous ways to cultivate mindfulness in everyday life. One way is to provide a verbal label for certain predetermined phenomena throughout the day—for example, mentally labeling the position of one’s body each time it changes (standing, sitting, walking, etc.). Similar approaches can be applied to emotional and cognitive phenomena, labeling each as it is observed. In Buddhist meditation, mindfulness of the body and breath are often used to cultivate contemplative states of mind.

Effects of Buddhist Meditation on the Brain

Buddhist meditation has significant effects on the human brain. Recent decades have seen a substantial increase in research interest in this area, with a succession of studies confirming that the effects of Buddhist meditation on the physical brain are detectable, substantial, and enduring.

In the 1980s, Brown et al. (1984b) studied visual sensitivity in individuals practicing Buddhist mindfulness meditation before and after a three-month retreat which involved 16 hours of mindfulness meditation each day. Following the retreat, practitioners were capable of detecting shorter single-light flashes and required shorter intervals to distinguish between consecutive flashes, compared to before the mindfulness retreat. This was consistent with previous studies (Brown et al., 1984a), as well as original Buddhist texts, which suggest that mindfulness meditation is associated with significant changes in human perception.

Benson et al. (1990), in an especially detailed study of brain function in three Tibetan Buddhist monks, also concluded that meditation was associated with significant changes in resting brain metabolism, as well as significant changes in electroencephalogram (EEG) readings or, more specifically, increased beta activity and asymmetry in alpha and beta activity between the hemispheres, indicating significant changes in patterns of brain electrical activity as a result of meditation.

In a similarly focused study, Newberg et al. (2001) studied the effects of meditation in eight experienced Buddhist meditators using advanced brain imaging technologies (single photon emission tomography) and reported significant changes in brain blood flow associated with meditation; more specifically, researchers reported increased regional cerebral blood flow in the cingulate gyrus, thalamus, inferior and orbital frontal cortex, and dorsolateral prefrontal cortex in the brains of meditators. Taken in conjunction with earlier, comparable neuroimaging studies (Newberg & Iversen, 2003), these findings confirm the substantial effects of contemplative practice on the physical brains of meditators.

These findings are also consistent with the work of Lutz et al. (2004), who examined 8 experienced Buddhist practitioners and 10 student volunteers, and reported that the Buddhist practitioners had significant changes in brain electrical activity during meditation; more specifically, researchers reported that meditation induced sustained EEG high-amplitude gamma-band oscillations and phase synchrony. In addition, however, the Buddhist meditators had certain changes in brain electrical activity (higher ratios of gamma-band activity to slow oscillatory activity over the medial frontoparietal electrodes) not only during meditation but also *after* meditation, suggesting that the changes in brain function induced by meditation last significantly longer than the meditation sessions themselves.

Overall, these findings, along with various other related studies (Hanson, 2009; Kelly, 2008), provided substantial scientific support for significant and enduring alterations in brain biology associated with meditation. In terms of specific alterations, there were signs of an emerging confluence amongst neuroscientific studies, suggesting that meditation is linked with detectable alterations in activity in specific brain areas, including the anterior cingulate cortex and dorsolateral prefrontal areas (Cahn & Polich, 2006).

More recently, as research in this area continues to expand, conclusions are being refined and integrated to create a more nuanced, blended understanding of meditation and the brain. Despite persistent methodological concerns that need to be resolved (Tang et al., 2015), systematic reviews and meta-analyses still show clear evidence of significant links between meditation and alterations in both brain structure (Fox et al., 2014; Luders & Kurth, 2019) and patterns of brain activation and deactivation, especially in the insula, pre/supplementary motor cortices, dorsal anterior cingulate cortex, and frontopolar cortex (Fox et al., 2016).

There is also novel evidence that meditation is associated with increased brain network integration (Van Lutterveld et al., 2017) and, hypothetically at least, possible alteration of the signal transduction process that regulates the expression of immune response genes (Black et al., 2019). At a subjective level, these kinds of biological brain changes appear linked with both the increased attention and alterations in experience of self associated

with meditation, as well as positive benefits in relation to anxiety, depression, stress, and pain (Brandmeyer et al., 2019).

These conclusions are complemented by an emerging literature supporting a similarly robust relationship between contemplative practice and positive psychological change; that is, recent years have not only seen multiple studies demonstrating that meditation produces biological changes in brain function (as measured through patterns of electrical activity and blood flow) but also studies suggesting that contemplative practice can be associated with positive psychological change, as reflected in the alleviation of psychological symptoms or treatment of mental illness through the judicious use of selected contemplative practices and meditative techniques.

More specifically, various forms of meditation, mindfulness, and Buddhist contemplative practices have been described as producing benefit for certain individuals with depression (Hofmann & Gómez, 2017; Segal et al., 2001), anxiety disorders (Emmanuel, 2001; Hofmann & Gómez, 2017; Montero-Marin et al., 2019; Tanya et al., 1997), obsessive-compulsive disorder (Külz et al., 2019; Olson, 2003), substance misuse disorders (Barrett, 1997; Marlatt, 2002; Tang et al., 2016), disordered eating patterns (Albers, 2006; Warren et al., 2017), disorders involving anger (DiGiuseppe, 1999; Leifer, 1999) and emotional regulation (Tang et al., 2016). Similar benefits have been described in relation to certain aspects of physical illnesses, including psychological care during cancer treatment (Haller et al., 2017; Lundberg & Trichorb, 2001) promotion of holistic health in HIV/AIDS (Hecht et al., 2018; Logsdon-Conradsen, 2002), adjunctive care in chronic disorders (Bonadonna, 2003; Zgierska et al., 2016), terminal care (Barham, 2003; McGrath, 1998; Zeng et al., 2018), and pain (Hilton et al., 2017).

Of these diverse psychological and physical disorders, depression is the condition for which the role of Buddhist contemplative techniques has been explored in greatest depth. Williams et al. (2007) describe a treatment paradigm called “mindfulness-based cognitive therapy” for depression, which combines mindfulness-based techniques from Buddhist tradition with Western cognitive therapeutic approaches to depression. This therapeutic paradigm involves a combination of meditation, education, and cognitive therapy in order to reduce symptoms of depression and promote sustainable, balanced recovery. There is now significant evidence supporting its use as a treatment for relapse prevention in people with recurrent depression, especially those with more pronounced residual symptoms (Farb et al., 2018; Kuyken et al., 2016). Similar approaches are increasingly being applied to a range of other issues within clinical psychology and psychiatry, including anxiety disorders, emotional dysregulation syndromes, anger problems, binge eating, suicidal behavior, and the psychological effects of trauma (Mace, 2008; Williams & Penman, 2011).

Mindfulness is proving to be an especially valuable psychological technique in the context of many existing forms of psychotherapy (Germer et al., 2005; Segal et al., 2001),

including cognitive-behavioral therapy (CBT) (Farb et al., 2018; Kumar, 2002; Kuyken et al., 2016), dialectical behavioral therapy (DBT) (Flynn et al., 2019; Palmer, 2002; Robins, 2002) and acceptance and commitment therapy (ACT) (Hayes, 2002; O'Brien, et al., 2019). There is also a long-standing relationship between psychoanalysis and Buddhist practice, especially meditation (Fromm et al., 1960; Harding, 2014). More recently, there has been increased consideration of the role of meditative practice in the context of depression in conjunction with other approaches, such as the use of psychotropic medication and various forms of psychotherapy (Epstein, 2007; Kelly, 2019; Lova et al., 2016).

Buddhist Meditation: The Future

Recent decades have seen substantially increased interest in the relationship between specific Buddhist techniques, especially mindfulness-based meditation, and positive psychological change or the alleviation of symptoms of psychological distress and mental illness (Brazier, 1995; Farb et al., 2018; Kelly, 2008, 2011). These meditative concepts and techniques are increasingly recognized as being potentially valuable not only for many individuals who experience psychological distress but also for many of those who seek to help others, such as therapists (O'Brien et al., 2019; Simpkins & Simpkins, 2009). These positive therapeutic developments are strongly underpinned by emerging knowledge of the substantial biological effects of Buddhist contemplative practice on the human brain (Fox et al., 2016; Hanson, 2009; Luders & Kurth, 2019).

The subjective effects of integrating this evolving “brain science” of meditation with the psychological effects of Buddhist practice have been explored in depth by Austin (1999, 2006, 2016), who provides a particularly detailed summary of existing neuroscientific research into Zen meditation and consciousness, combined with a substantial knowledge of Buddhism from an experiential perspective. This is an especially valuable area of work as it links “objective” scientific data with “subjective” experience, and opens up an important dialogue between two spheres which are often regarded as separate, to the detriment of both.

Future years are likely to see continued increase in the use of Buddhist mindfulness and meditative techniques as components in psychotherapeutic approaches to a range of states of psychological distress and mental illness. This trend was both evidenced and advanced through the establishment of a Centre for Mindfulness Research and Practice at the University of Wales at Bangor in the United Kingdom (www.bangor.ac.uk/mindfulness). Future years are also likely to see increased research into, and practice-based interest in, contemplative traditions other than Buddhism, including, most notably, meditative and contemplative practices within Christian traditions (Lopez, 2008).

Meditative Practices in Christian Tradition

Meditation features in Christian traditions in a variety of settings and ways.

The Foundations of Christian Meditation

Meditative and contemplative practices form an important part of many traditions within Christianity. Christianity is a monotheistic religion which has been historically divided into three main branches (MacCulloch, 2009):

- (a) *Roman Catholicism*, within which there are various churches, led by bishops, with the Pope, or Bishop of Rome, as highest authority on matters of faith;
- (b) *The Orthodox Church*, whose constituent churches are in communion with the Patriarchal Sees of the East, and which is the second largest constituent church within Christianity; and
- (c) *Protestantism*, which includes a relatively broad variety of churches, all of which draw at least some of their beliefs and practices from John Calvin (1509–1564), Martin Luther (1484–1546), and/or Huldrych Zwingli (1484–1531).

All three branches of Christianity regard the Bible as the word of God, presented as two canonical collections of books: the Old Testament and New Testament (Armstrong, 2007). Various churches differ in the extent to which the words of the Bible are to be taken literally or interpreted as metaphor, especially in relation to the earlier books of the Old Testament. Notwithstanding these interpretative divergences, the key features of Christianity in most churches include the belief that Jesus Christ was the Messiah prophesized in the Old Testament and that He was persecuted, crucified, and buried. He was then resurrected from the dead and, after appearing to some people, ascended into heaven. It is also believed that Jesus will return from the dead to judge all human beings, living and dead. Those who are virtuous and those who truly have repented their sins will enjoy eternal life. In Christian scripture, Jesus is seen as teaching about God, being the son of God, and forming part of the “Holy Trinity,” which comprises Jesus, God the Father, and the Holy Spirit.

The practice of Christianity varies between churches and traditions but generally involves group worship on Sunday, the day of the resurrection. Worship involves prayers, thanksgiving, sermonizing, and celebrating the Eucharist, which is a form of liturgical worship involving a consecrated meal, generally of bread and wine, which Christians believe is transformed into the Body and Blood of Christ during the Eucharist (transubstantiation). Other Christian rites include the sacraments, which are specific rites initiated by Jesus to convey grace in various particular contexts:

- (a) *The sacrament of baptism*, which is a Christian initiation rite soon after birth;
- (b) *The sacrament of confirmation*, which is Christian initiation as a young adult, strengthening baptismal grace;

- (c) *The sacrament of the Eucharist*, which is a partaking of Jesus's sacrifice, often at Sunday worship;
- (d) *The sacrament of penance and reconciliation*, which involves confession of, and forgiveness for, sins;
- (e) *The sacrament of anointing of the sick*, which is a sacrament of healing, conveying grace to those in immediate danger of death;
- (f) *The sacrament of holy orders*, in which an individual devotes themselves to the work of God by, for example, becoming a priest or bishop; and
- (g) *The sacrament of matrimony*, which establishes between a couple a lasting and exclusive bond, sealed by God.

In addition to Sunday Eucharist, the sacraments and various other public activities are linked with Christianity (e.g., pilgrimages); there are also many individual and group activities linked with Christian observance, including prayer, good works, and contemplative practices. Prayer can be practiced either individually or in groups, and can include forms of ritual devotion such as “the rosary” which involves saying short prayers up to 50 times each (Storey, 2004). Good works can include charitable involvement, helping the sick or elderly, assisting the poor, or attempting to influence social and government policy in directions indicated by Christian teachings (Massaro & Shannon, 2002).

Christian Contemplative Practices

Contemplative practices form a significant element within many Christian traditions but are generally not accorded the same primacy that meditation is accorded in Buddhist traditions (Talbot, 2002). Within Buddhism, meditation is a necessary element on the path to enlightenment whereas within Christianity, contemplative practices *can* represent an important element in one's spiritual life but do not have the same centrality that they possess in Buddhism. As a result, contemplative practices in Christian traditions have tended to be associated with particular historical individuals and particular groups of monks, nuns, and laypersons.

The individuals most strongly associated with contemplative traditions in the history of Christianity include the following:

- *Saint Augustine of Hippo* (354–430), a bishop, philosopher, and theologian, was an immensely influential figure in the development of Western Christianity and patron of the Augustinian religious order. Saint Augustine wrote extensively on matters of theology and, in Saint Augustine's view, contemplation was an extremely important method for reaching the truth about God. The production of specific psychological states while contemplating (e.g., joy at contemplative discovery) was epiphenomenal: the purpose of

contemplation was to understand the truth about God and encounter that truth immediately and directly (Kenney, 2005).

- *Saint Thomas Aquinas* (1225–1274), an Italian priest in the Dominican Order was another philosopher and theologian who placed considerable emphasis on “natural theology” and “natural law” (Maritain, 2008). Saint Thomas also emphasized Christian contemplative practice, arguing that Christian communities needed contemplative individuals within them in order to strengthen and deepen their faith.
- *Saint Ignatius of Loyola* (1491–1556) was a hermit and priest, who founded the Society of Jesus and encouraged followers to visualize and meditate on scenes from the life of Jesus Christ; this model of contemplative Christianity involved both intellectual and affective (emotional) components, centered on love (Caraman, 1990).
- *Saint Theresa of Ávila* (1515–1582), a Carmelite nun and mystic, described four stages of the “ascent of the soul” including (a) “mental prayer” or contemplation; (b) “prayer of quiet,” a supernatural state in which the individual’s soul is merged with God; (c) “devotion of union,” a supernatural *and* ecstatic state in which also involves an absorption of reason in God; and (d) “devotion of ecstasy or rapture,” a state in which the individual’s consciousness of being in their body has disappeared and they enter the ultimate, mystical trance (Cohen, 1957; Hamilton, 1982).
- *Saint John of the Cross* (1542–1591), a Carmelite friar and priest, wrote extensively in the fields of poetry and Catholic mysticism (De Nicolás, 1996; Kavanagh, 2000), and went on, with Saint Theresa of Ávila, to found the Discalced Carmelites, a mendicant Catholic order with strong emphasis on silent prayer, enclosed living, and contemplative practice (Hamilton, 1982).
- *Thomas Merton* (1915–1968), a Trappist monk from the United States, had a strong interest in Buddhist contemplative practice, and initiated dialogue with Buddhist leaders and teachers including the Dalai Lama and Thich Nhat Hanh, a celebrated Vietnamese Buddhist monk (Cunningham, 1999).
- *John Main* (1926–1982), a Benedictine monk, practiced and promoted Christian meditation throughout the 20th century (Harris, 2001). More specifically, Main developed a practice that involved sitting quietly for 20 to 30 minutes, letting one’s thoughts pass without engaging with them, and constantly returning to a chosen “prayer-phrase” (similar to a mantra); one was simply being *with* God instead of trying to talk *to* God (Main, 2006). Main’s work led to the emergence of the World Community for Christian Meditation, in 1991.

Christianity, especially early Christianity, also had a notably strong monastic component, which often involved lengthy, solitary, and/or silent contemplation (Belisle, 2003). This tradition persists, in various forms, among diverse Christian orders and groupings today, including:

- *The Religious Society of Friends* (Quakers), which began in England in the mid-17th century, as a break-away from English Puritanism, and now encompasses a range of different churches around the world, many of which are known for their social activism (including early opposition to the transatlantic slave trade). While the Religious Society of Friends engages in many different forms of prayer and devotion, one of the chief forms of worship is communal meditation, a form of silent prayer focusing on Jesus Christ (Dandelion, 2007). This is known as “unprogrammed worship” and lasts approximately one hour, during which time certain friends, if so moved, may rise and speak when they feel they are led by a spirit.
- *The Order of Cistercians* is a Catholic order of enclosed monks, whose first abbey was founded in 1098 by Robert of Molesme (1028–1111). The Order is characterized by literal observance of the rules of Saint Benedict, a commitment to manual labor, and an atmosphere of silence (Tobin, 1996). One branch of the Cistercians, the Order of Cistercians of the Strict Observance (Trappists), places an especially strong emphasis on silence in order to permit greater focus on gaining a deeper understanding and love of God.
- *The Carthusian Order*, or Order of Saint Bruno, is a Catholic Order of enclosed monks and nuns, founded by Saint Bruno in 1084. The life of the Carthusian monk or nun is characterized by solitude, meditation, prayer, and manual work, with a strong emphasis on silent, solitary contemplative practice (Lockhart, 1999).
- *The World Community for Christian Meditation* was founded in 1991, based on the contemplative work of John Main, a Benedictine monk who practiced and promoted Christian meditation (Harris, 2001; Main 2006). The World Community for Christian Meditation has its international center in London but has branches in many other countries, and sees itself as a monastery without walls, devoted to Christian contemplative practice.

Various other Christian religious orders and groups include other, different kinds of meditative and contemplative practices within their traditions, sometimes in the broader context of an enclosed way of life (e.g., Camaldolese and Order of Saint Clare). One of the key differences between Christian and Buddhist meditation, however, is the role of God in Christian contemplative practice. While Buddhist meditation centers on cognitive training and concentration in order to see things as they really are and thus bring an

end to suffering, Christian meditation focuses on coming into closer communion with God (e.g., the silent, “unprogrammed worship” of the Society of Friends). This difference is emphasized most clearly in the work of Saint Augustine who regarded the production of specific psychological states while contemplating as incidental to the central purpose of contemplation, which is to encounter the truth about God, immediately and directly (Kenney, 2005).

The 20th century, however, saw the emergence of significant dialogue between contemplative traditions and, in particular, renewed exploration of commonalities between Buddhist and Christian meditative traditions. Thomas Merton, for example, had a lengthy dialogue with D. T. Suzuki (1970–1966), a celebrated Buddhist teacher, looking at the relationship between Christian and Buddhist contemplative traditions, and this was later published in Merton’s “Zen and the birds of appetite” (Merton, 1968). More recently, Wallace (2007) has drawn attention to areas of convergence between Western and Eastern meditative traditions, noting that many Christian mystics (including Saint Augustine of Hippo) reported that some of the results of contemplative practice stemmed from clearer perceptions of God’s true nature, the human soul, and laws of nature. At least some of these observations have significant echoes of Buddhist writings on the purpose and consequences of meditation, which include the removal of defilements and enhancement of perception of reality.

Effects of Christian Meditation on the Brain

Another source of evidence of potential convergence between Buddhist and Western contemplative traditions has emerged from neuroscientific study of the biological correlates of contemplative practices. While most neuroscientific research on meditation to date has focused on practitioners of Buddhist contemplative practice, there is a growing, although still limited, body of evidence regarding non-Buddhist forms of meditation.

Azari et al. (2001), for example, used functional neuroimaging to study brain activation in Christian and nonreligious individuals during recitation of psalms (scripture from the Hebrew Bible), a nursery rhyme, and parts of a telephone directory. During recitation of religious scripture, Christian subjects showed increased activation of a frontal-parietal circuit in the brain, involving the dorsolateral prefrontal, dorsomedial frontal, and medial parietal cortex. These areas play a significant role in sustaining reflexive evaluation of thought, and these results suggest that subjective religious experience may be, in significant part, a cognitive process. This is consistent with the strong emphasis placed on cognition in Buddhist psychological and contemplative tradition (Bodhi, 1999; Gethin, 1998; Kelly, 2008).

Newberg et al. (2003) studied changes in patterns of blood flow in the brains of Christian (Franciscan) nuns during verbal-based meditative practice. They found significant alterations in brain blood flow patterns associated with meditation, including increased flow in the prefrontal cortex, inferior parietal lobes, and inferior frontal lobes,

indicating increased brain activity in these areas. There was also an inverse correlation between blood flow changes in the prefrontal cortex and superior parietal lobe on the same side. These findings suggest that meditative experiences may be mediated, at least in part, through differentiation of the superior parietal lobe, which is involved in the generation of normal sense of spatial awareness, among other tasks (D'Aquili & Newberg, 2000).

These findings are generally consistent with findings in the brains of Buddhist and other meditators, supporting a possible confluence of research findings, focusing on altered activity in specific brain areas (e.g., anterior cingulate cortex and dorsolateral prefrontal areas) and linking these with the increased attention and alterations in experience of self associated with contemplative practice (Cahn & Polich, 2006; Kelly, 2008; Hanson, 2009; Newberg et al., 2001; Newberg & Iversen, 2003). Taken together, these findings provide significant support for the idea that different forms of meditation, within differing spiritual traditions, may produce similar biological alterations in the brain. This area requires further study, however, as neuroscientific research to date has focused significantly on Buddhist meditation as opposed to other forms of contemplative practice, such as Christian meditation (Lopez, 2008), despite the fact that mindfulness finds roots in Jewish, Islamic, and Christian religions as well as Buddhism and Hinduism (Trousselard et al., 2014). There may also be value in exploring differences between individual spiritual “cognitive styles”: Tapanya et al. (1997), for example, studied levels of worry among Buddhist (Thai) and Christian (Canadian) elderly persons and reported that an extrinsic religious orientation among Buddhists, but not Christians, was linked to greater worry.

There is also a need for further research comparing the psychological and biological effects of religious and nonreligious contemplative practice. Wachholtz and Pargament (2005), for example, have found that spiritual and secular forms of meditation are associated with differing effects on anxiety, mood, spiritual health, and spiritual experiences. In terms of neurobiology, Azari et al. (2001), in their functional neuroimaging study, reported different patterns of brain activation in nonreligious individuals reciting a nursery rhyme compared to religious individuals reciting religious psalms, with the former showing significant activation of the left amygdala, which correlated significantly with their affective state. This area both merits and requires greater study.

Christian Meditation: The Future

Christianity has a long tradition of contemplative practice, dating from early monastic settlements, through the lives and works of many of the greatest leaders of Christian thought, including Saint Augustine of Hippo, Saint Thomas Aquinas, Saint Ignatius of Loyola, Saint Theresa of Ávila, and Saint John of the Cross. In the 20th century, spiritual leaders of Christian contemplative practice showed evidence of broader engagement with other contemplative traditions (e.g., Thomas Merton and Buddhism) and a desire to promote and renew Christian meditation on a broader, more inclusive basis (e.g., John Main and the World Community for Christian Meditation).

As a result of this strong tradition, the early 21st century sees the continuation of the contemplative practice of, among others, the Religious Society of Friends (Quakers), Order of Cistercians, Carthusian Order, Camaldolese, and Order of Saint Clare. The foundation of the World Community for Christian Meditation in 1991 has been accompanied by other evidence of renewed and broadening interest in Christian meditation: in 2005, the Carthusian Order was the subject of a widely distributed, award-winning documentary film, “Into Great Silence,” directed by Philip Gröning (Zeitgeist Films), and more recent years have seen several significant publications exploring mindfulness, meditation, and Christian spirituality (e.g., Stead, 2016).

Notwithstanding evidence of increased dialogue between Christian and Buddhist meditative traditions (e.g., Merton, 1968), there remain important differences between traditions, including, most notably, the role of God in Christian contemplative practice. Nonetheless, Christian sources still describe the results of contemplative practice as including clearer perceptions of God’s true nature, the human soul, and laws of nature (Wallace, 2007), at least some of which have significant echoes of Buddhist writings on the purpose and consequences of meditation (Kelly, 2008).

In addition, neuroscientific studies of meditators of both Buddhist and Christian traditions also point to areas of commonality, focusing especially on altered activity in specific brain areas (e.g., anterior cingulate cortex and dorsolateral prefrontal areas) which are linked with the increased attention and alterations in experience of self commonly associated with contemplative practice in all traditions (Cahn & Polich, 2006; Hanson, 2009; Newberg et al., 2001; Newberg & Iversen, 2003). Future years are likely to see this area of research increase its focus on Christian and other non-Buddhist forms of meditation, the role of individual spiritual “cognitive styles” in relation to meditation, and further comparisons of the psychobiological effects of religious and nonreligious contemplative practice.

Meditative Practices in Other Spiritual and Religious Traditions

Meditation features in many other religious and spiritual traditions around the world.

Islam

Islam is a religion based on the *Qur’an*, a book considered to be the word of God, and the example of Muhammad, the Islamic prophet (Armstrong, 2000). The five “pillars” of Islam provide the foundations of Muslim life:

- (a) Faith in the Oneness of God and finality of the prophethood of Muhammad;
- (b) The establishment of the daily prayers;
- (c) Almsgiving and concern for the needy;
- (d) Purification of the self through fasting; and
- (e) Pilgrimage to Makkah for all who are capable.

There are many different branches within Islam, each with certain distinctive features; the main branches include Sunni, Shi'a, Sufism, and Kharijite. Islam has a strong tradition of frequent prayer involving meditation on God by reciting the *Qur'an*; this is known as *Ṣalāt* and produces spiritual peace and strength to help individuals in the tasks of their lives (Aslan, 2005). While the intensity of *Ṣalāt* results in it bearing many similarities with various forms of meditation from other spiritual traditions, Islam also has various other additional contemplative traditions including, most notably, *tafakkur* and Sufism.

Tafakkur means "reflecting on the universe" in order to gain food for thought. *Tafakkur* is seen as a form of intellectual development that emanates from a higher level, from God. Receiving divine inspiration in this fashion permits personality growth and development which, in turn, helps the individual to live life on a more spiritual level.

Sufism is a mystical form of Islam with an especially strong focus on the spiritual and mystical aspects of the religion. Sufi meditation, also called *Muraqaba*, involves developing progressively deeper awareness of the self, ascending into an awareness of the universe and God. In some respects, the process of Sufi meditation is similar to that of Buddhism (developing particular forms of concentration), but the two traditions differ in terms of the role of God: in Sufi meditation, the final aim is for the individual to become extinguished within God, before returning with new knowledge of God and one's place in the universe.

Sufi meditation is often presented as possessing healing qualities, especially in relation to the healing spiritual journey from the realm of delusions into the realm of realities (As-Sayyid, 2005). Like Buddhism, this paradigm sees the self as originally pure but now defiled, and the process of meditation can return the self to its original state of purity. Sufi meditation is, however, considered controversial among certain scholars of Islam, albeit quite widely practiced and discussed among certain other groups (Frager & Fadiman, 1997; Karamustafa, 2007).

Although there have been some comparative considerations of Sufism and Western psychological traditions, such as psychoanalysis (Nurbakhsh, 1978a, 1978b), and some considerations of the biological correlates of Sufi practice (e.g., Ernst, 1998), the neuroscientific literature in this area has not grown in recent decades to the same extent as it has in relation to Buddhist practice. There is, nonetheless, substantial potential for much fruitful interaction between Sufi and Western psychological and neuroscientific traditions: Deikman (1977), in particular, felt that Western psychiatry could benefit significantly by engaging with Sufism's devotion to the development of higher intuitive and perceptual capacities, as well as Sufi conceptions of the conscious evolution of man and the ultimate realization of man's full capacities, for the benefit of all.

In recent years, Nizamie et al. (2013) have explored the relationship between Sufism and mental health, and recommend that the incorporation of spiritual/Sufi elements into the mental health care services needs to involve both (a) incorporation of spiritual/Sufi healers into the mental health care delivery system (e.g., basic training in identification

of mental illness and appropriate referral) and (b) incorporation of spiritual/Sufi beliefs and practices into the therapeutic process, which might increase uptake of mental health services by a largely spiritually oriented population. More recently, again, Isgandarova (2019) has written about the use of *Muraqaba* as a mindfulness-based therapy in Islamic psychotherapy, for treating symptomatic anxiety, depression, and pain. Clearly, this is an area likely to attract increased attention in the coming years.

Hinduism

Hinduism is a religion that is rooted in the Indian subcontinent and is also known as *Sanātana Dharma* (eternal law). Hinduism is sometimes regarded as the world's oldest religion and appears to have myriad origins and contributing influences, resulting in an enormous diversity of practices and beliefs within Hinduism (monotheism, polytheism, etc.). Many branches of Hinduism are characterized by belief in reincarnation and *karma* (laws of cause and effect) (Flood, 1996).

Although it is difficult to subdivide Hinduism into different schools, McDaniel (2007) describes six general types of Hinduism:

- (a) *Folk Hinduism*, rooted in local cults and traditions relating to deities at communal level;
- (b) *Vedic Hinduism*, which is practiced by *brahmins* (educators, lawmakers, and preachers in Hindu tradition);
- (c) *Vedantic Hinduism*, as based on the teachings or philosophies of the *Upanishads*, which are core Hindu scriptures (Mascaro, 2005);
- (d) *Yogic Hinduism*, which emphasizes particular physical and mental disciplines and practices, as outlined in, for example, the *Yoga-sūtra of Patañjali* (Feuerstein, 1992);
- (e) *Dharmic Hinduism*, based on the idea of *karma* and various traditional Hindu societal practices; and
- (f) *Bhakti*, which places particular emphasis on the involvement of the individual in devotion and divine worship.

Yogic Hinduism places a special emphasis on the practice of yoga, a collection of physical and mental disciplines which assist the individual in attaining states of physical and mental balance and unity. The roots of these practices are found in a wide variety of Hindu traditions and texts, including, for example, the *Yoga-sūtra of Patañjali* (Feuerstein, 1992). Yoga is both a form of meditation and a preparation for deeper contemplative practices (Brown & Gerbarg, 2009).

The practice of yoga can involve a range of observances, including abstaining from certain types of actions (e.g., violence and lying), observing certain qualities (e.g., purity and austerity), sitting in certain postures, using specific patterns of breathing and specific

patterns of focusing the senses and attention, contemplation, and the merging of consciousness with meditative objects (Feuerstein, 1992). Overall, there is much overlap between certain contemplative yoga practices and Buddhist meditation, reflecting the partially shared origins and courses of both traditions.

The practice of yoga has significant physiological and psychological effects. The physiological effects of yoga appear to stem from alterations in the parasympathetic drive, stress-response patterns, neuroendocrine system, and/or thalamic generators (Brown & Gerbarg, 2005a). There is also evidence that some of its physiological effects may be mediated by increased endogenous secretion of melatonin triggered by yogic practices (Harinath et al., 2004). In parallel with these neurophysiological findings, there have been suggestions that yoga may prove a useful complementary element in the management of various physical disorders, such as epilepsy (McElroy-Cox, 2009; Panebianco et al., 2017) and asthma (Pretorius, 2009; Yang et al., 2016), as well as having a potentially beneficial effect on longevity (Brown & Gerbarg, 2009; Bushell, 2009). More study is needed in all these areas before systematic recommendations can be made.

Yogic practices also have significant psychological effects (Dalai, 1991) including increases in mindfulness (Shelov et al., 2009). Consistent with this, there is growing evidence to support the usefulness of yoga as an adjunctive treatment for stress, depression, anxiety, posttraumatic stress disorder, and substance abuse (Brown & Gerbarg, 2005b, 2009; Cramer et al., 2013). In terms of depression, there is evidence that, at least in certain individuals, yoga may be superior to no treatment (Khumar et al., 1993); may be comparable with electroconvulsive therapy and imipramine (an antidepressant medication) in terms of remission rates (Janakiramaiah et al., 2000); and may have an adjunctive role for those who have benefited from anti-depressant medication but experience residual symptoms (Shapiro et al., 2007). Although further evidence is needed before treatment guidelines can be made for specific disorders, including depression and anxiety (Krisanaprakornkit et al., 2006), these remain very promising areas for further research (Nauphal et al., 2019).

Future years are likely to see continued increases in public interest in yoga in both Eastern and Western countries: in 1998, it was estimated that some 15 million American adults had already practiced yoga at some point in their lifetime, including 7.4 million during the previous year (Saper et al., 2004). This pattern of use is likely to continue and increase in the coming years, both in America and elsewhere (Corliss, 2001).

There is also likely to be continued interest in the integration of existing scientific knowledge of the physiology and psychology of yoga, linking psychological, neurological, and immunological research findings into coherent, unified models (Kulkarni & Bera, 2009). In the broader context, there is likely to be increased interest in the articulation of models of yoga and meditative practice that integrate neuroscientific findings with subjective experiences of yoga and meditation (Austin, 1999, 2006, 2016; Deshmukh, 2006), contributing to the emergence of a more unified, integrated

understanding of the subjective effects and objective biological correlates of yogic and contemplative practices.

Judaism

The practices and beliefs of Judaism originate in the Hebrew Bible and were further shaped by texts such as the *Talmud*. Judaism is one of the world's oldest monotheistic religions and is seen as an expression of the relationship between God and the Children of Israel. The practices and observances of Judaism include prayer several times daily, particular forms of dress, *Shabbat* (weekly day of rest), pilgrimage festivals, various dietary laws, and reading of scripture (Robinson, 2000).

There is a strong tradition of meditation and contemplative practice within Judaism (Davis, 2000). According to Judaism, Creation is God made manifest, and the purpose of life is to know God and transform the world through compassion and justice. Jewish scriptures provide myriad examples of meditative behavior, demonstrating that contemplative practice has constituted an important element within the broader practice of Judaism for many centuries (Shapiro, 2000).

More specifically, the Jewish mystical, meditative tradition, *Kabbalah*, is fundamentally based on esoteric teachings relating the finite world of humans with the infinite world of the Creator (Matt, 1996). Many of the practices associated with *Kabbalah* are centered on contemplation, including visualization of the soul's journey, in order to come closer to, and develop a deeper understanding of, the Divine. Contemporary Judaism also incorporates a number of different, related meditative practices (Davis, 2000) including *Hisbonenus* (understanding through analytic and reflective study, generally of the *Torah*) and *Hisbodedus* (unstructured, individualized meditation with the aim of creating an individualized relationship with God and clarifying one's own motives).

There is significant overlap between some of the aims of meditation in the traditions of Judaism and Buddhism. In the context of Judaism, for example, Shapiro (2000) writes that the purpose of meditation is to free the meditator from the idea of permanence and the illusion of separation, thus producing a state of calm that permits the meditator to respond constructively to the challenges and opportunities of life. One of the key differences between these traditions, however, relates to the centrality of God in Judaism, in significant contrast to Buddhism.

In comparative terms, there have been myriad explorations of the relationships between psychoanalysis and mysticism (e.g., Leavy, 2009), including *Kabbalah* (Berke, 1996). Using a more cognitive framework, Birnbaum (2005) examined the issue of adolescent aggression in Jewish-Israeli society and proposed guided mindfulness meditation as a useful approach for facilitating growth toward autonomy, self-awareness, and healing. Consistent with this, Ben-Arye et al. (2009) examined use of complementary and alternative therapies (yoga, meditation, guided imagery) in Israel and reported that women used

such therapies more frequently than men, and that Jewish women used such therapies more frequently than Arab women.

From a more neuroscientific perspective, Drubach and Claassen (2008) considered the apparent conflict raised by the Jewish and Christian belief that God is ever-present and the fact that the brain is not constantly aware of such a presence. The authors used neuroscientific theories of perception to propose an approach to this dilemma based on the idea of neuronal habituation, producing an apparent “unawareness” of God, even though He is ever-present. As in other spiritual traditions, future years are likely to see continued research and neuroscientific model-building focusing on the biological correlates not only of specific beliefs and belief systems but also of various spiritual practices within Judaism, including meditation and other forms of contemplative prayer (Glick, 2014).

Taoism

The word Tao (*Dao*) means “way” or “path.” Taoism (*Daoism*) refers to a group of spiritual and psychological traditions in East Asia, all of which place emphasis on nature, compassion, moderation, and humility (Oldstone-Moore, 2003). The key principles of Taoism include the Tao (*Dao*) itself; De (*Te*), which is active cultivation of the “Way” of virtue and integrity; Wu Wei, which means “doing without action”; and P’u, which means a state of receptiveness and readiness for Tao. Taoist philosophy has multiple spheres of influence including health and medicine, as well as architecture, politics, and martial arts.

The most influential text in Taoism is the Tao Te Ching (*Daodejing*) which was written by Lao Tzu in the 3rd or 4th century BC (Tzu & Mitchell, 1999). The Tao Te Ching is centered on the nature of Tao which, according to Taoism, transcends traditional concepts of form and categorization. As a consequence, the Tao Te Ching presents a series of thematically linked texts, with the overall aim of conveying the essential principles of Tao and guiding readers toward understanding the “Way.”

Taoist traditions include a range of meditative and contemplative practices (Cleary, 2000). Many of these techniques are centered on the breath because, in Taoism, breath is associated with Qi, which is the life force within each living being (Simpkins & Simpkins, 2009). Taoist practice aims to use breathing as a way to help internal energy flow better through the body, thus producing healing. The emphasis on breath as an element in meditation is similar to that in various Buddhist contemplative techniques, including Zazen.

Taoism sees emotions as a constantly changing flow, producing a dynamic balance between various emotions (e.g., happiness and sadness) (Simpkins & Simpkins, 2009). This conceptual approach provides a reason to experience the full range of emotions, but also a reason not to become excessively involved in one emotion or another: the flow of various emotions is constant. In some ways, this approach is analogous to the cultivation of mindfulness of emotions in Buddhist tradition; that is, noting the presence of emotions and possibly labeling them, but not engaging excessively with them as they pass and change (Brazier, 2003).

The principles and practices of Taoism have had significant influences on contemplative practices in other traditions, such as Buddhism, and many of the neuroscientific findings in relation to Buddhist meditation are likely to apply to analogous forms of Taoist practice (Lopez, 2008; Wallace, 2007). Taoism's particular emphasis on breathing is also the subject of neuroscientific attention (Squire et al., 2008) and is likely to form the focus of further, future research.

In terms of therapeutic applications, there is growing evidence of the use of Taoist practices, such as breathing techniques and meditative practices, in psychotherapeutic settings, especially in relation to stress reduction (Simpkins & Simpkins, 2009). More specifically, there is emerging evidence that the practice of Qigong, which uses controlled breathing and graceful movements to promote the circulation of Qi, may be associated with significant benefits in terms of positive mood, reduced anxiety, and enhanced pleasure, at least in certain individuals (Johansson & Hassmén, 2008). In addition, Qigong meditators show lower levels of neuroticism than nonmeditators, after controlling for gender, age, and education (Leung & Singhal, 2004). Future research is likely to also focus on potential roles for Qigong in fibromyalgia (Astin et al., 2003) and cancer recovery (Carlson et al., 2017).

Future Directions

Future years are likely to see a continued increase in public interest in meditation, monasticism (Draper, 2009), and yoga (Corliss, 2001) in both Eastern and Western countries. There is also likely to be increased interest in other contemplative traditions which were not considered in this chapter, including those with lengthy histories (e.g., Jainism) and more recent schools (e.g., New Age meditative practices). These trends are likely to continue in parallel with deepening interest in the ways in which various aspects of psychology interact with contemplative traditions, especially as contemplative practices (such as meditation and yoga) continue to grow in popularity. Conceptually, these developments can be considered in three broad, thematic categories: neuropsychology and contemplative traditions; clinical psychology and contemplative traditions; and new concepts, questions, and queries.

Conclusions

Most of the world's major religious and spiritual traditions incorporate elements of contemplative prayer or meditation, although the nature, prominence, and precise features of such practices vary between traditions. Overall, interest in contemplative practice and meditation is continuing to grow significantly in the Western world, both in the general population and among researchers interested in the neuroscientific and clinical effects of contemplative practice.

Recent years have seen an especially notable increase in research interest in the neuroscience of contemplative practices, especially Buddhist meditation. Findings to date

provide substantial scientific support for significant and enduring alterations in brain biology associated with meditation, with strong evidence of detectable alterations in brain activity associated with meditation. These biological changes appear linked with both the increased attention and alterations in experience of self associated with meditation.

These findings are complemented by emerging evidence of relationships between contemplative practice and positive psychological change, with studies suggesting that specific contemplative practices may benefit some individuals with depression, anxiety disorders, obsessive–compulsive disorder, substance misuse disorders, disordered eating patterns, disorders involving anger, emotional dysregulation syndromes, binge eating, suicidal behavior, and posttraumatic disorders. There has been particular clinical interest in the use of “mindfulness-based cognitive therapy” for depression, combining mindfulness-based techniques from Buddhist tradition with Western cognitive therapeutic approaches (Farb et al., 2018; Kuyken et al., 2016; Williams et al., 2007). Similar techniques may offer further benefits in relation to certain aspects of physical illnesses, including psychological care during cancer treatment, promotion of holistic health in HIV/AIDS, adjunctive care in chronic medical illness, and terminal health care.

While much of this research has focused on Buddhist traditions, there is increasing neuroscientific and clinical interest in contemplative practices from other spiritual traditions, including Christianity, Islam, Hinduism, Judaism, and Taoism. There is also growing evidence of increased dialogue between meditative traditions, and although important differences between traditions remain (e.g., the role of God in Christian and Jewish contemplative practice but not in Buddhism), there are also significant areas of commonality—for example, Christian sources describe the results of contemplative practice as including clearer perceptions of God’s true nature, the human soul, and laws of nature, and at least some of these descriptions have significant echoes of Buddhist writings on meditation.

The dialogue between Buddhist tradition and “Western” neuroscience has been especially interesting in recent decades (Lopez, 2008; Wallace, 2007) and has led to the emergence of the Mind and Life Institute, dedicated to the establishment of a working partnership and research collaboration between modern science and Buddhism (www.mindandlife.org). An analogous dialogue between Buddhist tradition and “Western” psychotherapeutic techniques has produced a long-standing relationship between Buddhism and psychoanalysis, and, more recently, integration of mindfulness techniques with existing forms of psychotherapy, including cognitive-behavioral therapy, dialectical behavioral therapy, and acceptance and commitment therapy.

Neuropsychology and Contemplative Traditions

In light of the enormous growth in neuroscientific interest in contemplative practice and brain function over past decades, it is likely that much future research in this area will remain focused on the detectable biological effects of meditation on the brain. Given that

studies to date have focused largely (although not exclusively) on Buddhist practice, there is a need for further study of meditative practices from other contemplative traditions (such as Christianity), in order to compare results across practices and traditions.

From a neuropsychological perspective, there is a strong need for greater integration of neuroscientific findings about mediation with subjective experiences of contemplative practices (Austin, 1999, 2006, 2016; Deshmukh, 2006). The blending of objective with subjective sources will contribute to the development of a more unified, integrated understanding of the psychological effects and biological correlates of meditation. This process may be hampered by Western science's traditional difficulty with the integration of "subjective" experience with "objective" measurement and scientific techniques. Overcoming these methodological tensions may represent one of the key contributions that neuropsychological research into contemplative practice will bring to Western neuropsychological research.

There is also likely to be significant value in exploring differences between individual spiritual "cognitive styles" and identifying ways in which different individuals respond to contemplative practices, and their related psychological consequences. The consequences of these differing cognitive styles are also likely to vary across spiritual traditions (Tapanya et al., 1997), pointing to a possible need for multilevel conceptual models that take into account cognitive style, contemplative practice, spiritual tradition, *and* personal factors related to psychological and spiritual activities. The development and interpretation of such models will present a unique and valuable challenge to Western psychology.

Future research work in this area could also usefully consider the role of culture in mediating or modulating expressions of psychological states related to, or induced by, contemplative practice (Castillo, 2003). At present, there is a notable paucity of systematic considerations of cultural factors in relation to contemplative practices, despite a relatively substantial literature relating to other aspects of cross-cultural psychology (Berry et al., 2002). Previous work in cross-cultural psychology has much to offer in this context, not least through its considerations of methodological issues such as the selection of valid control groups and study samples, attaining an optimal balance between "etic" approaches (from outside the system) and "emic" approaches (from within the system), and engaging in meaningful considerations of cultural "equivalence" (Berry et al., 2002; Kelly & Feeney, 2007).

Clinical Psychology and Contemplative Traditions

From the perspective of clinical psychology, therapeutic interest is likely to continue to focus on mindfulness in the context of existing forms of psychotherapy, including CBT, DBT, and ACT (Boseley, 2010). With psychotherapeutic and psychiatric practice increasingly emphasising evidence-based paradigms of care, there is a need for further randomized controlled clinical trials to quantify the effects of mindfulness and meditation-based techniques for specific psychological disorders and mental illnesses.

The evidence base to date is strongest for “mindfulness-based cognitive therapy” for depression (combining mindfulness-based techniques from Buddhist tradition with Western cognitive therapeutic approaches) (Farb et al., 2018; Kuyken et al., 2016; Williams et al., 2007). Similar approaches are now being applied in the contexts of anxiety disorders, emotional dysregulation syndromes, anger problems, binge eating, suicidal behavior, and the psychological effects of trauma (Mace, 2008). Further work is needed to clarify and consolidate the evidence bases for these interventions as forms of psychological therapy.

In terms of future research on mindfulness, Garland and Gaylord (2009) suggest four areas which they believe should feature on the research agenda: (a) performance-based measures of mindfulness; (b) scientific evaluation of Buddhist claims made about mindfulness; (c) the neurophenomenology of mindfulness; and (d) measuring changes in mindfulness-induced gene expression. Further work in these areas would build on much existing research on correlates of mindfulness (Greeson, 2009) and help integrate robust considerations of mindfulness with existing neuroscientific findings. There are already interesting hypotheses emerging in relation to mindfulness meditation and gene expression, although further work is needed (Black et al., 2019).

These considerations of the role of mindfulness within Western psychotherapeutic and neuroscientific paradigms are useful, important, and greatly to be welcomed. An exclusive focus on mindfulness to the exclusion of all else would, however, serve to obscure other aspects of contemplative practice which form key elements of most meditative traditions: Buddhist tradition, after all, accords substantial importance to the practice of meditation for *both* attainment of calm (*samatha*) and development of insight (*vipassanā*). While the existing scientific and psychological literature shows considerable evidence of benefits from attention, concentration, relaxation, and stress reduction, the issue of insight has been generally ignored in the integration of contemplative traditions into psychological therapies.

This relative neglect of the issue of insight in psychological considerations of contemplative practice stems chiefly from the West’s strong tendency to separate psychological from spiritual practice. Many Eastern traditions (e.g., Buddhism) do not observe a robust division between psychological and spiritual matters. This makes a great deal of sense when one considers that an individual’s psychological and spiritual beliefs and practices reside within the same brain, at the same time and in the same sociocultural context as each other.

On this basis, the West’s division between psychological and spiritual matters is, largely, a line drawn in the sand and which, as a result, can be altered or removed as circumstances require. In this context, the unfolding encounter between Eastern contemplative traditions and Western psychology offers an important opportunity to reexamine the relationship between spirituality and psychology in the West, and refocus attention on the point of ultimate convergence for both spirituality and psychology: the individual human mind.

New Concepts, Questions, and Queries

The meeting of any two substantial traditions, or families of traditions, is a complicated, challenging, and exciting process. The emerging relationship between the family of (chiefly) “non-Western” contemplative traditions and the family of (chiefly) “Western” psychological traditions fits this paradigm perfectly, in all of its complexity, confusion, and excitement.

This meeting of traditions presents specific opportunities for established subdisciplines within “Western” psychological thought and practice, such as neuropsychology and clinical psychology (see above). The overarching merit of such meetings of traditions, however, lies in the issues and challenges raised by one tradition for which the other tradition *has no category or language*. This element of the encounter between “Western” psychological traditions and “non-Western” contemplative traditions will probably produce the most exciting immediate challenges and the most lasting intellectual and cultural legacies to result from this encounter.

The tension between private and public paths to truth provides the clearest example of this to date. In Buddhist tradition, the path to truth lies in subjective or *private* exploration, through individual contemplative practice: even though practice may commonly occur in group settings, it is the *individual* who must meditate, contemplate, and achieve their own spiritual progress. In “Western” tradition, by contrast, the search for truth is conceived as a very public affair, involving open access to step-by-step methodologies, transparent scientific experimentation, and public articulation of results (in journals, newspapers, other media)—results upon which others may build. This is in stark contrast with Buddhism’s requirement that each individual travels the journey for themselves. What does this contrast mean for the current meeting of Western and Eastern traditions, and what does psychology have to offer in this arena?

Psychological research has, traditionally, aimed to document, codify, and analyze individual psychological behavior in a scientific fashion and has not endorsed individual psychological practice as the path to truth to anything like the extent that Buddhism does. Consistent with this “Western” psychological approach, Christian contemplative traditions retain a focus on a predetermined outcome to individual contemplative practice (deeper realization of God) and, when compared to Buddhist tradition, place much less emphasis on the insight-revealing merits of the individual contemplative path.

Despite these differences in approach, or possibly *because* of them, psychology offers the most appropriate and adaptable arena in which contemplative practices can integrate and interact with Western psychological and spiritual traditions. Some methodological adaption may, however, be required. It is, for example, immediately apparent that Western psychology’s division into subdisciplines (neuropsychology, cognitive psychology, clinical psychology, cross-cultural psychology, etc.), while offering a reassuring framework for the overwhelmed, does not lend itself readily to the

holistic consideration of the possibilities opened up by contemplative traditions: most contemplative traditions conceptualize the brain as a single, unified entity, integrating not only various psychological subdisciplines but also spirituality into a single, holistic model of mind.

These tensions between approaches are greatly to be welcomed: dividing psychology into subdisciplines may serve specific purposes for researchers and teachers, but may also distract from the ontological unity of the individual, living brain, which, after all, constitutes the ultimate root of *all* psychology. Committed, integrated psychological considerations of contemplative traditions can help restore a sense of balance by refocusing attention on the holistic experience of the individual mind, and placing this in the broader context of its spiritual, cultural, *and* scientific settings.

Cross-cultural psychology, as conceptualized in Western traditions, also has much to offer to various schools of contemplative practice as part of these integrative, interpretative, and adaptive processes. The introduction of Buddhism to the United States, for example, has (arguably) resulted in the emergence of a distinct “Western” school of contemplative Buddhism (Gopnik, 2017; Kelly, 2017). This adaptation of Buddhism to a new geographical *context* has political, cultural, spiritual, and even economic dimensions. But the most compelling way in which to approach this matter, at least initially, is through the prism of cross-cultural psychology (Berry et al., 2002), starting with an examination of the extent to which existing concepts and tools within cross-cultural psychology are appropriate to the systematic exploration of complex spiritual and cultural phenomena such as the integration of meditation into a new cultural and political context. At present, this area of research is a largely untilled field; the opportunities are at once substantial, challenging, and exciting.

There is, however, a need for caution. Given recent enthusiasm in relation to the neuroscience of meditation, and ongoing research into its clinical effects, it is useful for researchers to reflect upon the purpose of such cross-sectoral research, which is, surely, neither to “prove” that any given spiritual practice is “scientifically valid” nor to provide “spiritual justification” for specific forms of neuroscientific or clinical activity. The purpose of these cross-sectoral dialogues is, rather, to enrich endeavors in both fields and, ideally, move toward a meaningful integration of objective and subjective forms of knowledge in relation to meditation. Although there may be certain limits to which these goals can be achieved (Ernst, 1998), there clearly remains substantial potential for further research and ongoing dialogue aimed at developing a deeper, more integrated understanding of the spiritual, psychological, and biological effects of contemplative practice for the benefit of all.

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Translation of Eastern Meditative Disciplines into Western Psychotherapy

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Abstract

This chapter describes the history and influence of Buddhist meditative disciplines in Western psychotherapy. We begin with an overview of Buddhist traditions and a brief discussion of some of the foundational tenets of Buddhist psychology. The dialogue between Buddhism and psychotherapy from the early 1900s to the present is traced to gain insights into the transformation from meditation as a spiritual discipline to mindfulness as a secular psychotherapy. Four of the most widely studied and practiced mindfulness-oriented psychotherapies are described: mindfulness-based stress reduction, mindfulness-based cognitive therapy, dialectic behavioral therapy, and acceptance and commitment therapy. The chapter ends with an invitation to consider the role of compassion as a reciprocal influence connecting the spiritual practice of meditation to mindfulness as a clinical intervention. What benefits might be realized by reevaluating the therapeutic secularization of these ancient and profound spiritual practices? We consider the desirability, form, and likelihood of a possible reintegration.

Key Words: Buddhism, religion, spirituality, meditation, mindfulness, psychology, psychotherapy

Introduction

*I have discovered a nectar-like truth,
Deep, calm, and simple, lucidly awake and unformed.
Whomever I explain it to, no one will understand;
So I will remain silent in the jungle.*

—Buddha Shakyamuni (in Schmidt & Tweed, 2003, p. 17)

Although meditative practices associated with many Eastern spiritual traditions are present in the rapidly expanding Western psychological and psychotherapeutic discourse, we do not have sufficient space here to discuss the subtle and complex relationships of all of them. Thus, we have chosen to discuss what we know best: Buddhism and Buddhist contemplative practices. From the jungle temples of Southeast Asia, Himalayan meditation

caves, and incense-shrouded monasteries of Japan and China, Buddhist spiritual and contemplative practices have migrated into the laboratories and consulting rooms of Western research scientists and clinicians. Therapies that include meditative components have now been shown to be effective in treating psychological and psychiatric disorders (Chiesa & Serretti, 2011; Goldberg et al., 2018; Hedman-Lagerlöf et al., 2018; Hilton, Maher, et al., 2017; Hofmann et al., 2010; Lenz et al., 2016; Li et al., 2017). Meditation has become an accepted part of contemporary psychotherapy, psychiatry, behavioral health, and psychosomatic medicine. Exploring the historical relationship between Buddhist meditative disciplines and psychotherapy will help us understand how and why contemplative practices entered the armamentarium of Western psychotherapists.

We have organized this chapter in three sections. First, is an overview of Buddhism and Buddhist meditation practices, tracing the path of how this esoteric Eastern spiritual practice came to dialog with and influence Western psychotherapeutic thinking. Second, we review the evolution of contemporary meditation research and practice, including recent research, the current state of mindfulness in psychotherapy, and clinical applications of four mindfulness-oriented therapies. Third, we consider possible futures for spiritually informed therapies, and in particular, how Buddhist contemplative disciplines may influence research and clinical practice. We close by exploring several philosophical questions concerning the broader relationship between these curious bedfellows.

Buddhism: A Uniquely Adaptable Tradition

Buddhism has migrated around the world from its original home in Northern India. As it did so, it adopted many cultural nuances and rituals from indigenous religions. These migrations have produced two major Buddhist schools and hundreds of smaller sects and teaching lineages. The first major school is *Theravāda* Buddhism, sometimes called the Path of the Elders. Practiced primarily in Sri Lanka, Myanmar (Burma), Laos, Vietnam, and Thailand, this tradition emphasizes *vipassana*,¹ or insight meditation. Vipassana practices are believed to cultivate mindfulness and insight into the nature of reality. The Theravāda school represents itself as being closest to the original teachings and practices of the historical Buddha (Thanissaro Bhikkhu, 1996). The second school, *Mahayana* Buddhism, is based on *bodhicitta*, which is the wish to achieve enlightenment not purely for oneself but for the sake of all sentient beings. Mahayana has further divided to become *Zen* Buddhism and *Vajrayāna* Buddhism. Zen Buddhism originated in China and then migrated to Vietnam, Korea, and Japan. This is the tradition that may be most familiar to many Westerners. Zen emphasizes gaining wisdom through experience rather than knowledge based on theoretical or intellectual understandings. Zen students practice *zazen* (“just sitting”), a concentrative breath meditation, and *shikantaza* (“wholehearted sitting”), a form of insight meditation. Zen practices also include *kōans*, which are short teaching stories or sentences that initially seem paradoxical. Kōans are intended to radically alter perceptions of reality by thwarting the student’s attempts to comprehend that

which cannot logically be comprehended (S. Suzuki, 1970). *Vajrayāna* Buddhism developed in Tibet and is practiced in Nepal, Bhutan, northern India, and parts of China. Most consider *Vajrayāna* to be a branch of Mahayana Buddhism, but some view it as a separate school (Kitagawa, 2002). Tibetan practices encompass a number of complex, multifaceted contemplative techniques that range from simple breathing exercises to elaborate, tantric visualization rituals (sGam.Po.Pa, 1986). Some are devotional practices not typically applied in secular contexts (e.g., *guru yoga*).

Is Buddhism a Religion or a Method?

Buddhism may be unique among major spiritual traditions, as it generally eschews monotheism or other deific beliefs. Literally translated, the word “buddha” simply means “one who is awake.” Siddhārtha Gautama (who later became Shakyamuni Buddha) is considered the founder of Buddhism. Gautama was born in Lumbini around 400 BCE (Cousins, 1996) near the Himalayas in modern-day Nepal (Schmidt & Tweed, 2003). The Buddha’s boundless compassion for all beings would not allow him to teach anything less than what he saw as the ultimate truth about reality (Thurman, 1995). Thus, he refused to offer a religious solution to the human condition (suffering, illness, old age, and death), including belief in himself or others as deities or promoting unconditional acceptance of any dogma without personal exploration of the truth of his teachings.

Batchelor (1997) suggested that the Buddha was not a mystic, and his awakening was not meant to be interpreted as some privileged or esoteric insight into the nature of the universe. Batchelor maintains that the increasingly ritualized, religious practices of Buddhism have been responsible for imputing such claims to Shakyamuni Buddha’s insights, while the only claim Shakyamuni made about himself was that he had “freed his heart and mind from the compulsions of craving.” The Buddha called this “the taste of the *dharma*” (Batchelor, 1997, p. xi). *Dharma* (or *dhmma* in Pali) usually refers to the Buddhist teachings, but it may also mean those aspects of reality and experience with which those teachings are concerned. A similar position is held by His Holiness the 17th Gyalwa Karmapa, Trinlay Thaye Dorje (as cited in Thurman, 1995). As spiritual leader of the Kagyu lineage of Tibetan Buddhism, the Karmapa maintains that Buddhism should be viewed simply as a method, rather than as a religion or philosophy. He commented that Buddhism as a method was designed to simply and directly connect us to our true essence so that we might see through confusion and see with clarity the existence of *samsara* (Pellarin et al., 2003).

On Suffering and the End of Suffering

Before we continue, understanding what Trinlay Thaye Dorje meant by *samsara* may help explain the affinity between psychotherapy and the meditative disciplines. *Samsara* is defined as being the “cyclic existence” of birth, death, and rebirth that is espoused in Buddhism (Schmidt, 1999, p. 180). *Samsara* is synonymous with the state of ordinary

human existence, characterized by *dukkha*, which is generally translated to mean suffering but includes all forms of dissatisfaction, including discomfort, dis-ease, and uncomfortable or unwanted emotions. Dukkha arises from the desire to cling to objects or experiences that are unattainable or impermanent, and the desire to push away things that are unpleasant or unwanted.

The Affinity Between Buddhism and Psychotherapy

Interest in suffering and the ending of suffering provides one point of intersection between Buddhism and psychotherapy. Although Western psychologists maintain boundaries between psychotherapy and spiritual practice, the desire shared by spiritual teachers and psychotherapists to relieve suffering may partly explain the interest in exploring their synergies. Alan Watts (1961) suggested a reframing of Buddhism by observing, “If we look deeply into such ways of life as Buddhism and Taoism, Vedanta and Yoga, we do not find either philosophy or religion as these are understood in the West. We find something more nearly resembling psychotherapy” (p. 3). Watts noted that “the main resemblance between Eastern ways of life and Western psychotherapy is in the concern of both with bringing about changes of consciousness, changes in our ways of feeling our own existence and our relation to human society and the natural world” (pp. 3–4). Some practices associated with the Theravāda, Zen, and Vajrayāna traditions of Buddhism have long been of interest to Western scientists and psychotherapists.

Notwithstanding their many dissimilarities, all Buddhist schools were founded on an anthology of scriptures known as the *Tripitika* (literally meaning three baskets). The first “basket” is the *Vinaya*, which is the disciplinary code of conduct for monks. Second is the *Pali Canon*, which contains the collected discourses (*suttas* in Pali; *sutras* in Sanskrit) of the Buddha. The third, and most relevant to this discussion, is the *Abhidhamma*, which contains the more abstruse scriptures that deal with philosophy, metaphysics, and psychology (Bhikkhu Bodhi, 1993). The *Abhidhamma* might be considered the world’s first psychology textbook. It is a scholarly text that thoroughly describes attributes of the mind, consciousness, and mental states. The *Abhidhamma* discusses how to attain and stabilize mental states that are helpful, while dispelling those that are destructive or harmful. Goleman (1972a) suggested that the *Abhidhamma* is perhaps the broadest and most encyclopedic treatment of higher states of consciousness in existence. The *Abhidhamma* is the principal source of Buddhism’s psychology of mind and is referenced often in contemporary meditation research literature. The wealth of scholarly psychological insights found in the *Abhidhamma* makes Buddhist ideology particularly suited to engagement with Western scientists.

Tension Between the Secular and the Religious

For more than 500 million people around the world, Buddhism is more than a practical method to achieve happiness; it is an ancient and venerated spiritual path. With its

long oral and written traditions, Buddhism is contemplative and rich in mysticism and prophecies. While the focus of this chapter is primarily secular, two predictions attributed to Padmasambhava (a revered 8th-century Tibetan sage) frame an interesting tension for modern practitioners who seek to explore the intersection of body, mind, and spirit using Buddhist spiritual practices in clinical settings.

A Prophet and His Prophecies

Oral traditions have traced the teachings of Padmasambhava in a direct lineage from teacher to teacher up to the present day. Padmasambhava allegedly made this prediction: “When the iron bird flies, and horses run on wheels, the Tibetan people will be scattered like ants across the World, and the Dharma will come to the land of the red-faced people” (Das, 1997, p. 23). In writing about the dharma’s ability to transcend temporal and cultural constraints, Goldstein (2002) suggested that Padmasambhava was foretelling both the invasion of Tibet by China and the emergence of Buddhism in the West. Goldstein holds that Buddhism has retained the integrity of its core principles while expanding far beyond its cultural origins. These principles include meditative techniques, the expression of compassion, and the perfection of wisdom that identifies both the causes of suffering and the means to end it.

In another prophesy that is directly relevant to contemporary ways of teaching mindfulness in psychotherapy, Padmasambhava was believed to have cautioned against the teaching of these profound practices for the liberation of suffering by those who have not received proper permission from the lineage holders of that tradition. He specifically warned against the use of meditation as a way to help others by those who were not themselves accomplished practitioners:

In the future, when the dark age of degeneration arrives, some people who claim to be practitioners will desire to teach others without having received permission. Without having practiced themselves, they will instruct others in meditation. Without being liberated themselves, they will pretend to give instructions for liberation. Without being devoid of self-interest, they will instruct others to cast away their fetters of attachment and be generous. (Schmidt, 1999, p. 150)

Holding this cautionary statement in mind, let us look back to when the Buddha’s teachings first began to influence Western psychology.

Tracing a Lineage of Increasing Influence

For more than one hundred years, psychiatrists, psychologists, and others in the field of mental health have been drawn to explore Buddhist ideas about the mind and ways of perceiving the world. Perhaps because these concepts are markedly different than in Western psychology, some have been dismissive of the teachings, some have embraced

them wholeheartedly, and some have misunderstood or misinterpreted them. We'll now outline some of the ways that Buddhist thinking has danced with Western psychology from 1900 to the present.

Buddhism and Psychotherapy: 1900–1950

William James was an early proponent of Buddhism as a psychology. When the Buddhist monk Dharmapāla attended one of James's lectures at Harvard, James is quoted as saying to him, "Take my chair. You are better equipped to lecture on psychology than I." Following one of Dharmapāla's own lectures, James declared, "This is the psychology everybody will be studying twenty-five years from now" (as cited in Scott, 2000, p. 335). Although feeling that Buddhism was a generally pessimistic psychology, in *Varieties of Religious Experience* (1902/1990) James strongly endorsed the functional value of meditation.

In the early 1900s, the Freudian psychoanalytic tradition began an ongoing dialogue with Buddhism. Although Freud (1927) himself quickly dismissed belief in all religions as a form of psychosis, some of his followers disagreed. Sun (1924) compared Buddhist teachings with tenets of psychoanalysis and found some philosophical confluence. In particular, he noted the similarity between consciousness as an "endopsychic organ" and the Buddhist quality of *mano*, which is loosely considered to be consciousness that is aware of the self. Sun also found similarities in the psychoanalytic view of unconscious neurotic suffering and the Buddhist conception of *dukkha*. Both could only be mastered by substituting conscious insight for unconscious phantasy (p. 41). He felt that Buddhism and psychoanalysis were similarly dedicated to the arising of wisdom to replace the "evils of illusion" (p. 40). Sun noted that Freudian and Buddhist teachings on the subject of determinism were similar, citing the first line of the *Dhammapada*,² which says, "All that we are, is the result of what we have thought; it is founded on our thoughts, it is made up of our thoughts" (p. 40), and then comparing this with Freud's comment, "We are what we are because we have been what we have been. And what is needed to solve the problem of human life is not moral estimates, but more knowledge" (p. 40).

Psychoanalyst Franz Alexander (1931) was rather less charitable in his analysis of Buddhism, calling its theoretical framework and practices "nihilistic" (p. 132). He believed that Buddhist meditation practices would trigger a reversal of normal psychological development to an infantile, narcissistic state. According to Alexander, meditative training was purely an egocentric and regressive exercise. He wrote, "It is clear that Buddhist self-absorption is a libidinal, narcissistic turning of the urge for knowing inward, a sort of artificial schizophrenia with complete withdrawal of libidinal interest from the outside world" (p. 130). Alexander also surmised that meditative practices resulted in a psychological state of "emotionlessness." He first erroneously conflated emotionlessness with *nirvāna*, which he perceived as being similar to the condition of a fetus in the womb—an "oceanic feeling" akin to an artificial catatonia. In stark contrast to Alexander's understanding,

some Buddhist scholars consider nirvāna to be a state of awareness that is beyond discursive thought and free from desires, hatred, ignorance, and suffering (Evans-Wentz, 1968). Although later moderating his extreme position, Alexander further suggested that the major difference between Buddhism and psychoanalysis was that Buddhism denies reality while analysis seeks to help one try to adjust to it.

Carl Jung relished being a psychological interpreter of Buddhism. He expanded the dialogue with Buddhism beyond Freudian psychoanalysis when he published the foreword to D. T. Suzuki's *Introduction to Zen Buddhism* (Jung, 1939/1968a, pp. 540–541), where he expressed his awareness of the significance of Buddhist practices but criticized early efforts to invoke Western psychology to gain understandings of spiritual enlightenment or *satori*. Although Jung understood the fascination of Western audiences for esoteric Zen practices, he also maintained that the Western mind was utterly incapable of grasping such ineffable mysteries as enlightenment. In a seemingly contradictory statement, Jung then noted that the very fact of Buddhism's existence for 25 centuries, during which “many brilliant minds have worked . . . is sufficient reason for at least venturing a serious attempt to bring such processes within the realm of scientific understanding” (p. 544). He concluded that psychotherapy was the only Western discipline that could gain some understanding of the quest for *satori* (p. 553).

Jung (1943/1968b) continued to explore the differences between East and West, astutely noting that Europeans had produced a “medical psychology dealing specifically with the *kleshas*” (p. 572) or the core defilements of the mind³ that Buddhism proposes to overcome. The difference, Jung felt, between the tortured psyche of Western therapy patients and the psyche of Buddhist practitioners was that psychoanalysis was entangled in the problem of the shadow and its influence on consciousness, while Buddhist practitioners were comfortably acquainted with the shadow in the form of the *kleshas*. “The spirit of India grows out of nature; with us, spirit is opposed to nature” (p. 572). Psychotherapists typically spend more time attending to psychopathology than they do cultivating the natural spirit of humanity in their patients and limited vision may constrain our goals. Freud (1895/2000) suggested that maximum therapeutic effectiveness could be achieved “if we succeed in transforming [*our client's*] neurotic misery into common unhappiness” (p. 305). A Buddhist psychotherapist would settle for no less than the complete end to all suffering for all sentient beings.

Buddhism and Psychotherapy: 1950–1960

The psychoanalytic dialogue during the 1950s continued to explore primarily Zen theory and practices. Stunkard (1951) identified the way in which Zen masters interacted with their students as having a particular connection with psychoanalysis. He saw similarities in the need to maintain a careful balance between “encouragement necessary to maintain the subject's participation, and the frustration required for his continued self-examination” (p. 424). Stunkard, however, advocated for a child-like reliance upon a parent-like teacher,

and by analog, the psychoanalyst, which seems more attuned to the devotional practices of Vajrayāna than to Zen.

Rather than calling on the West to adopt Eastern ways of being, Sato (1957) called upon Western science to help Zen Buddhism to free itself from rigidity, emphasizing psychotherapy as a key contributor to this change. Sato found that Zen and psychoanalysis had both recognized the importance of attention to intrapsychic experiences occurring in the present moment. He also found parallels in his understanding of the Buddhist concept of “no-mind” and analytic free association. Sato’s ideas are consistent with modern thinking in one important area. He identified a clear difference between Zen, which emphasizes the importance of intuition and attending to discrete experiences, and Western psychology, which has a propensity to label, categorize, and judge phenomena.

Not limited to theoretical psychological discourse, Zen began to inform specific psychotherapy interventions. For example, *Morita therapy* is a Japanese protocol developed by Japanese psychiatrist Shoma Morita (Rhyner, 1988). Originally, Zen did not directly influence Morita; however, his thinking later “converged to the Zen mode of thought” (Kora & Sato, 1957, p. 219). The initial therapy was subsequently refined by some of Morita’s students, one of whom was a former Zen monk. Developed to help patients suffering from neurasthenia,⁴ one aim of Morita therapy was to help the patient stop struggling against or fleeing from reality. Similar to contemporary mindfulness-based approaches, the patient was encouraged to “accept the sufferings and worries just as they are,” becoming “open-minded,” and avoiding any kind of “repulsive tendency” toward the self or one’s experiences (p. 221).

Kondo (1958) explored Zen *shikantaza* meditation as a therapeutic intervention. He noted that initially, his patients found the practice almost unbearable—at times feeling that it was intensifying their suffering. Kondo explained this as the experience of having normal patterns of “scattering their energy” blocked, leaving the patient nowhere to go but inward. The inward movement resulted in a juggling of ideas and fantasies, again to avoid directly facing the causes of suffering. Nonetheless, Kondo encouraged his patients to keep “just sitting.” Eventually, they described experiences of increased energy and vitality. One patient was reported to say, “When I sit, I feel I am rooted and full of sap, where before I felt helplessly buffeted by every emotional wind or storm” (p. 63). Kondo defined these experiences as knowing the “real self” and believed that experiential understanding was equally important in psychoanalysis and Zen meditation.

The concept of a “real self” was central to the theories of neo-Freudian feminist psychoanalyst Karen Horney. She too expressed an affinity for Zen, although developing the interest only near the end of her life. Horney was particularly interested in the work of D. T. Suzuki, citing him in her writings as early as 1945, but not meeting him until the early 1950s (Morvay, 1999). She also approached Kondo to explore incorporating the Zen practice of “just sitting” into psychotherapy as a way of cultivating the “real self.” Horney delighted in the fact that Zen could provide her with something she had hitherto been

unable to find—a means to verify the existence of the “real self” (Morvay, 1999, p. 28). Traveling to Japan to study with Suzuki and Kondo deepened Horney’s understanding of Zen. She came to understand that good therapy required a certain quality of presence of mind in the therapist that she defined as being “wholehearted.” To Horney, that wholeheartedness had begun to seem much like the results of Zen meditation practice. She eventually concluded that wholeheartedness required the therapist to become “fully present in the moment through a kind of forgetting of the self,” thereby freeing herself to “be there with an unlimited receptivity to impressions, feelings, etc.” (Morvay, 1999, p. 29).

The humanistic psychoanalyst Erich Fromm was also interested in the work of Zen master D. T. Suzuki. Fromm began his exploration of relationships between Buddhism and psychoanalysis with an acknowledgment of the gulf that lies between them. He admitted that his interest in Zen arose in response to the sense of spiritual crisis he felt in many of his patients. He framed the spiritual pain in decidedly existential terms as a “deadening of life” and the “alienation [of man] from himself, from his fellow man and from nature” (Fromm, Suzuki, & De Martino, 1960, pp. 78–79). In 1957, Fromm invited Suzuki and Richard De Martino to collaborate in a series of talks in Cuernavaca, Mexico, which resulted in the seminal book, *Zen Buddhism and Psychoanalysis* (Fromm et al., 1960). In the book’s foreword, Fromm noted that a couple of decades earlier, it would have been inconceivable to find that high level of interest among his colleagues in such an esoteric tradition as Zen, adding that Dr. Suzuki had “stimulated, inspired, and refreshed” all those in attendance. Fromm attributed this positive reception to the development of psychoanalytic theory, changes in the intellectual and spiritual climate of the West, and the popularity and accessibility of Suzuki’s writing to Western therapists. Suzuki was careful to state that Zen did not stand in opposition to science, but he did suggest that Zen might inform Western scientists, noting that the Western approach to reality may not be the only one worthy of consideration. Fromm held that Buddhism was superior to Western religions in its use of rationality and realism. In Zen practices, Fromm saw promise for a resolution of the existential suffering that the psychoanalyst alone could not resolve for his patients.

Buddhism and Psychotherapy: 1960–1980

Increasing interest in Zen among psychoanalysts invited sharp criticisms from philosopher Ernest Becker (1960). He cautioned that uncritically accepting Stunkard’s (1951) relating the Zen master’s relationship to his student to the relationship between the analyst and analysand would open up Western psychotherapy to coercion rather than healing. Becker (1961a) felt that Zen teachers (and by analogy, like-minded psychoanalysts) were essentially engaged in a surreptitious process of converting students to their own perspectives. On the whole, he experienced Zen as an irreconcilable dichotomous paradox, with “poignant esthetic musings about man and nature” struggling against a “blatant denial of life” (Becker, 1961b, p. 13).

Despite Becker's harsh critique, the East–West dialog continued. In Japan, Kishimoto (1962) wrote about an integrative *self-awakening therapy* that blended Eastern philosophical traditions with Fromm's humanistic psychoanalysis, Horney's self-realization theory, and Frankl's existential psychology. According to Kishimoto, the well-being of the body and soul must be improved using Zen meditation and kōan practice as a method of catechesis, by which the mind's conflicts might be “scraped off” (p. 431). For Kishimoto, Zen was less about treating neurosis than it was about finding well-being by forging a sense of unity with the world. Self-awakening therapy was a stepwise process. At the outset, the client would engage in a free-association-like talk therapy in an attempt to establish the desired sense of unity with the world. If unsuccessful, then the client was directed to meditate three to five times daily, combining deep breathing and kōan practices. Once the desired sense of unity with the world was attained, then the client would join a like-minded group, share his or her suffering, and encourage other suffering people to support one another until all were freed from neurotic suffering (Kishimoto, 1962).

Maupin (1962) noted the important connection between meditative practice and the therapeutic benefits of relaxation by drawing similarities between *zazen*, autogenic training (Schultz & Luthe, 1959), and progressive muscle relaxation (Jacobson, 1938). Like Kishimoto (1962), Maupin sought to understand how Zen helped patients cultivate a new relationship with the world. He saw the Zen concept of *satori* as being a way of experiencing oneself and the world as a unified whole, and he felt this was a point of interest for psychotherapy. He contrasted *satori* to the experience of a separate, neurotic, and conceptual self. Whereas the latter is held to be something stable, objective, and in need of defense, the *satori* experience sees through this illusion to “the real self, the true author of one's behavior, which at the same time is a part of the whole flux of the universe” (Maupin, 1962, pp. 363–364).

Sutherland (1966) similarly speculated about the conjunction of Eastern spirituality and Western psychotherapy in a nondualistic paradigm. He wrote about the Eastern way of experiencing the world, not as a collection of separate objects and separate subjects but rather as “a great organic action,” with all apparent divisions being the consequence of artificial constructions that served “ease in communication and not inherently the nature of reality itself” (p. 10). Sutherland tied his ideas directly to Western psychotherapy by promoting an emphasis on here-and-now experiences and a radical acceptance of suffering and joy alike, with “faith in an order beyond technology and world politics, beyond anything the mind can grasp” (p. 12). This radical opening to the present moment was to be cultivated through meditation and the asking of unanswerable questions that might “lead to new ways of knowing” (p. 12). Practiced in this way, Sutherland proposed, psychotherapy might perceive the psychopathology in the individual person as being important, but it would also see and value “the eternal,” thus allowing meaning to stretch beyond the limits of the bounded, individual self in order to touch the realm of spirit, soul, and God.

In some ways, Sutherland seemed to make little differentiation between spiritual practices and psychotherapy.

Koji Sato (1968) took a more pragmatic approach that mirrors more closely the secular clinical versions of mindfulness practiced today. He chose sitting meditation as being a “psychophysiological adjustment” (p. 8) equivalent to other Eastern practices observed over centuries to have positive impacts upon physical and emotional health. He reported these beneficial effects as ranging from raising vital, sexual energy, to curing chronic psychosomatic illnesses, kidney and heart disease, gynecological problems, and high blood pressure. According to Sato, psychophysiological adjustment was but one of the 10 virtues that Zen practitioners could expect to cultivate, the 10 virtues covering every aspect of human existence in mind, body, and spirit.

Sato’s integration of mind, body, and spirit in Zen as a therapeutic intervention coincided with the birth of a new paradigm in psychology known as the “fourth force.” Transpersonal psychology initially developed out of the human potential movement. In a talk given at the Esalen Institute in 1967, Abraham Maslow (1971) eloquently defined this emergent discipline as a psychology that might study “that which motivates, gratifies and activates the fortunate, developed self-actualizing person” (pp. 3–4). Lajoie and Shapiro (1992) later recognized the evolution of this new paradigm and the shift away from its human potential movement roots, by expanding their definition of transpersonal psychology to include “humanity’s highest potential, with the recognition, understanding, and realization of unitive, spiritual, and transcendent experiences” (p. 91).

Ram Dass, a former Harvard University professor turned spiritual teacher, provides one example that exemplifies the paradigm shift that began in the 1960s. During this period, meditation research briefly moved away from strictly academic scholarship and toward experiential scholarship that was integrated with personal spiritual practices. As a Western scholar and a meditation practitioner, Dass embarked on a lifelong trajectory aimed at unifying body, mind, and spirit into a singular psychology—but not purely for the sake of science. His intent was to do this while advancing his own spiritual path. He preferred not to pursue these aims in a Himalayan cave but rather “in New York City in the United States with television and loving people around and great cooks and advertising and total support for all of the attachments” (Dass, 1970, p. 92). This, Dass said, was his own personal *sadhana*, or spiritual journey.

Other academic psychologists (e.g., Jack Kornfield, Daniel P. Brown, Richard J. Davidson, John D. Teasdale, and Alan C. Marlatt) and psychiatrists (e.g., Deane H. Shapiro, Jr., Roger N. Walsh, and a few years later, Mark Epstein) adopted a similar path that, in the world of transpersonal psychology, changed what it meant to be a scholar-practitioner. Philosopher Alan Watts (1961) was another voice that encouraged East and West to influence one another, discussing the complementary aims of meditative practices and psychotherapy, in terms of both “being a transformation of consciousness, of the

inner feeling of one's own existence; and . . . the release of the individual from forms of conditioning imposed upon him" (p. 18).

Beginning in the 1970s, another scholar-practitioner, Daniel Goleman, wrote extensively about meditation and meditation research (notable works include Goleman, 1972a, 1972b, 1981, 1988). Goleman's (1971) concept of meditation as a "meta-therapy" may best describe the harmony between spirituality and psychotherapy that was sought by transpersonal therapists. Goleman defined meta-therapy as "a procedure that accomplishes the major goals of conventional therapy and yet has as its end-state a change far beyond the scope of therapies... an altered state of consciousness" (p. 4). Goleman then gradually moved away from meditation research as he extended his work on emotional intelligence to a more general audience (Goleman, 1995).

In 1977, the American Psychiatric Association released a position statement that called for a critical examination of the clinical effectiveness of meditation practices: "The association strongly recommends that research be undertaken in the form of well-controlled studies to evaluate the possible specific usefulness, indications, contraindications, and dangers of meditative techniques" (p. 720).

The APA task force suggested that meditative practices might reduce the need for psychotropic medications and facilitate psychotherapy. With the endorsement of this respectable and conservative mental health organization, the stage was set for a new wave of scientific study and the further secularization of these profound practices into Western research laboratories and clinical settings.

Many of the meditation studies conducted during this period measured physiological responses such as heart rate and oxygen consumption (Benson, 1975; Benson et al., 1974), blood pressure (Seer & Raeburn, 1980), and electroencephalogram (EEG) alpha rhythms (Davidson et al., 1976). Findings from many systematic investigations made it clear that meditation practices affect a variety of hypometabolic responses and reduce cortical arousal (Woolfolk, 1975). West (1980) suggested that the practice of meditation reduces arousal and increases relaxation for four reasons: (a) the repetition of a single stimulus produces habituation of the orienting reaction, (b) the eyes are closed so that external visual stimuli are blocked, (c) the setting itself is quiet, and (d) the meditator has expectations of deep relaxation and states of peace. Benson (1975) named this hypometabolic response the *relaxation response*, thereby framing meditation as a self-regulation strategy rather than a consciousness discipline. Walsh (1996) later observed that heart rate and respiration are comparatively gross and objective measures relative to the subtle and subjective shifts in awareness, values, and emotions that have constituted the traditional goals of meditation. Several well-controlled studies have found that the hypometabolic effect is not unique to meditation but is shared with other relaxation techniques such as yoga, progressive muscle relaxation, biofeedback, autogenic training, and self-hypnosis (see review by Walsh, 1996). Comparison studies found that meditation practices resulted in cognitive and affective changes beyond the hypometabolic "relaxation response" produced

by other self-relaxation methods (Lazar et al., 2000; Lehrer et al., 1983; Semple, 2010; Weinstein & Smith, 1992). Research focus began to shift from simply examining the psychophysiology of meditation to cultivating a deeper understanding of cognitive and affective correlates of meditative practices.

Transforming Meditation into Mindfulness

Concurrent with research that placed meditation in a theoretical framework of cognitive and affective processes, a subtle shift in terminology happened that seemed to move meditation in the context of psychotherapy even further from the sacred and plant it more firmly in the secular world. Academic journal articles began to appear that used the phrase “mindfulness meditation” in relationship to clinical interventions (Brown & Engler, 1980; Brown et al., 1984a, 1984b; Forte et al., 1988; Kabat-Zinn, 1984; Kabat-Zinn et al., 1985; Kutz, 1985). Jon Kabat-Zinn then published *Full Catastrophe Living* (1990), which described a structured group program of mindfulness meditation that had been developed and researched at the University of Massachusetts Medical Center during the previous decade. Fueled by the emergence of the Mindfulness-Based Stress Reduction program (MBSR), the term “meditation” began to be used less frequently, and gradually transformed into “mindfulness.” After defining “mindfulness” as it is used in contemporary psychotherapy, we will briefly describe what might be called the four foundations of therapeutic mindfulness—the four principal therapies that incorporate mindfulness-based approaches.

Mindfulness

In Buddhism, the word “mindfulness” derives from the Pali word *sati*, which comes from a root word that means, “to remember.” *Sati* is a subtle concept loosely related to conscious awareness, attention, remembering (to be fully present in this moment), and maintaining a constant presence of mind (Bhikkhu Bodhi, 1993). As a mental factor, *sati*

signifies presence of mind, attentiveness to the present rather than the faculty of memory regarding the past. It has the characteristic of not wobbling, i.e., not floating away from the object.⁵ Its function is absence of confusion or non-forgetfulness. (p. 86)

“Not wobbling” refers to a stability of attention on the percept of interest, while “absence of confusion” refers to the aim of cultivating discerning wisdom that arises from seeing reality clearly (i.e., seeing what *is*, with no preconceived expectations or judgments). Mindfulness is considered to be the “heart” of Buddhism (Hanh, 2008). The Buddha’s noble eightfold path includes *right mindfulness* (*samma sati*) as a single component of a spiritual path that integrates ethical conduct, mental discipline, and wisdom (D. T. Suzuki, 1956). In traditional texts, mindfulness is seen as a process or a path, rather than a trait or mental function (Silānanda, 2002).

Although there is not yet a single, broadly accepted definition, in Western psychology, mindfulness is often described as being a particular form of attention, and mindfulness practices are frequently referred to as exercises in training attention (Grossman & Van Dam, 2011). One often quoted definition is “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (Kabat-Zinn, 2003, p. 145). The term “mindfulness” is often used interchangeably with *mindful awareness* or *mindful attention*. Bishop et al. (2004) proposed a two-component operational definition, suggesting that mindfulness is “a process of regulating attention in order to bring a quality of nonelaborative awareness to current experience and a quality of relating to one’s experience within an orientation of curiosity, experiential openness, and acceptance” (p. 234).

Mindfulness is considered both the dynamic activity of refocusing attention to present-moment events and the state of mind that results from practicing mindfulness. The process of mindfulness is simply the practice of bringing nonjudgmental attention to internal and external events as they arise, moment by moment, then returning the “wobbly” attention whenever awareness arises that the attention has drifted away. Internal events include thoughts, emotions, perceptions, and body sensations. External events include interpersonal, situational, and environmental experiences. Practicing mindfulness is simply the returning of attention, to what Kabat-Zinn (2005) described as the *nowscape*, by which he meant the multifaceted and rich inner and outer world of perceptions and felt experiences. Mindful awareness is intentional and receptive to immediate experience. It is characterized by an attitude of curiosity, openness, and nonjudgmental acceptance—regardless of whether a given event is interpreted as being pleasant or unpleasant. Qualities of mindful awareness include increased attention to the experience itself; greater awareness of thoughts *about* the experience; and fewer attempts to analyze, rationalize, extend, avoid, criticize, or change the experience.

In clinical psychology, mindfulness is typically defined without reference to religion or spirituality. Essentially, mindfulness is the application of attention in a specific manner, while maintaining an explicit relationship to the object of attention, and with recognition and awareness that internal cognitive and affective factors can influence one’s perceptions. It is generally accepted that mindfulness can be cultivated and that it enhances self-management of attention (Baer, 2003; Bishop et al., 2004; Kabat-Zinn, 1994; Semple, 2010).

The Modern Zeitgeist: Mindfulness and Psychotherapy

Along with a movement toward more sophisticated psychotherapy research methods, mindfulness changed its primary allegiance—migrating from the psychodynamic camp to become firmly aligned with the cognitive sciences. During this time, cognitive and information-processing theories became (and still are) the dominant paradigm in clinical

psychology and psychotherapy research. Cognitive-behavioral therapy (CBT) had accumulated a great deal of research evidence to support its effectiveness in the treatment of mood, anxiety, and other mental disorders. CBT helps patients to identify their cognitive biases; appreciate the associations between thoughts, emotions, and behavior; distance themselves from their own idiosyncratic perspectives; and develop more realistic self-statements (Overholser, 1995). Some have argued that consistent meditation practice encourages precisely the same changes (Teasdale, 1999). Cognitive and mindfulness-based therapists are united by the desire to understand the workings of the mind and apply that understanding to reduce human suffering. These models share the insight that thoughts are not always accurate reflections of reality. In other ways, however, they are based on opposite and incompatible worldviews, and reconciling the dialectic can sometimes be a challenge for Western psychotherapists.

MINDFULNESS-BASED STRESS REDUCTION

During the 1970s and most of the 1980s, meditation research had been quietly marginalized. The MBSR program (Kabat-Zinn, 1990, 1994) provided impetus for a renewed surge of interest by academic psychologists. With colleagues at the University of Massachusetts Medical Center, Jon Kabat-Zinn developed MBSR to help patients cope with intractable pain and better manage stress associated with chronic illnesses (Kabat-Zinn, 1984; Kabat-Zinn & Chapman-Waldrop, 1988; Kabat-Zinn et al., 1985). The Stress Reduction Clinic opened at the university medical center in 1979. At present, more than 25,000 people have completed the eight-week MBSR program at the Center for Mindfulness in Medicine, Health Care, and Society. (In 2019, the Center for Mindfulness was renamed the UMass Memorial Health Center for Mindfulness.) MBSR groups are conducted in hundreds of medical centers in the United States and frequently are used to help both adults (Demarzo et al., 2015) and youth (Semple & Burke, 2019) manage the pain and stress associated with major medical illnesses.

MBSR provides an intensive, eight-week group training in meditations similar to vipassana practices. MBSR participants learn to engage more skillfully with their lives by enhancing present-focused awareness. Guided instructions in three specific practices are taught: (1) mindfulness of the breath, (2) mindfulness of the body (body scan), and (3) mindful movement practice (simple yoga postures). Simple, sensory-focused exercises (such as eating one raisin with mindfulness) provide further practice in being present in the moment. Group discussions and guided inquiries follow each exercise. Participation in an MBSR course demands a significant personal commitment—up to 45 minutes of daily home practice, six days each week. The efforts required to develop a consistent daily meditation practice provide much practical experience in mindful awareness. Instructor training programs are also available for those interested in facilitating MBSR. Somewhat more aligned with spiritual practices than other models subsequently developed, a personal, experiential understanding of mindfulness is believed to be essential.

MBSR instructors are therefore expected to cultivate and maintain an ongoing personal mindfulness practice.

Research has shown that MBSR increases stress management skills for adults coping with chronic pain (Hilton, Hempel, et al., 2017; Jastrowski Mano et al., 2013; Rosenzweig et al., 2010), general hospital patients (Kabat-Zinn et al., 1985; Miller et al., 1995), and individuals with more serious conditions such as cancer (Zimmermann et al., 2018, Abedini et al., 2020), traumatic brain injuries (Bédard et al., 2003), and HIV (Creswell, et al., 2009; Sibinga et al., 2008; Webb et al., 2018). Teachers (Hwang et al., 2017), medical school students (Shapiro et al., 1998), inner-city residents (Roth & Robbins, 2004), prison inmates (Bowen et al., 2006), and others in chronically stressful situations have also found MBSR-like practices beneficial. Similar effects are also being found for children and adolescents (Semple & Burke, 2019).

The scientist-practitioner model of training encourages clinicians to utilize evidence-based practices to treat their patients. Nearly a mantra during the 1990s, the phrase “what works for whom” was heard often. Matching a specific therapy to the particular mental health problems of the patient became prevalent; however, MBSR was not intended to be therapy. Although many of those teaching MBSR are also clinicians, they are referred to as instructors or facilitators, not therapists. A number of MBSR-like adaptations focus more on clinical issues. Examples of these include Mindfulness-Based Relapse Prevention (MBRP; Bowen et al., 2011), which is aimed at treating addictive behaviors (Li et al., 2017), and Mindfulness-Based Eating Awareness Training (MB-EAT; Kristeller & Wolever, 2011) for binge eating and other eating disorders (Masuda & Hill, 2013; Warren et al., 2017). One clinically focused MBSR variant that has received substantial research support is Mindfulness-Based Cognitive Therapy (MBCT; Segal et al., 2002, 2013).

MINDFULNESS-BASED COGNITIVE THERAPY

Like MBSR, MBCT is also an eight-week group protocol that teaches traditional breath and body meditations. Unlike MBSR, however, MBCT was developed as a therapy focused on preventing relapse in patients who suffer from recurrent major depressive episodes. It does this by integrating the theoretical foundation and techniques of MBSR with strategies borrowed from cognitive therapy. The aims of MBCT are to help patients (1) become more aware of thoughts, body sensations, and feelings; (2) develop a new way of relating to their own thoughts, body sensations, and feelings, specifically by learning mindful observation, acknowledgement, and acceptance of unwanted thoughts and feelings; (3) redefine ruminative cognitions as being events in the mind rather than immutable truths; (4) recognize the onset of negative moods using mindful awareness as kind of “early warning” system; and (5) learn to disengage or “decenter” from the negative moods or thoughts before they escalate into a full depressive relapse. Clinical trials of MBCT suggest that, for patients with three or more major depressive episodes, MBCT can significantly reduce rates of relapse (Kingston, et al., 2007; Kuyken et al., 2008; Ma & Teasdale, 2004; Segal

et al., 2010; Teasdale et al., 2000; Williams et al., 2014). MBCT has also been evaluated as a treatment for acute depression (Barnhofer et al., 2009; Kenny & Williams, 2007; Smith et al., 2007), bipolar disorder (Deckersbach et al., 2012; Miklowitz et al., 2015; Perich, et al., 2013; Stange et al., 2011; Williams et al., 2008), anxiety disorders (Britton et al., 2012; Craigie et al., 2008; Evans et al., 2008; Kim et al., 2009; Mehranfar et al., 2012), obsessive–compulsive disorder (OCD) (Key et al., 2017; Külz et al., 2014), and post-traumatic stress disorder (Hilton, Maher, et al., 2017). MBCT has also been adapted for use with children with anxiety (Semple & Lee, 2011), and evaluated in clinical trials (Butler, 2014; Dehghani et al., 2014; Esmaeilian et al., 2018; Esmaeilian et al., 2013; Lee et al., 2008; Semple et al., 2010; Strawn et al., 2016). MBCT adapted for adolescents has shown early promise in reducing symptoms of depression (Ames et al., 2014) and attention deficit hyperactivity disorder (Haydicky et al., 2015; Haydicky et al., 2012).

Two other therapies integrate concepts borrowed from meditative traditions without teaching or advocating extensive meditation practices. These are dialectical behavior therapy and acceptance and commitment therapy, which have been referred to as “mindfulness-informed” approaches—to differentiate them from the “mindfulness-based practice” interventions used in MBSR and MBCT (Semple & Burke, 2011).

DIALECTICAL BEHAVIORAL THERAPY

Dialectical Behavior Therapy (DBT) was developed to treat patients diagnosed with borderline personality disorder (Linehan, 1993a, 1993b), but it was later expanded to include other disorders associated with dysregulated emotions (Lynch, et al., 2006) and substance use disorders (Linehan et al., 1999). Some core principals of DBT derive from Zen Buddhism (Robins, 2002), but they are incorporated into a structured set of cognitive interventions (e.g., cognitive reframing) and behavioral techniques (e.g., applied functional analysis, social skills-training, and exposure) (Linehan, 2014).

The principal dialectic in DBT refers to a core struggle within the patient between complete, unconditional acceptance of how they actually are, conflicting with accepting the need to make cognitive and behavioral changes. Not unlike a Westernized *kōan* practice, DBT aims to resolve the dialectic by finding a way to integrate these opposing positions. DBT teaches skills to cultivate acceptance (mindfulness, distress tolerance) and skills to implement behavioral changes (interpersonal effectiveness, emotional regulation). Mindfulness supports the resolution of the dialectic tension between acceptance and change. Two subsets of mindfulness skills are directly taught. Some focus on *what* mindfulness is (e.g., observing, describing, and participating), and others focus on *how* mindfulness is practiced (e.g., nonjudgment, one-mindfulness, and acting with effectiveness). Mindfulness exercises include noting and counting breaths and mindful walking, listening to music, eating, or writing. Although patients in DBT do not learn traditional meditation practices, DBT seems to have successfully integrated an acceptance-based mindfulness paradigm with a change-based cognitive-behavioral model (Lau & McMain, 2005).

ACCEPTANCE AND COMMITMENT THERAPY

Acceptance and Commitment Therapy (ACT; Hayes & Wilson, 1995) is based on the concept of functional contextualism, in which events and actions are believed to have meaning only in relationship to the contexts in which they develop. ACT is a nonspecific approach to treating a broad range of human problems, similar to the Buddhist concept of *dukkha* (suffering), which are believed to be both inevitable and ubiquitous (Hayes, 2002). ACT is grounded in relational frame theory, which is a constructivist theory of language and cognition, and it uses the concepts of cognitive fusion and experiential avoidance to describe unhelpful behaviors (Hayes et al., 2006). Cognitive fusion is holding the belief that thoughts and other intrapsychic events are accurate reflections of reality. Acceptance of thoughts then activates behavioral responses. Experiential avoidance results from attempts to avoid, manage, or control thoughts, emotions, and sensations, even when the avoidant behaviors are unhelpful (Fletcher & Hayes, 2005). Cognitive fusion and experiential avoidance are believed to underlie psychological inflexibility and suffering. ACT intends to help patients develop psychological flexibility, formulate personal values, and make commitments to change. Core concepts include identification of acceptance, values, cognitive defusion, contact with the present moment, observing the self, and committed action (Hayes et al., 1999). Experiential activities include brief meditative-like practices (e.g., mindfulness of thoughts, emotions, the breath, or other physical sensations), but ACT does not include extended meditation practices.

Research support for ACT shows preliminary indications of effectiveness for a range of problems as diverse as treating substance use (Heffner, et al., 2003); preventing rehospitalization of psychotic patients (Bach & Hayes, 2002); managing migraine headaches (Grazzi et al., 2019); math anxiety (Zettle, 2003); anorexia (Wilson & Roberts, 2002); and treating trichotillomania (Twohig & Woods, 2004). A meta-analysis examined 42 randomized controlled trials and concluded that ACT is probably efficacious for chronic pain and tinnitus, possibly efficacious for depression, psychotic symptoms, OCD, mixed anxiety, drug abuse, and stress at work, and experimental for all other disorders (Öst, 2014). Nonetheless, some of the studies Öst examined lacked methodological rigor. For example, many failed to ascertain a clinical diagnosis for the participants. Based on significant methodological limitations, Öst concluded that ACT is not yet a “well-established” treatment for any disorder.

Beyond the Newscape: Envisioning a Mindful Future

As we retraced the historical influence of Eastern meditative disciplines on psychotherapy, we found an interesting progression. The early scholarly dialogs that explored similarities and differences between Zen Buddhism and psychoanalysis motivated some scholar-practitioners to find a way to synthesize the two. This effort evolved into a scientific engagement that searched for underlying commonalities between these distinctly different traditions, which resulted in a “fourth force” in psychology—the transpersonal

movement. Transpersonal psychology borrowed directly from contemplative techniques, pulling them out of the context of their spiritual home, and subjecting them to systematic inquiry, albeit using assumptions grounded in a very different worldview. Although transpersonal researchers collected much valuable information, their efforts never quite achieved the status of mainstream academic respectability. Psychiatry then responded to the call by the American Psychiatric Association (1977) for scientific study of the efficacy of meditation as a treatment for psychopathology. What resulted was a split between clinical and transpersonal psychology. The transpersonal world returned to scholarly theoretical dialogues, while clinical psychology further secularized meditation, examining the process, mechanisms, and outcomes of meditation, both clinically and using state-of-the-art biomedical technologies. The results of those recent scientific endeavors have provided much support for the effectiveness of Westernized contemplative practices in treating a host of psychological and physical health problems.

The National Institutes of Health (NIH) direct the overall path of biomedical research in America. At the NIH, meditation studies are no longer funded solely by the National Center for Complementary and Integrative Health (NCCIH). The National Institute of Mental Health (NIMH), National Cancer Institute (NCI), National Institute on Drug Abuse (NIDA), National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), National Heart, Lung, and Blood Institute (NHLBI), National Institute on Aging (NIA), and others are also funding research in this area. To date, the NIH has funded more than 3,000 research studies involving mindfulness meditation.⁶ Cognitive psychologists appear to have achieved what the transpersonal psychologists could not. Mindfulness is no longer considered an “alternative” intervention; it has landed firmly in the mainstream of biomedical research.

We now know much more about how meditative practices ameliorate the effects of chronic stress associated with severe medical conditions such as cancer (Massion et al., 1995; Speca et al., 2000), heart disease (Tacon et al., 2003), and HIV (Creswell et al., 2009; Sibinga et al., 2008) and how secular mindfulness training can help in the treatment of these and other medical conditions. We are learning more about the neuropsychology of attention, executive function, and affect regulation resulting from meditation practices, and how they influence psychiatric symptomatology (Rubia, 2009). Mindfulness practices appear to activate neural structures involved in attention and emotion self-regulation (Davidson et al., 2003; Davidson et al., 2002; Jha et al., 2007; Lutz et al., 2014; Tang et al., 2009; Tang et al., 2007; Tang et al., 2012), which may be pathways through which mindfulness exerts its therapeutic effects.

We understand a bit more about how mindfulness practices enhance well-being. Daniel Siegel (2007) is known for his work in *interpersonal neurobiology*, which is an interdisciplinary science that aims to understand subjective and interpersonal experiences. Siegel has synthesized research in neuroplasticity (Schor, 2003), the relational functions of a specialized neural circuitry known as mirror neurons (Iacoboni et al., 1999), and

attachment theory (Ainsworth & Bowlby, 1991; Bowlby, 1978). Siegel's model of well-being includes three components—the physical brain, the mind (defined as a system for organizing energy and information) and attuned relationships (Siegel, 2006). He believes that the integration of these components is mediated by the prefrontal cortex, an area of the brain that has shown structural and functional changes in meditation practitioners (Lazar et al., 2005; Schoenberg et al., 2014). We certainly have much more to learn. Mindfulness research is growing almost exponentially. Consequently, our understanding of what changes and how mindfulness training influences those changes is growing almost exponentially.

Closing the Circle

*We shall not cease from exploration, and the end of all our exploring
will be to arrive where we started and know the place for the first time.*

—T. S. Eliot

A relatively recent addition to mindfulness research and clinical practice is the integration of compassion and loving-kindness practices to foster the well-being of individuals and humanity as a whole. This addition may presage a paradigm shift—the reintegration of what some might consider spirituality into secular mindfulness practices. Compassion has been defined as the capacity to be nonjudgmentally present with the suffering of others without avoiding it, allowing feelings of kindness and an earnest desire to help emerge (Wispé, 1991). One practice borrowed directly from Buddhism is lovingkindness or *metta*, the potential of which was described by meditation teacher Sharon Salzberg (2002).

When we practice metta, we open continuously to the truth of our actual experience, changing our relationship to life. Metta—the sense of love that is not bound to desire, that does not have to pretend that things are other than the way they are—overcomes the illusion of separateness, of not being part of the whole. Thereby, metta overcomes all of the states that accompany this fundamental error of separateness—fear, alienation, loneliness, and despair—all of the feelings of fragmentation. In place of these, the genuine realization of connectedness brings unification, confidence and safety. (p. 21)

We found some suggestions that even brief metta practice may have potential. For example, one controlled trial with 134 novice meditators found that a single 10-minute session of lovingkindness meditation increased feelings of social connection and decreased self-focus (Seppala et al., 2014).

Stanford University's Center for Compassion and Altruism Research (CCARE) was inspired by a 2005 visit from His Holiness the 14th Dalai Lama. Its mission is to

“investigate methods for cultivating compassion and promoting altruism within individuals and society through rigorous research, scientific collaborations, and academic conferences.” CCARE also offers a compassion cultivation program, teacher training, and public education (Center for Compassion and Altruism Research and Education, 2018). Their clinical research has focused on the effects of a manualized training program derived from MBSR known as Compassion Cultivation Training (CCT), which combines mindfulness, self-compassion, and *metta* or lovingkindness practices (Scarlet et al., 2017). Early research support for CCT seems promising. In one randomized controlled trial (RCT), 100 community participants were randomized to nine weeks of CCT or a wait-listed control condition. Significant improvements were reported for the CCT group on measures of compassion for others, receiving compassion from others, and self-compassion (Jazaieri et al., 2013). This study suggests that compassion can be trained and developed. One small pilot study found that following a course of CCT, healthcare workers reported improvements on measures of self-compassion, mindfulness, and interpersonal conflict scores (Scarlet et al., 2017). Another pilot study with chronic pain patients reported improvements in pain severity, anger, and well-being (Ruchelli et al., 2014).

Compassion represents an important conceptual shift away from considering subjective well-being, self-efficacy, autonomy, competence, productivity, and related constructs as central measures of psychological health (World Health Organization, 2004). Kristin Neff (2003) delineated three components of compassion—self-kindness, common humanity, and mindfulness. Self-kindness is directing understanding rather than criticism toward oneself when experiencing pain or difficulty; common humanity is seeing our own suffering as a part of the larger human condition rather than something that isolates or separates us from the collective; and mindfulness is the capacity to hold our own suffering in awareness in a balanced way, without over-identifying with thoughts and feelings or getting caught up negative reactivity. Self-compassionate people are less likely either to avoid negative feelings or simply look at the bright side (Neff & Dahm, 2015). They tend to be mindful of their suffering but treat themselves with kindness, fully aware of their connection to humanity and the human condition (Neff, 2012). For example, a self-compassion practice described by Neff (p. 82) repeats phrases that acknowledge and accept one’s emotional distress.

This is a moment of suffering.

Suffering is a part of life.

May I be kind to myself.

May I give myself the compassion I need.

Compassion has also garnered some attention as a clinical intervention, particularly with regard to the amelioration of anxiety and depression. Mindful self-compassion and compassion focused therapy are two relatively new compassion-focused protocols that have shown preliminary research support.

Germer and Neff (2013) developed Mindful Self-Compassion (MSC), which is a manualized eight-week program that integrates self-compassion skills with mindfulness in a format similar to MBSR. Two small studies of MSC—one open pilot and one randomized, wait-list controlled trial have been conducted (Neff & Germer, 2013). The pilot study found significant pre–post improvements on self-compassion, mindfulness, and well-being constructs. Results of the randomized controlled trial indicated that, as compared to the control group, participants who completed the MSC program reported significant increases in self-compassion, mindfulness, and well-being. MSC has also been studied in women with body image concerns (Albertson et al., 2015), women residing in a domestic violence shelter (Allen et al., 2021), trauma victims (Beaumont et al., 2012), student therapists (Beaumont et al., 2017), and with teens (Bluth & Blanton, 2014; Bluth et al., 2016).

Compassion Focused Therapy (CFT; Gilbert, 2009) was developed for people with emotional problems associated with high shame and self-criticism. CFT uses a Buddhist-informed definition of compassion: “a sensitivity to suffering in self and others, with a commitment to try to alleviate and prevent it” (Gilbert, 2014). A systematic review evaluated 14 CFT studies (Leaviss & Uttley, 2015). However, only three of the studies were RCTs, two were non-RCTs, and the rest were observational studies or case reports. Only one RCT used a clinical sample (Braehler et al., 2013). Consequently, the evaluation of CFT as a clinical intervention must be considered preliminary. CFT appears to be acceptable and tolerable. For the most part, improvements in psychological well-being were reported, and particularly for individuals high in self-criticism. Leaviss and Uttley concluded that CFT may be more effective than no treatment; however, it lacks sufficient research to support its being more effective than other evidence-based treatments (e.g., cognitive-behavioral therapy).

One systematic review and meta-analysis of 22 RCTs involving an assortment of kindness-based meditative (KBM) practices has been conducted (Galante et al., 2014). Studies were included that incorporated lovingkindness meditation, compassion meditation, Christian contemplative practices, and other compassion-oriented practices. The KBMs were found to be moderately effective in decreasing self-reported depression, and increasing mindfulness, compassion, and self-compassion when compared to passive controls. However, when compared to a broad variety of active controls, the results were inconclusive. The authors noted that many of the studies were poorly designed, incompletely reported, underpowered, and suffered from high attrition rates. These and other methodological limitations have been relatively common in mindfulness studies (see Davidson & Kaszniak, 2015, for a discussion of this topic). Although the compassion research is limited at present, the reader may wish to contemplate the question of how the integration of compassion and loving-kindness practices might open the door to more overtly spiritual practices into what, for the past few decades, has primarily been the secular practice of mindfulness.

Concluding Thoughts

Notwithstanding the remarkable advances that have been made in the integration of meditative disciplines with psychotherapy, transpersonal psychologists have speculated on what has been lost in the secularization of these profound practices. Roger Walsh (1993) observed that in bringing mindfulness into clinics and laboratories, “more attention has been given to heart rate than heart opening” (p. 66), and he encouraged more focus on transpersonal goals such as ethical behaviors, love, compassion, generosity, wisdom, and service. MBSR includes the practice of *metta*. Its secular cousin, MBCT, does not ordinarily include this practice, although some therapists do incorporate *metta* practices in their MBCT groups. Would augmenting MBCT with *metta* practices enhance its effectiveness as a treatment for mood and anxiety disorders? Some of the recent compassion research suggests so. Could opening the heart in this way provide for stronger or more sustained therapeutic effects to the individual or even provide other benefits to those people around the meditator?

Walsh’s lament brings us to introduce two rhetorical questions for your consideration. First, how do we harness the power of these practices to relieve psychopathological suffering while remaining true to their original spiritual intentions? Second, if these practices in their secular, clinical manifestations do effectively relieve suffering, need we concern ourselves with anything more profound than that? We would like to close by questioning the possibility or desirability of integrating spirituality and psychotherapy. Is there any way to completely integrate them, and might we even want to do so? The Buddha taught that all experiences in life, including mental and psychological events, are marked by three characteristics: suffering (*dukkha*), impermanence (*anicca*), and egolessness (*anatta*). A thorough understanding of what are known as the “three marks of existence” is believed to be one path that leads to the end of suffering (Ross, 1980). Ken McLeod, a Buddhist teacher, once translated the three marks into contemporary terms as, “life is tough . . . it will put you through some changes . . . but don’t take it personally.” Meditative disciplines and psychotherapy share the desire to end human suffering. Yet, life is indeed “tough.” A complete integration of Eastern spirituality with psychotherapy might require Western psychotherapy to stop reifying mental illness as being “me” or “mine.” Psychiatric disorders might not be viewed as disorders of the brain or of our genetic inheritance. Can we move away from the belief that human unhappiness is the result of chemical imbalances in the brain? Should we? More radically, we might need to stop reifying the notion of a bounded and permanent self, let go of the a priori belief that changes are required before happiness can arise, and radically expand our thinking about ways to attain a more permanent solution to the human condition. Then we wonder . . . could any psychotherapy that seeks to cultivate unconditioned awareness of the ultimate nature of ourselves and our world ever be anything other than a spiritual practice?

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Notes

1. Theravāda terms are mostly noted in Buddhism's original language of Pali. Mahayana terms are mostly noted in their more common Sanskrit translations. For example, *Dhamma* is the Pali word for teachings of the Buddha, while *Dharma* is the equivalent word in Sanskrit. Zen-specific terms are generally Japanese.
2. The *Dhammapada* is a collection of 423 Buddhist scriptures that are attributed directly to the historical Buddha.
3. In the *Abhidhamma*, 10 defilements or unwholesome mind states are identified. The first three, sometimes known as the "three poisons" (greed, hate, and delusion), are considered to be the roots of suffering.
4. Neurasthenia is a disorder characterized by depressed mood, fatigue, anxiety, irritability, headaches, dizziness, and central or peripheral neuralgia (World Health Organization, 2022).
5. Objects can be internal (e.g., thoughts, emotions, and body sensations) or external, tangible objects.
6. NIH Research Portfolio Online Reporting Tools (RePORT) database. Accessed July 29, 2022, <http://report.nih.gov>

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Eastern Traditions, Consciousness, and Spirituality

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Abstract

This chapter discusses the constructs of consciousness and spirituality in the Eastern tradition of early Buddhism. The descriptive explanations of the following basic and yet complex questions are offered: What are the contents of consciousness? Are there content-less states of consciousness? What is spiritual inquiry? If states of consciousness are multileveled and multifaceted, how one can understand the process of transformation and attainment of these states? Although a comprehensive presentation of various Eastern traditions is not possible in a brief book chapter, it is hoped that a detailed look at early Buddhism will give the reader a taste of the issues that Eastern theories and practices attempt to address.

Key Words: awareness, spirituality, Eastern perspectives on consciousness, spiritual inquiry, enlightenment, nirvana, samatha, vipassana, mindfulness, jhanas, meditation

Introduction

Eastern traditions hold an important place in world spirituality and consciousness studies. There is a growing interest in the field of modern psychology to compare and integrate the teachings of Eastern wisdom traditions (Dimidjian, & Linehan, 2003; Miculas, 2007; Mijares, 2003; Nauriyal et al., 2006). In discussing Eastern traditions, however, one should first clarify the scope of inquiry and state what one intends to cover under the umbrella term “Eastern traditions.” As Nakamura (1964) stated, there is no unambiguous way of referring to some traditions or ways of thinking as belonging to what may be conveniently referred to as the “East.” The diversity of traditions originating in the Eastern regions of our planet precludes the possibility of offering generalized theories applicable to all traditions “Eastern.” Hence, the scope of this book chapter is limited to one particular tradition: early Buddhism. Early Buddhism, originating in India, has shaped and influenced other traditions of the East, including, but not limited to, those originating in China, Japan, Nepal, Myanmar, Sri Lanka, Thailand, and Indonesia (Forman, 1999; Motoyama, 2008; Nakamura, 1964; Rao, 2002). Although early Buddhism may not provide us with theories and concepts that are applicable to all Eastern traditions, it provides

us with the foundational material from which many other Eastern traditions derive their conceptual framework and the practices that lead to their stated soteriological goals.

Definitions

We are unable clearly to circumscribe the concepts we use not because we don't know their real definition, but because there is no real "definition" to them. To suppose that there must be would be like supposing that whenever children play with a ball they play a game according to strict rules.

—Ludwig Wittgenstein

The problem of precise definition is not limited to the term "Eastern traditions," however. The other terms under consideration—"early Buddhism," "consciousness," "spirituality," and "spiritual inquiry"—also lack precise definitions and are highly contested terms. But if one were to forego the pursuit of a precise definition of a term or concept and agree with Wittgenstein (1953/1986) that we could make up the rules and alter them as we go along, then we can offer workable but imprecise definitions of the terms under consideration. Furthermore, we may be able to refine our understanding of the terms or concepts as we go along.

Early Buddhism

Early Buddhism is understood throughout this chapter to mean "the Buddhism of the five *Nikayas*." The *Nikayas*—the *Khuddaka Nikaya*, the *Majjhima Nikaya*, the *Samyutta Nikaya*, the *Digha Nikaya*, and the *Anguttara Nikaya*—composed in Pali, may be described as the collection of the Buddha's teachings. The discourses of the Buddha were orally preserved by the monks and later formalized and put in a canonical body of literature by the four Buddhist councils that convened over the course of centuries (c. 480 BCE–20 BCE). The five *Nikayas* form the *Sutta Pitaka* (the casket containing the *suttas*) of the *Pali* canon. The *Vinaya Pitaka* (the casket containing the rules of conduct) and the *Abhidhamma Pitaka* (the casket containing the "higher truths") are the other two caskets besides the *Sutta Pitaka* that form the *Pali* canon. The *Nikayas*, that is, the *Sutta Pitakas*, are thought to have been composed earlier than the other two *Pitakas* and contain much of the important information about the Buddha's teachings, the sociocultural situation of his time, and the Buddha's dialog with other contemporary teachers and laypeople.

Early Buddhism is distinguished from other Buddhist traditions such as *Theravada Buddhism*, "the school whose particular ideas are found mostly in the *Abhidhamma* and *Pali* commentaries and in certain late *sutta* materials" (Harvey, 1994, p. 100), or *Mahayana Buddhism* whose particular ideas, concepts, and theories are found in such works as the *Mula-madhyamaka Karika* of Nagarjuna. These two traditions, and sixteen others for that matter, could be construed as selective interpretations and applications of

the early Buddhist teachings contained in the five *Nikayas*. These later traditions depend on early Buddhism, but they do not form it.

Consciousness

Vimal (2009) recently identified 33 definitions of consciousness that have found footing in contemporary consciousness dialog. An impressive array of contemporary consciousness studies scholars (e.g., Seager, 2007; Velmans, 2009; Wilkes, 1984) have acknowledged that it is challenging to offer a single and universally applicable definition of “consciousness.” For our purpose, “consciousness” could be defined as multifaceted and multileveled awareness and the ground of our experience that is more of a process rather than substance, is usually dependent on the senses but could be independent of it, is intentional in nature, could be with content or content-less, and has reflexive quality to it.

Spirituality and Spiritual Inquiry

Spirituality is often confused with religion. How these two terms should be distinguished from each other is a subject that has provoked an intense debate and generated as many questions as it has tried to answer. For our purpose, “spirituality” is defined as a study area and an experimental lab that attempts to understand the existential search of a human being to seek the meaning and purpose of human life and to accomplish that purpose of human life *free of* (a) the dictates of organized entities such as the religious orders and social hierarchies; (b) authority in form of the *ultimate* creator, scripture, or teacher; and (c) the rules and rituals that control human behavior and endeavor. Spirituality deals with the existential journey of a human being and the states of consciousness of a human being who is on such a journey. Spirituality is concerned with consciousness and awareness.

“Spiritual inquiry” is defined here as an existential search of a human being to seek and find the meaning and purpose of life. Such spiritual inquiry has no predetermined and charted path, no predetermined and given method, and its goal may or may not be defined. The *process* of spiritual inquiry is as important as the attainment of the end goal, if any. To engage in spiritual inquiry is to grow, to choose, and to define one’s existential choices.

To better understand the aforementioned terms and concepts from an early Buddhist perspective, let us begin with a look at the life and teachings of the Buddha.

Siddhartha’s Spiritual Inquiry

The Buddha (the enlightened one), known to his relatives as Siddhartha, to the masses as Sakyamuni, and to his contemporaries as Gotama, was a historical figure who lived and taught during a specific time of our human history. There are many traditional and modern accounts of the Buddha’s life story, but the one that held personal meaning for me and that influenced my own interpretation of the Buddha’s life is the one that appears in Paul Carus’s *The Gospel of the Buddha* (Carus, 1894/1981).

The Buddha (the enlightened one) was born as Siddhartha, in a Hindu royal family to Suddhodhana and Mayavati in 563 BCE in northeast India. When the Buddha was born, it was predicted that he would either become the king of kings or the monk of monks. Suddhodhana, the father, was alarmed by this prediction. To prevent or minimize the possibility of Siddhartha becoming the monk of monks, Suddhodhana decided to ensnare Siddhartha in a life of pleasure. To this end, many seasonal palaces were built for Siddhartha and all entertainment was provided to keep him happy. The painful events of life were hidden from Siddhartha's sight and every attempt was made to prevent him from experiencing the cyclical nature of life. This stratagem of Suddhodhana was successful, and Siddhartha appeared to be happy and content with his lifestyle.

When Siddhartha was of the proper age, he was married to his cousin Yashodhara. Siddhartha fathered a son, Rahula, with Yashodhara. Because of Siddhartha's marriage and fatherhood, to Suddhodhana it appeared that the chances of his son becoming a monk had diminished to a great extent, and consequently he loosened his grip on Siddhartha's life and started to give more liberty to Siddhartha. One day, Siddhartha desired to visit the world beyond the confines of his seasonal palaces and on his outing, he encountered the painful events of human existence, namely, old age, disease, and death, caused by the cyclical nature of human life. He, however, also encountered a monk who appeared to be very peaceful amid all these changes and unperturbed by the events that bothered Siddhartha. These experiences profoundly impacted his perception of life and opened his mind to the larger questions concerning human life. Upon returning to his palace, Siddhartha became a contemplative and started to spend his time reflecting on the nature of human existence.

During one of such contemplative quests under his favorite tree, a divine figure (*samana*) came in his vision and told him that renunciation of life was the most suitable way to inquire about and discover the answers to the existential questions that concerned him (Carus, 1894/1981). The divine figure told Siddhartha that the life of the householder was painful and compared it with the life of a monk, which was peaceful. This prompted Siddhartha to think about renunciation, but he felt that renouncing the world at such an early age as his was against the religious and social injunctions of his time. However, the divine figure confided that all ages were appropriate for renunciation and his age should not prevent him from becoming a wandering monk. Siddhartha found assurance in the words of the divine figure and decided to renounce the world. In the *Ariyapariyesana Sutta* of the *Majjhima Nikaya*, the Buddha recalls his experience of renunciation of his householder life: "Then I, monks, after a time, being young, my hair coal-black, possessed of radiant youth, in the prime of my life—although my unwilling parents wept and wailed—having cut off my hair and beard, having put on yellow robes, went forth from home into homelessness" (Horner, 1954/1967, p. 207).

After renouncing his life of comfort, Siddhartha wandered around in various parts of northern India. He went to many different teachers and engaged in lively discussion with

many spiritual leaders of his time. Siddhartha was an experimenter of truth. He wanted to evaluate a variety of possible means of spiritual development and maturity. Siddhartha desired to understand the path that leads one to the end goal as well as examine the end goal(s) of the movements of his time (Patel, 1998). Among the many spiritual teachers he met, he was most enthusiastic and impressed by the teachings of Alara Kalama and Uddaka Ramaputta (Horner, 1954/1967). Both of these leaders belonged to the Upanishadic tradition and sincerely practiced what they preached. The Buddha referred to these teachers as the beings who know and see.

The Buddha referred to the teachings of these teachers and provided a general outline of their views. Alara Kalama believed in a state of *nothingness*. He propounded that this state can be achieved by following a spiritual discipline consisting of faith, energy, mindfulness, concentration, and intuitive insight. In other words, to attain *nothingness*, one would need to cultivate faith, have spiritual energy, be mindful of the psychophysical events and the contexts in which they occur, practice concentration, and develop intuitive insight. This spiritual discipline would lead one to the state where no psychophysical events happened or any visible and definable substance could be found. Furthermore, according to Alara Kalama, the knowledge of the *nothingness* would lead to self-realization for the individual of the sort that “As I am, so are you; as you are, so am I.” In other words, the realization of *nothingness* would lead to the ultimate unity of all beings or the realization of one indivisible self without duality. The *Mundaka Upanishad* (Radhakrishnan & Moore, 1957/1989) explains this state of realization of *nothingness* with reference to the salt water. Just as the dissolved salt is in no particular part of the water but is in all of the water, the state of *nothingness* is the state of all pervasive reality.

The Buddha outlined the teachings of Uddaka Ramaputta in a similar fashion. The spiritual discipline recommended by Uddaka Ramaputta was the same as the one prescribed by Alara Kalama. But their goals differed. Whereas for Alara Kalama, the spiritual discipline led one to the state of *nothingness*, for Uddaka Ramaputta, it led the individual to the state of *neither perception nor nonperception*. This state was a state in which the working of perception, and the absence thereof, ceased. Siddhartha soon realized the truth about the states of *nothingness* and *neither perception nor nonperception*; however, upon realizing these truths, he felt that they did not lead to dispassion, awakening, or to *nibbana*. After evaluating the efficacy of the goals of *nothingness* and *neither perception nor nonperception* teachings as taught by Alara Kalama and Uddaka Ramaputta, Siddhartha felt that these could not be the ultimate goals of his path. The Buddha thought that the experience of the states of *nothingness* and *neither perception nor nonperception* failed to cultivate dispassion, tranquility, getting rid of the unwholesome states of consciousness, super knowledge, awakening, or *nibbana*. For him, dispassion, awakening, and *nibbana* were far more important goals. Therefore, he left these two spiritual teachers and embarked on the next phase of his spiritual journey.

After leaving Alara Kalama and Uddaka Ramaputta, the Buddha joined a group of ascetics who practiced extreme self-mortification as means to liberation. He almost

died because of practicing extreme self-mortification. Siddhartha was revived by a kind young woman who gave him a bowl of rice pudding. The Buddha soon realized that the denial of the senses does not lead one to enlightenment. After leaving the practice of self-mortification, the Buddha traveled on his own path in an effort to obtain that state of dispassion, tranquility, super knowledge, and *nibbana*.

After a final resolve and complete concentration, the Buddha achieved enlightenment, a state in which he experienced the unborn, undecaying, boundless, undying *nibbana*. Knowledge and vision arose in him and he realized that he had attained *nibbana*. The Buddha, the enlightened one, understood that this state was deep, difficult to see, difficult to understand, tranquil, excellent, beyond the dialectic of language, and subtle. It was difficult to see and understand for those who delighted and rejoiced in sensual pleasure, and who had a strong attachment to the senses. But for those learned who calmed their senses, renounced all attachments, cultivated dispassion, and destroyed craving, this reality was not difficult to see (Horner, 1954/1967, p. 212).

Soon after his enlightenment, the Buddha felt that it was time for him to pass on because even if he were to transmit his message of *nibbana* to people, they would not be able to understand his message. It would only bring useless fatigue and weariness. Lord Brahma (a divine figure in Hindu spirituality), however, persuaded the Buddha to teach about the *dhamma*. After consenting to Lord Brahma's request, the Buddha traveled throughout northeastern India and taught the spiritual means that led him to *nibbana* (Horner, 1954/1967, p. 212).

The Buddha's Spiritual Method

Before we offer our summary of the Buddha's spiritual method, it needs to be pointed out that the Buddha's spiritual method is a postexperiential construction of his spiritual inquiry that led him to enlightenment. The spiritual method evolved as the Buddha engaged in the process of spiritual inquiry and as he made existential choices on the path. The path got carved out, in bits and pieces, from Siddhartha's evolving experience. To assume that the Buddha knew his path prior to embarking on his journey would be to suppose that the Buddha had a priori knowledge of all his existential choices and when he was to make those choices. To borrow Hilary Putnam's words, for Siddhartha "to have made all possible existential choices is precisely to have stopped growing, to have become utterly rigid as human being" (Putnam, 1989, pp. 22–23). Although the Buddha taught for nearly fifty years after his enlightenment, one of his last messages was "Be your own light."

Four Noble Truths

The Buddha taught that an individual who is on a spiritual path first needs to recognize and comprehend the truth(s) about suffering. They must know that there is suffering (*dukkha*) in the world. Second, they must realize that there is a cause for the arising of the suffering (*dukkhasamudaya*). Third, this suffering can be prevented (*dukkhanirodha*).

Fourth, there is a way that leads to the prevention of this suffering. The Buddha called the recognition and acceptance of suffering as the four noble truths (*ariya-sacca*). The first noble truth concerns what is or can be characterized as suffering. In his first discourse, *Dhammacakkappavattana Sutta*, the Buddha spelled out the notion of suffering as follows:

Birth is suffering; old age is suffering; sickness is suffering; death is suffering. Sorrow, lamentation, and dejection are suffering. To receive what one does not like (i.e., what is not pleasant), and to not receive what one likes (i.e., what is pleasant) is suffering. Being in contact with what is unpleasant and to be separated from what one intensely likes is suffering. In short, clinging to the five aggregates of the personality—body, feeling, perception, disposition, and consciousness—is suffering. (Rhys Davids & Woodward, 1917–1930, p. 421)

According to the Buddha, the human suffering arises because of the three main factors: (a) the cyclical existence of life, (b) clinging to the five aggregates of which the human personality is made of and thinking of these aggregates as oneself, and (c) having likes and dislikes about the world. Furthermore, the Buddha explained these causes of suffering (as well as the causes of liberation as explained in the next section) as a causal link that his followers termed as codependent arising (*paticcasamuppada*). This codependent arising consists of the following 12 factors: (1) ignorance, (2) dispositions, (3) consciousness, (4) psychophysical personality, (5) six senses, (6) contact, (7) feeling, (8) craving, (9) grasping, (10) becoming, (11) birth, and (12) old age, death.

The second truth about suffering concerns the fact that the aforementioned factors of causation are the causes of suffering. For instance, in the conceptual realm, attachment to views and the grasping of systems, doctrines, concepts, and theories of any kind can lead to disputes, verbal warfare of the sort “my doctrine or view alone is true, everything else is false,” and consequently cause suffering. In the psychological realm, attachment to desires, feelings, craving, and clinging to some dearly believed doctrines, rules, and rituals leads to suffering. In the physical realm, attachment to the bodily sensations, feelings, and so on leads to suffering. The Buddha taught that there is a way that leads one to the cessation of the cyclical existence and hence to the cessation of suffering.

Eightfold Path

He characterized this way as an eightfold path. The eight steps of this path are as follows: (1) balanced view infused with equanimity (*samma ditthi*); (2) balanced resolution infused with equanimity (*samma sankappa*); (3) balanced speech infused with equanimity (*samma vaca*); (4) balanced action infused with equanimity (*samma kamma*); (5) balanced livelihood infused with equanimity (*samma jiva*); (6) balanced effort infused with equanimity (*samma vayama*); (7) balanced mindfulness infused with equanimity (*samma sati*); and (8) balanced concentration infused with equanimity (*samma samadhi*) (see figure 21.1).

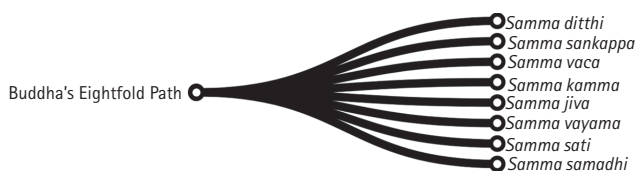


Figure 21.1 Buddha's Eightfold Path

It is important to note that most scholars of Buddhism interpret the word *samma* as “right,” but if that is the case the Buddha would have used the word “*sacca*” (right or true) to convey the correct and clear meaning. The word “*samma*” has the same meaning as the Sanskrit word “*samyak*,” which means a balanced approach infused with equanimity. Furthermore, the Buddha was against both the right and wrong views and had considered them to be equally problematic. From his own spiritual journey, the Buddha had learned that one could get attached both to the right views and wrong views, codes of conduct, rites, and rituals. In the *Sutta Nipata* (Saddhatissa, 1994), it is stated that the monks who had happily renounced the views and theories that bound them to the life of householder now found themselves attached to the “highest” views, purity, and rules:

When a man in the world, abiding in views, esteems something especially (as) “the highest,” then he says that all others are inferior; in this way he is not beyond disputes.

Those who hold rules to be the highest thing, thinking purity comes from (practice of) self-restraint, take up rites and observe them (dutifully), (thinking) “if we learn this, then we’ll have purity.”

When someone is deficient in rule and ritual, having failed to perform some act, he trembles, he yearns and longs for purity here, like one who has left home (but) lost the caravan. (p. 105)

Early Buddhist Meditation Practices

Early Buddhism proposes four meditation practices that help an individual gain freedom from grasping and attachment, transcend the material and conceptual realms, and experience the states of consciousness as they really are (*yathabbutam*). The main aim of this section is to explicate the early Buddhist meditative practices, that is, bare awareness (*anapanasati*), mindfulness (*satipatthana*), insight (*vipassana*) and equanimity (*samatha*), which help the aspirant to allow themselves to perceive and experience the states of consciousness as they really are. The bare awareness, mindfulness, and insight meditation practices are explained first, followed by the equanimity meditation.

Bare Awareness and Mindfulness (Anapanasati and Satipatthana)

The bare awareness and mindfulness meditation practices are interlinked and at times the terms are used interchangeably. The word *Satipatthana* consists of two separate words, *sati*

and *upatthana*. The word *sati* means what is existing. The word is derived from the root *sat* (i.e., to exist). On the other hand, the word *upatthana* means keeping present, remaining aware of what is arising. The combination of these two words can be taken to mean the awareness of, or mindfulness of, the phenomenon as it arises into existence, and one may add, as it passes away. The two most important *suttas* that deal with the mindfulness and bare awareness meditation practices are the *Satipatthana Sutta* and the *Anapanasati Sutta* (Horner, 1954/1967, pp. 81–82; Horner, 1959/1970, pp. 87–88).

According to the *Satipatthana Sutta*, mindfulness is the knowledge and awareness of the mental and physical phenomena as they constitute the human personality (*nama-rupa*), the sixfold sense spheres (*ayatanas*), and the factors of enlightenment (*bojjhangas*). The *sutta* discusses awareness with respect to four different aspects of our experience, such as, the body (*kaya*), the feelings or sensations (*vedana*), the phenomena in general (*dhamma*), and the ultimate realms of consciousness (*brahmaviharas*). Thus in one passage, we read, “Here, a monk remains observing the body as body, resolute, aware and mindful, having put aside worldly desire and sadness; he remains observing feelings as feelings; he remains observing mental states as mental states, he remains observing mental objects as mental objects, resolute, aware and mindful, having put aside worldly desire and sadness.” (Bucknell & Kang, 1997, p. 19).

We can make two important observations: First, the mindfulness meditation is concerned with being aware of or knowing the given phenomenon as it really is. This idea is most eloquently captured by the phrase “observing the body as the body . . . observing the substratum of consciousness as the substratum of consciousness (*kaye kayanupassi . . . citte cittanupassi*).” The observing of the phenomena here is the awareness (*sati*) and perception (*sanna*) of the phenomena in its pure form (*suddha-dhamma*). Nyanaponika Thera very succinctly covers this aspect of bare awareness when he says, “Bare Attention is the clear and single-minded awareness of what actually happens *to* us and *in* us, at the successive moments of perception. It is called ‘bare’, because it attends just to the bare facts of a perception as presented, attention or mindfulness is kept to a bare registering of the facts observed, without reacting to them by deed, speech or by mental comment which may be one of self-reference, judgment or reflection.” (Thera, 1975, p.30). Second, such bare awareness of the phenomenon gives us not only the knowledge of the reality as it is, it also helps one to move toward the attainment of the state of *Nibbana*.

The *sutta* further explains the mindfulness of phenomena by shedding light on each of the phenomenon in question. Thus the mindfulness of the body is explained with regard to (a) the awareness of the activities of the body (*iriyapathasati*), (b) the awareness regarding breathing experience of the body (*anapanasati*), (c) the awareness of the body in terms of different parts (*patikulamanasikaro*), the cosmic elements that make up the body (*dhatumanasikaro*), and finally (d) the awareness of the body as the *body* (*‘atthi kayo’ ti va pannassa sati*) (Thera, 1975, pp. 117–121). The last awareness of the body (i.e., the

awareness that “There is body”) is said to lead one to freedom from grasping and clinging. This state of freedom from grasping is a state of total detachment (Horner, 1975, p. 75).

In short, one can say that the mindfulness of the body is not limited to the awareness of the certain aspects of the body; rather it comprises full awareness of the whole body. We are thus concerned not only with the awareness of the various parts that make up the body such as the bones, sinews, liver, blood, urine, or the cosmic elements that constitute the body, such as the water and air, but also with the awareness of the activities of the body such as walking, sleeping, standing, talking, being silent, eating, sitting, and so on.

Similarly, when one is aware of a substratum of consciousness, one’s awareness is not limited to the activities of the mind such as thinking, but the sphere of one’s mental awareness extends to the origination and dissolution of the activities of the mind, mind’s relation to other senses, the question whether one’s mind is free from the defiling marks or is bound by them, and more importantly, the awareness of a substratum of consciousness as a substratum of consciousness (*‘atthi cittam’ ti va pannassa sati*) (Horner, 1967/54, pp. 76–77).

Awareness is not limited to the ordinary world of senses and sense-objects, but it also includes the factors of enlightenment (*bhōjjangas*) as well (Horner, 1967/1954, p. 62). This goes to show that mindfulness pertains to, and is extended to, the higher states of consciousness and other factors that lead to enlightenment.

We can summarize the description of bare awareness and make the following conclusions. The bare awareness pertains to observing the way the phenomena are. This bare awareness is a nonjudgmental state and is the knowledge of the things as they are in a given moment (*khana*) without any bias about how they should be or what they could have been. Its task is to give an individual an opportunity to know the phenomena to the extent that it is necessary. Further, the awareness developed because of mindfulness generally leads to a sort of “epistemological detachment”—the detachment based on the knowledge of the body as the body or the mind as the mind and is helpful to the individual to detach themselves from the mental and physical phenomena. Last, this bare awareness, for the most part, pertains to the ordinary and visible phenomena of our day-to-day world of the senses, but occasionally, bare awareness of the phenomena extends to the realm of enlightenment in the sense that this bare awareness also concerns the limbs of enlightenment and the gradually progressive higher states of consciousness.

From the above description, it is obvious that there is at least one clear advantage of this practice of bare awareness of reality, namely, such an awareness lifts the veil of deception created by our thoughts, fantasies, and so on, and lets us know the way the phenomenon is in a given moment (*khana*). It thus cuts the conceptual propensities of our beliefs, thoughts, which confuse us as to the real nature of the phenomena. Second, bare awareness is not limited to a specific aspect of a phenomenon but covers the whole gamut of the human experience. It deals with the senses, the sense-objects, and the factors of human personality, as well as with the enlightenment factors.

Insight (Vipassana)

The word *vipassana* consists of *vi*, a prefix, which symbolizes the heightened significance of an act, and *passana*, to see. The word thus stands for a greater (more keen) perceptual awareness, or as Piyadassi Mahathera puts it, “seeing beyond what is ordinary, clear vision. It is not surface seeing or skimming, not seeing mere appearances, but seeing things as they really are” (Mahathera, 1991, p. 201). According to its etymological meaning, the term “insight” then means a clear perception of the real nature of the world of phenomena. This literal meaning, however, is thought to be too restrictive for the reason that besides clear perception, it fails to capture and explain other aspects of the meditation practice such as the cultivation of wisdom and knowledge of the true nature of the phenomena. For this reason, the word wisdom (*panna*) is often used in association with this meditation practice. Buddhaghosa, an important commentator on the Buddhist texts, says that “wisdom consists in insight knowledge associated with skillful consciousness (*kusalavinnana*)” (Nanamoli, 1975, p. 479). According to Buddhaghosa, insight knowledge along with skillful consciousness are the two components of wisdom:

It is wisdom (*panna*) in the sense of act of wisdom (*pajanana*). What is this act of wisdom? It is knowing (*janana*) in a particular mode separate from the modes of perceiving (*sanjanana*) & cognizing (*vijanana*). For though the state of knowing (*janana-bhava*) is equally present in perception (*sanna*), in consciousness (*vinnana*), & in understanding (*panna*), nevertheless perception is only the mere perceiving of an object as, say, ‘blue’ or ‘yellow’; it cannot bring about the penetration of its characteristics as impermanent, painful, and not-self. One could say that insight meditation is wisdom-inducing perception based on the mindful awareness regarding the world of phenomena. (Nanamoli, 1975, p. 480)

The most important characteristic of insight is that it so changes the perception and understanding of the aspirant that whereas before he or she used to perceive substantiality, happiness, and permanence, he or she now perceives the same phenomena as non-substantive, impermanent, and suffering (*anatta*, *anicca* and *dukkha*). Nyanaponika Thera states that “*Insight* is the direct and penetrative realization of the three characteristics of existence, i.e., impermanence, suffering and impersonality.” (Thera, 1975, p. 44).

Equanimity (Samatha)

The importance of equanimity (*samatha*) meditation can hardly be overstated. The centrality of this meditation is evident from the fact that the Buddha had entered in this form of meditation immediately before his enlightenment during the lifetime as well as prior to attaining final enlightenment (*Mahaparinibbana*). This form of meditation also forms the final phase of the noble eightfold path that leads one to enlightenment. Further, as Gunaratana remarks, in the *Nikayas* this form of meditation is itself called *nibbana*

(Gunaratana, 1992, p. 7). As Piyadassi Mahathera points out, the Buddha himself declares that he who develops this form of meditation realizes *nibbana* (Mahathera, 1991, p. 228).

This form of meditation is variously known as calm (*upasama*), equanimity (*samatha*), and concentration (*ekaggata*). These various words are used to describe the meditation depending on what aspect of the meditation practice that one places the emphasis upon.

As noted earlier, the word *samatha* comes from the Sanskrit *samatva*, meaning to hold, perceive, experience (all things) equally. From this etymological meaning, it seems that the emphasis is placed on developing a state of consciousness which does not discriminate or categorize things as “good” or “bad,” “right” or “wrong.” The manifold and often opposing beliefs, views, theories, and thoughts are given up in this state of consciousness to the extent that it becomes possible for the aspirant to experience and perceive things equally without having a preference for either opposing category or belief. It is an experience of the phenomena in a nonjudgmental state. The state of discriminating consciousness is replaced by a unified state of consciousness where the world of duality is transcended and concentration is placed upon a single object evenly.

This state of equanimity is supposed to produce a calming effect on one’s life since the suffering generated by debates and quarrels, due to the adherence to different views and theories, is eradicated in such a state. The tradition itself places such an important emphasis on this calming aspect of the meditation that frequently the meditation itself is called “calm.” Both these terms are interchangeable and can be used alternatively without the loss of meaning.

This meditation is also known as concentration since equanimity is thought to be the result of a concentrated state of the substratum of consciousness in which a unified state of consciousness replaces that of duality. The *Nikayas* themselves define *samatha* in terms of concentration. In the *Culavedallasutta*, we read, “Whatever, friend, Visakha, is one-pointedness of the substratum of consciousness (*cittassaekekaggata*), this is concentration” (Horner, 1967, p. 363). This understanding of the term is carried forward by Buddhaghosa, who further, and more extensively, defines the term when he says, “What is this concentrating? It is the centering of consciousness and consciousness-concomitants evenly and rightly on a single object; placing, is what is meant. So it is the state, in virtue of which consciousness and its concomitants remain evenly and rightly on a single object undistracted and unscattered, that should be understood as concentrating. Concentration has non-distraction as its characteristic. It is manifested as non-wavering. Because of the words ‘Being blissful, his mind becomes concentrated,’ its proximate cause is bliss” (Nanamoli, 1975, pp. 84–85). Griffiths offers a similar definition based upon that of Buddhaghosa’s, “Concentrative meditation is a process by which the awareness is narrowed down from its usual wide spectrum to a specific single point, just as a searchlight beam can be focused from a very wide and diffuse area of illumination to a small and intense spot of light” (Griffiths, 1981, p. 607). The main distinguishing marks of this meditation are (a) the centering of consciousness on one object; (b) nondistraction of such

concentrated state of consciousness; and (c) the attainment of the state of bliss that is the result of such concentration. Finally, the *samatha* form of meditation is most frequently explained in terms of the successive states of consciousness known as the *jhanas* (Bucknell, 1993; Gunaratana, 1992; Mahathera, 1991).

The gradual elimination of unwholesome mental states, discursive reasoning, and thought are not the only benefits of this meditation practice. The *samatha* meditation produces what Buddhaghosa calls the “skillful consciousness,” leading to wisdom and subsequent liberation (Nanamoli, 1975, p. 479).

We can say that wisdom as a way of knowledge consists of four meditative practices (i.e., bare awareness, mindfulness, insight and equanimity). Whereas bare awareness and mindfulness give the aspirant the awareness of the bare phenomena, insight gives the individual a clear perception of the characteristics of the phenomena. Finally, equanimity leads one to the nonrational experience attained through the one-pointedness of mind.

The *suttas* themselves state that the attainment of enlightenment is possible by the way of insight preceding concentration, concentration preceding insight, or joining both in pairs:

Herein, brethren, a monk develops Insight preceded by Equanimity (*samatha-pubbangamam vipassanam*). While he thus develops Insight preceded by Equanimity, the Path is born in him. He now cultivates, develops and strengthens that Path, and while doing so, the Fetters are abandoned and the tendencies come to an end.

Or again, brethren: a monk develops Equanimity preceded by Insight (*vipassana-pubbangamam samatha*). While he thus develops Equanimity preceded by Insight, the Path is born in him. He now cultivates, develops and strengthens that Path, and while doing so, the Fetters are abandoned and the tendencies come to an end.

Or again, brethren: a monk develops Equanimity and Insight joined in pairs (*samatha-vipassanam yuganaddham*). While he thus develops Equanimity and Insight joined in pairs the Path is born in him. He now cultivates, develops and strengthens that Path, and while doing so, the Fetters are abandoned and the tendencies come to an end. (Thera, 1970, p. 11)

States of Consciousness

According to the texts (Horner, 1954/1967, pp. 106–107), the process of transcendence of the material and conceptual realm involves experiencing the higher states of consciousness. The higher states of consciousness help one break the causal chain that binds one to suffering. Just as there is a causal chain that binds one to suffering, the *Samyutta Nikaya* (Rhys Davids & Woodward, 1982, pp. 25–27) states that there is a causal chain that leads one to liberation from suffering. Figure 21.2 depicts both the causal chain that leads one to suffering and also the causal chain that leads one to liberation. Both these chains are linked and one could say that this in fact is one chain with two parts.

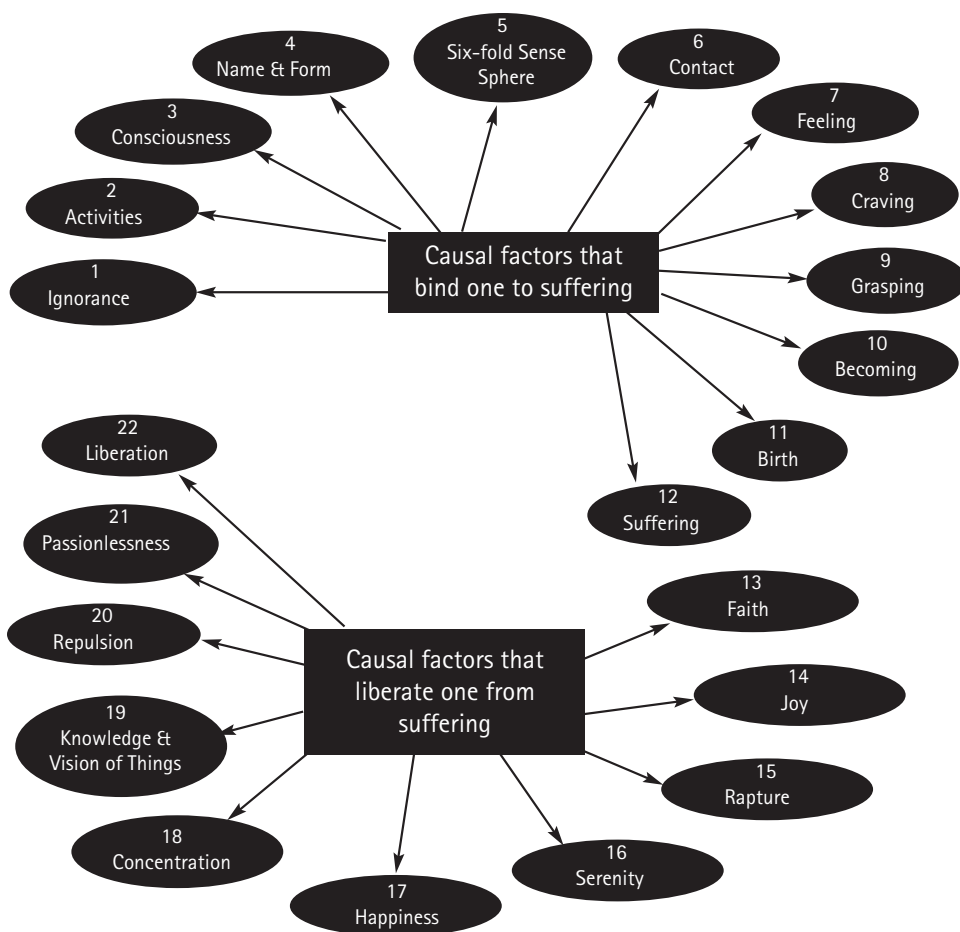


Figure 21.2 The Causal Factors of Suffering and Liberation in Early Buddhism *Note.* Adapted from *Samyutta Nikaya*, pp. 25–26, by C. A. F. Rhys Davids and F. Woodward, 1982, Pali Text Society.

The components of the causal chain that leads one to liberation (e.g., concentration, joy, rapture, happiness, and serenity) are the components that constitute the higher states of consciousness in early Buddhism. In what follows, four different states of consciousness—with content and without content—are explored: (1) states of consciousness with content (*Rupa jhanas*); (2) states of content-less consciousness (*Arupa jhanas*); (3) enlightenment with content (*Saupadisesha Nibbana*); and (4) enlightenment without content (*Anupadisesha Nibbana*). To this end, let us begin with a discussion of the *jhanas*.

The *jhanas* may be seen as successive states of consciousness in which “unification” or “concentration” (*ekaggata*) is attained by gradually giving up the lower states of consciousness for the higher states. There are numerous passages in the *Nikayas* that describe the *jhanas* in detail. These passages offer some description of the various *jhanas* and the conditions preceding and succeeding each *jhana*. Let us begin by considering some key descriptions. In the *Sallekha Sutta*, we read:

The situation occurs, Cunda, when a monk here, aloof from pleasures of the senses, aloof from unskilled states of mind, may enter on and abide in the first *jhana* which is accompanied by initial thought and discursive thought, is born of aloofness, and is rapturous and joyful.

When some monk here, by allaying initial thought and discursive thought, with the mind subjectively tranquillized and fixed on one point, may enter on and abide in the second *jhana* which is devoid of initial and discursive thought, is born of concentration, and is rapturous and joyful.

When some monk here, by the fading out of rapture, may abide with equanimity, attentive, and clearly conscious, and may experience in his person that joy of which the *ariyans* say: “Joyful lives he who has equanimity and is mindful,” and may enter on and abide in the third *jhana*.

When some monk here, by getting rid of joy, by getting rid of anguish, by the going down of his former pleasures and sorrows, may enter on and abide in the fourth *jhana* which has neither anguish nor joy, and that is entirely purified by equanimity and mindfulness.

When some monk here, by wholly transcending perceptions of material shapes, by the going down of perceptions due to sensory impressions, by not reflecting on the perceptions of multiformity, aware that “Ether is unending,” may enter on and abide in the plane of infinite ether.

When some monk here, by wholly transcending the plane of infinite ether, aware that “Consciousness is unending,” may enter on and abide in the plane of infinite consciousness.

When some monk here, by wholly transcending the plane of infinite consciousness, aware that “There is no-thing,” may enter on and abide in the plane of no-thing.

When some monk here, by wholly transcending the plane of no-thing, may enter on and abide in the plane of neither-perception-nor-non-perception. (Horner, 1954/1967, pp. 52–53)

Let us look at another *sutta* from the *Nikayas* to get a better sense of the *jhanas*. In the *Mahamoggallana Sutta*, Maha Moggallana, a direct disciple of the Buddha recounts his *jhanic* experience as follows:

Now what is the first *jhana*? Herein when a brother, aloof from sensuality, aloof from unwholesome states, attains the first *jhana* which is accompanied by thought directed and sustained, which is born of solitude, full of zest and ease, and abides therein, this is called “the first *jhana*.” Now, friends, aloof from sensuality, aloof from evil states, I entered on the first *jhana* and abode therein. But, friends, when I had remained in this condition, perception and work of mind connected with sensuality still continued. Thereupon, friends, the Exalted One [the Buddha] by accomplishment [*iddhi*] came to me and said: Moggallana, Moggallana, do not indulge in the first *jhana* . . . make steadfast thy mind in the first *jhana*. In the first *jhana* make the mind one-pointed. In the first *jhana* compose the mind. So after that, I entered upon . . . and abode in the first *jhana*.

Now what is the second *jhana*? Herein when a brother, by the absence of thought directed and sustained (*avitakka*), attains the inward calm, that one-pointedness of will, apart from thought directed and sustained, born of concentration, zestful and full of ease, which is the second *jhana*, and abides in the second *jhana*, and abides therein, this is called “the second *jhana*.”

Now what is the third *jhana*? Herein a brother, by fading out of zest, abides balanced and remains mindful and composed, and experiences with the body that ease of which the *Ariyans* aver: “The balanced, thoughtful man dwells happily.” Thus he enters on and abides in the third *jhana*. This is called “the third *jhana*.”

Now what is the fourth *jhana*? Herein a brother, rejecting pleasure, rejecting pain, by the coming to an end of the joy and sorrow which he had before, enters on and abides in the fourth *jhana*, which is freed from pleasure, freed from pain, but is a state of perfect purity of balance and equanimity. This is called “the fourth *jhana*.”

Now what is the realm of infinite space? Herein a brother, passing utterly beyond the perception of objects, by the coming to an end of the perception of resistance, by not attending to perception of diversity, with the idea of “infinite is space,” enters on and abides in the realm of infinite space. This is called “the realm of infinite space.”

Now what is that realm of infinite consciousness? Herein a brother, passing utterly beyond the realm of infinite space, with the idea: “Endless is consciousness,” enters on and abides in the realm of infinite consciousness. This is called “the realm of infinite consciousness.”

Now what is that realm of nothingness? Herein a brother, passing utterly beyond the realm of infinite consciousness, with the idea of “there is nothing at all,” enters on and abides in the realm of nothingness. This is called “the realm of nothingness.”

Now what is that realm of neither-perception-nor-non-perception? Herein a brother, passing utterly beyond the realm of nothingness, enters on the realm where he neither perceives nor perceives not. This is called “the realm of neither-perception-nor-non-perception.”

Now what is that unconditioned consciousness [*animitta ceto-samadhi*]? Herein a brother, paying no attention to any or all distinguishing marks, enters on and abides in that rapture . . . which is without conditions. This is called “the unconditioned.” (Woodward, 1927/1980, pp. 179–185)

These two *suttas* give us a good understanding of the progression of consciousness and the distinguishing factors of each *jhana*. In table 21.1, each *jhanaic* state of consciousness is depicted, where the factors designated as absent have made the experience of the state of consciousness of that *jhana* possible. The present factors are the ones that are present in this state of consciousness, but they will need to be transcended if the individual wanted to move forward. The *Sallekha Sutta* is designated as *S1*, and the *Mahamoggallana Sutta* is designated as *S2*. The presence of present factors, absent factors, and causing factors in each *jhanaic* state in each *sutta* is marked by an “X.”

Table 21.1 Absent and Present Phenomena in the Higher States of Consciousness in the <i>Sallekha Sutta</i> of the <i>Majjhima Nikaya</i> (S1) and the <i>Mahamoggallana Sutta</i> of the <i>Samyutta Nikaya</i> (S2)					
Jhanas	S1	S2	Present Factors	Absent Factors	Causing Factors
Jhana 1	X	X	Discursive thought	Sense desires	Aloofness from desires
	X	X	Discursive reasoning	Unwholesome states	Giving up of sense desires
	X	X	Zest		and other unskilled states
		X			One-pointed concentration
Jhana 2	X	X	Rapture, joy	Discursive thought	One-pointed concentration
	X	X		Discursive reasoning	Giving up of discursive
					reasoning and thought
	X	X			Tranquilization of the senses
Jhana 3	X	X	Mindfulness, joy	Rapture	Concentration of mind
	X	X	Indifference		
Jhana 4	X	X	Indifference	Joy, anguish,	Rejection of pleasure and
	X	X	Mindfulness	pleasure, sorrow	pain
		X			One-pointed concentration
Jhana 5	X	X	Endless space	Perception of	End of perception of
	X	X		multiplicity	resistance; Non attention to
					perception of multiplicity
		X			One-pointed concentration
Jhana 6	X	X	Endless consciousness	Endless space	Transcendence of space
		X			One-pointed concentration

(continued)

Table 21.1 Continued					
Jhanas	S1	S2	Present Factors	Absent Factors	Causing Factors
Jhana 7	X	X	Nothingness	Endless	Transcendence of infinite
				consciousness	consciousness
		X			One-pointed concentration
Jhana 8	X	X	Neither perception nor nonperception	Nothingness	Transcendence of nothingness
		X			One-pointed concentration
Animitra		X	Unconditioned	Consciousness with duality	Nonattention to distinguishing marks
Ceto			Consciousness		
Samadhi		X			One-pointed concentration

These two *suttas* give us enough information about the *jhanic* states, except that neither of the *suttas* directly mentions the state of cessation of perception and feeling (*sanna-vedayita-nirodha*) that is mentioned in the *Madhupindika Sutta* (Horner, 1954/1967) as that state of consciousness which precedes the state of unconditioned consciousness. Besides these two *suttas*, there are numerous other *suttas* in the *Nikayas* that discuss these *jhanic* states of consciousness (Horner 1954/1967, pp. 27–29, 155–156, 259–263). We will use them to illuminate our discussion as the need arises.

States of Consciousness with Content (Rupa Jhanas)

Simply stated, the first *jhana* is the beginning of the gradual removal and transcendence of the ordinary consciousness associated with the world of senses and sense objects. The main characteristics of this state of consciousness are the separation (*vivicceva*) of sense desires (*kamehi*) and unwholesome mental states (*akusalehi dhammehi*) and the attainment of liking (*piti*) and happiness (*sukha*) born of such separation. The activities of wholesome discursive thought and reasoning are said to continue in this state of consciousness since the state is described as “with discursive reasoning and thought (*savitakkam savicharam*).”

In the second *jhana*, the one-pointedness of mind, inner tranquility along with liking, and pleasure are present, but the factors of discursive reasoning and thought along with other mental defilements are absent. The inner tranquility (*ajjhataṃ sampasadanam*) is said to arise because of the giving up or transcending of discursive reasoning and thought (*vitakkaṃ vicāraṃ vūpasamaṃ*). Also, happiness is attained after giving up these factors. Whereas in the first *jhana*, the liking was born of discrimination (*viveka-jā*) based on discursive reasoning and thought, in this *jhana* the liking is said to arise because of concentration (*samādhi-jā*). The one-pointedness is said to be without discursive reasoning and thought (*ekodibhavaṃ avitakkam avicāram*).

In the third *jhana*, indifference (*upekkhā*), awareness, and knowledge based on equanimity (*satisampajaṇṇa*) are present. This state of consciousness is attained by transcending the liking associated with the first and second *jhanic* states as well as by developing one-pointed concentration. Furthermore, whereas in the first *jhana*, happiness and liking were associated with discrimination, and in the second *jhana* with concentration, in this third *jhana* it is associated with the body. What one experiences in this state is the bodily sensation without its mental associations. Here the activities of the mind and speech are presumably subsiding while those of the body are continuing.

The fourth *jhana* is concerned with relinquishing the joy (*somanassa*) and sorrow (*domanassa*), pain (*dukkha*), and pleasure (*sukha*). This relinquishment leads one to purity of mindfulness (*sati*) and indifference (*upekkhā*). What is meant here is that the state of indifference is the result of one's renunciation of the experience of pleasure and pain, and sorrow and joy.

From the earlier description, it is evident that common to all four *jhanas* is the initial presence of psychophysical elements associated with thinking, feeling, and connotation, and

the gradual transcendence of these states to be replaced by a pure, refined, concentrated state of consciousness. Thus, wholesome or unwholesome thinking; pleasant, neutral, or unpleasant feelings; and actions based on wholesome and unwholesome desires gradually give way to one-pointed state of consciousness accompanied by knowledge based on equanimity and indifference. In essence, what one experiences in these states of consciousness is the gradual elimination or absence of rationality-based actions and events (*avitaḥ-kam avicaram*) and the incremental emergence of wisdom based on successive and more refined states of consciousness. Also, the one-pointedness of mind is fundamental to all four states.

Another point that needs to be observed is that whereas the typical experience associated with unwholesome mental states, discursive reasoning, and discursive thought was that of pain and suffering, the typical experience related to these states of consciousness is that of happiness and joy: “He drenches, steepes, saturates, and suffuses his body with this rapture and happiness born of seclusion, so that there is no part of his entire body which is not suffused by this rapture and happiness” (Bhikkhu Bodhi, 1989, pp. 41–42).

States of Content-less Consciousness (Arupa Jhanas)

The *arupa jhanas* can be characterized as gradually deepening states of consciousness in which the ordinary experiences of the world, as defined and understood by the sixfold senses, and the sense spheres of the senses along with the objects and our notions of space and time, are all displaced by a refined, unitive, unsupported, and unconditioned (*animitta*) consciousness. Crucial to the content-less *jhanas* are the absence of discursive reasoning and thought, and the cessation of the activities of mind, speech, and feeling. There is also a joyful and gradual immersion into reality that is void (*sunno*) in the sense that only awareness per se is present without the sense-objects or the senses.

The fifth *jhana* adds to the process of transcendence of the *rupa jhanas*, the realm of perception with regard to the material perceptions. It divides perceptions into material perceptions (*rupa-sanna*), impact perceptions (*patigha-sanna*), and the variety perceptions or perceptions related to multiforms (*nanatta-sanna*).

The material perceptions can be characterized as those perceptions in which the object is perceived as having specific physical characteristics such as color, shape, the material it is made of, and so on. The impact perceptions can be characterized as those perceptions in which the impact of materiality on the senses when the object is cognized as having such and such color, shape, form, and so on is the focus of one’s awareness of the perceptions. The variety perceptions are perceptions concerned with all diverse sense objects and the sense spheres.

The cessation of these three aforementioned perceptions is the transcendence of the perceptual realm. Once the perceptual realm is transcended, one enters into and moves about in the realm of endless space—space that is not bound by one’s perception of space with form (*rupa*). In other words, in this realm, all limitations imposed by the concept of

“space” are given up. Second, the perception of space does not impact one’s senses with the idea that the space is limited or bound. Third, the variety perceptions concerned with space are given up, paving the way for the realization that space is not bound, or to put it positively, the space is without end or infinite (*ananto akaso*).

In the sixth *jhana*, the realm of endless consciousness (*vinñāṇācāyatana*) is attained by transcending the realm of “space.” According to the *Poṭṭhapāda Sutta*, the consciousness of space, that there is space, is transcended in this realm (Max Muller, 1899/1977, p. 250). This would seem to suggest that with the transcendence of the consciousness of space, one’s consciousness regarding materiality is completely transcended.

The seventh *jhana* is the realm of nothingness (*ākāṅkheyyāyatana*) that the meditation practitioner attains because of the transcendence of the realm of consciousness. It could be taken to mean that consciousness without the object is not about something, or in other words, it is about nothing. The realm of nothingness indicates that the consciousness is without object or the conception of or the image of an object. Such a state of consciousness is characterized as content-less (*sunña*).

The eighth *jhana* is called the realm of neither perception nor nonperception (*nēva sañña na saññāyatana*). It is rather perplexing to determine what is meant by the phrase “neither perception nor nonperception.” The three types of perceptions are supposed to have been transcended in the fifth realm, so it seems rather odd to realize in this eighth *jhana* that perceptions in their entirety were not transcended. Maybe what is suggested here is that only the material perceptions were transcended in the earlier realm, but the perception regarding the mental contents, however empty, still continued. In other words, the awareness regarding content-less perception may have continued. Such awareness of content-less perception is given up here.

The next two states of consciousness, the cessation or prevention of perception and feeling, and the state of unconditioned consciousness occupy an important place in early Buddhism. The state of neither perception nor nonperception is reported by the complete prevention or cessation of perception and feeling (*sannavedayitanirodha*), or simply, the accomplishment of prevention (*nirodhasamāpatti*) (Horner, 1954/1967, p. 261). The word *nirodha* is often translated as cessation or stopping, but its literal meaning conveys the sense of prevention, that is, temporary cessation rather than final cessation. The sense of prevention implies that there is a temporary cessation of the activities, but that the “prevented” activities could be renewed, if one so wanted. Thus, the term *nirodha* can be used in two senses: (a) temporary cessation and (b) complete cessation. We will interpret and employ the term in either of these two senses given the context in which it occurs. The state of cessation or prevention of perception and feeling lacks perception and feeling. From this it becomes clear that the state of neither perception nor nonperception, which we discussed earlier, can signify the continuation of perception of “empty” mental events. Such continuation is prevented in the state of cessation of perception and feeling.

The state of unconditioned consciousness (*animittacetosamadhi*) is a state in which the support of consciousness, meaning the senses and the sense objects, is absent. The unconditioned consciousness is literally the consciousness without any marks (Woodward, 1927/1980, pp. 184–185). The state of unconditioned consciousness is regarded the same as the “accomplishment of cessation.” In both these states, consciousness regarding the material and mental spheres is totally stopped. The importance of this “unsupported consciousness” is expressed in the *Udana*: “For the supported there is instability, for the unsupported there is no instability; when there is no instability there is serenity; when there is serenity there is no subservience; when there is no subservience there is no coming-and-going; when there is no coming-and-going there is no decess-and-uprising; when there is no decess-and-uprising there is neither ‘here’ nor ‘beyond’ nor ‘in between the two.’ Just this is the end of suffering” (Ireland, 1990, p. 110).

Finally, the *arupa jhanas*, like the *rupa jhanas*, are accompanied by one-pointed concentration and happiness (*sukha*). The difference between the one-pointed concentration in the *arupa jhanas* as opposed to that in the *rupa jhanas* is that concentration in these states either has a highly refined object or no object at all. The one-pointed concentration in these realms does not have any object and is not disturbed by the constant onslaught of sense objects and sense impressions.

This one-pointed concentration is explained by the Buddha in the *Mahaparinibbana Sutta* via a story about his own experience:

Once, Pukkusa, when I was staying at Atuma, at the threshing-floor, the rain-god streamed and splashed, lightening flashed and thunder crashed, and two farmers, brothers, and four oxen were killed. And a lot of people went out of Atuma to where the two brothers and the four oxen were killed. And, Pukkusa, I had at that time gone out of the door of the threshing-floor and was walking up and down outside. And a man from the crowd came to me, saluted me and stood to one side. And I said to him: Friend, why are all these people gathered here? (He replied:) Lord, there has been a great storm and two farmers, brothers, and four oxen have been killed. But, you, Lord, where have you been? (I said:) I have been right here, friend. (The inquirer:) But what did you see, Lord? (I said:) I saw nothing, friend. (The inquirer:) Or what did you hear, Lord. (I said:) I heard nothing, friend. (The inquirer:) Were you sleeping, Lord. I was not sleeping, friend. (The inquirer:) Then, Lord, were you conscious? Yes, friend. (He asked:) So, Lord, being conscious and awake you neither saw nor heard the great rainfall and floods and the thunder and lightening? (I said:) That is so, friend. (Walshe, 1987, p. 259)

The one-pointed concentration described here is a concentration without any support since it does not have any object as such. This concentration is the consciousness of the consciousness per se (*“atthi ceto” vati*). One of the passages explains this endless consciousness in the following way:

Consciousness which is non-manifestive, endless, lustrous on all sides,

Here it is that earth and water, fire and wind, no footing find.

Here again are long and short, subtle and gross, pleasant and unpleasant Name and form, all cut off without exceptions. (Rhys Davids & Rhys Davids, 1899–1921)

The *arupa jhanas* are also accompanied by happiness. The happiness experienced in the *rupa jhanas* was described as the happiness pertaining to the feeling, thinking, and conation aspects. On the other hand, the happiness experienced during the highest stage of the *arupa jhanas* is not happiness that arises from the sense sphere or sense objects; rather, it is happiness per se that does not depend on the feeling, thinking, or conation. The Buddha explains this happiness:

Here, Ananda, a monk, by wholly transcending the plane of neither-perception-nor-non-perception, enters and abides in the stopping of perceiving and feeling. This, Ananda, is the other happiness that is more excellent and exquisite than that happiness. But the situation occurs, Ananda, when wanderers belonging to other sects may speak thus: “The recluse Gotama speaks of the stopping of perceiving and feeling, and lays down that this belongs to happiness. Now what is this, now how is this?” Ananda, wanderers belonging to other sects who speak thus should be spoken to thus: “Your reverences, the Lord does not lay down that it is only pleasant feeling that belongs to happiness; for, your, reverences, the Tathagata lays down that whenever, wherever, whatever happiness is found that belongs to happiness.” (Horner, 1957/1975, p. 69)

Earlier in the *sutta*, it is claimed that each *arupa jhana* is accompanied by happiness associated with the experience of consciousness related to that realm. For example, in the realm of infinite consciousness, one experiences the happiness related to the moving about (*viharati*) in the realm of consciousness.

Finally, the cessation of perception and feeling and the attainment of the unconditioned consciousness are shown as either directly culminating in wisdom (*panna*) or in liberation (*nibbana*), or they are thought of themselves as liberation (*nibbana*). Thus, it is said, “. . . attaining the cessation of perception and feeling, he dwells therein, and having seen by wisdom, the cankers (*asavas*) are completely destroyed. Thus far, sir, without qualification has *nibbana* in this visible world been spoken by the Lord” (Woodward & Hare, 1932–1936, p. 454). The meditator (*jhayin*) who attains the state of cessation of perception and feeling is variously described as the *arahant*, the *Tathagata*, or the Buddha.

The *suttas* describe this higher reality as infinite space, infinite consciousness, a place where there is a complete cessation of perception and feeling. This state of cessation of perception and feeling, however, is not a final state. This state is succeeded by the state of consciousness in which one experiences the normal reality with the knowledge that one is liberated. This state of consciousness is called the cessation of the cyclical existence with residue (*saupadisesha nibbana*). The Buddha taught that in the final state of consciousness, one achieves the cessation of the cyclical existence without residue (*anupadisesha nibbana*).

Enlightenment with Residue (Saupadisesha Nibbana)

The *nibbana* in which the purified senses continue to operate is called the enlightenment with remainder (*saupadisesha nibbana*). Such liberation is described in the *Itivuttaka*:

Here, monks, a monk is meritorious, one who has destroyed the cankers, who has lived the life, done what was to be done, laid down the burden, won the goal, worn out the fetter of becoming, one released by perfect knowledge. In him the five sense faculties still remain, through which, as they have not yet departed, he experiences sensations both pleasant and unpleasant, experiences pleasures and painfulness. In him the end of lust, hatred, and delusion, monks, is called the condition of *nibbana* with the basis still remaining. (Windisch, 1889, p. 38)

The hallmark of the enlightenment with remainder is that the enlightened individual continues to normally function in this world. They, for instance, return to the world of senses and experiences pleasure and pain as a normal person does. The Buddha clarifies the enlightenment with remainder in response to a query by Ananda, his direct disciple:

Ananda: May it be said, Venerable Sir, that a monk's achievement of concentration may be of such a sort that, though he does not attend to the eye or visible shapes, . . . to the body or touchables, . . . to solidity, . . . to the sphere of infinite space, . . . infinite consciousness; though, whatever is seen, heard, sensed, discerned, attained, sought after, through round by mind—to all that he does not attend, and yet he *does* attend?S

The Buddha answers: Herein, Ananda, a monk attends thus—This is the real, this is the excellent; . . . the renunciation of all substrate, the destruction of craving, detachment, stopping, *nibbana*. (Woodward & Hare, 1932–1936, pp. 321–323)

From this passage, it appears that even though the sense sphere continues to be operative, due to detachment born of enlightenment, one is able to experience the sense sphere, such as pleasure and pain. Yet the sense sphere, the substrate, is said to be given up because of the destruction of craving and detachment. In another *sutta* (Woodward, 1927/1980, pp. 202–203), a monk, Kamabhu, explains the attainment of cessation of perception and feeling by claiming that the activities of speech, discursive reasoning, and thought are abandoned first, followed by those of mind and body, such as breathing, perception, and feeling. Next, he tells that the attainment of cessation of perception and feeling is not accomplished by thinking, such as I shall attain, I am attaining the ceasing of perception and feeling; rather, the state is attained by practice of mind that leads him to the state of being such (*tathattaya upaneti*). Then, on being asked, “How does one who has attained cessation of perception and feeling differ from a dead person?” Kamabhu replies that the person who has attained cessation of perception and feeling retains vitality (*pana*) and heat (*tejo*) and their faculties become clarified. A person who has attained the cessation

of perception and feeling, first knows the world as void (*sunñato*), signless (*animitto*), and aimless (*appanibhito*), and second, as a result of the attainment of cessation and perception, they develop detachment.

Second, the presence of sense faculties does not entail the continuation of their activity. Indeed, this is precisely what is emphasized in the *sutta*:

Now, your reverence, are these properties of vitality states that are to be felt, or are the properties of vitality one thing, states are to be felt another? Your reverence, these properties of vitality are not themselves states to be felt. If, your reverence, these properties of vitality were themselves states to be felt, no emergence could be shown for a monk who has had won to the stopping of perception and feeling. But because, your reverence, the properties of vitality are one thing and states to be felt another, therefore the emergence of a monk who has won to the stopping of perception and feeling can be shown. (Woodward, 1927/1980, pp. 202–203)

Thus, one can say that in enlightenment with remainder, the enlightened individual gradually recedes back to the world of senses and experiences the normal world but now his senses are more purified and he experiences the sense sphere with detachment.

Enlightenment without Residue (Anupadisesha Nibbana)

The total cessation of perception and feeling may be characterized as that content-less state of consciousness in which liberation is achieved without remainder. The following is the description of an Arahant who has achieved liberation without remainder: “Herein, monks, a monk is an Arahant with cankers destroyed, who has lived the life, laid down the burden, attained his own goal, the fetter becoming utterly destroyed, released by perfect gnosis” (Harvey, 1995, p. 180). In the *Aggivaṇṇagotta Sutta*, we read:

Even so, Vaccha, that material shape by which one recognizing the *Tathagata* might recognize him—that material shape, . . . feeling, . . . perception, . . . habitual tendencies, . . . consciousness, . . . has been got rid of by the *Tathagata*, cut off at the root, made like a palm-tree stump that can come to no further existence and is not liable to arise again in the future. Freed from denotation by material shape, perception, . . . feeling, . . . habitual tendencies, . . . consciousness, . . . is the *Tathagata*, Vaccha, he is deep, immeasurable, unfathomable as is the great ocean. (Horner, 1954/1967, p. 166)

One can interpret this passage to mean that the enlightenment without remainder is the enlightenment in which the individual has given up the senses, sense sphere, and has passed on. It would seem that the total cessation of the senses has been indicated and likened to the analogy of a cut palm tree. Just as a palm tree whose roots have been cut is said to have ceased to exist, likewise, in the enlightenment without remainder, all

activities have ceased. This enlightenment without remainder could be explained as the final enlightenment in which the material body, along with its psychological accompaniments (*nama-rupa*), is given up.

This final state of consciousness, the enlightenment without remainder, is described as follows:

Monks, there is a not-born, not-become, not-made, not-dispositionally conditioned. Monks, if that not-born, not-become, not-made, not-dispositionally conditioned were not, no escape from the born, become, made, dispositionally conditioned would be known here. But, monks, since there is a not-born, not-become, not-made, not-dispositionally-conditioned, therefore an escape from the born, become, made, dispositionally-conditioned is known. (Woodward, 1931, pp. 80–81)

Future Directions

Since the advent of logical positivism and empiricism, cross-cultural scholarship has placed heavy emphasis on applying the Buddhist teachings to our experiences originating in our day-to-day world and limited to our ordinary senses. A great many scholars and practitioners of psychotherapy and medicine have emphasized the usefulness of Buddhist meditation practices to reduce stress, treat obsessive–compulsive disorders, or improve emotional intelligence. These empirical and positivist approaches utilize some aspects of the Buddha's teachings. The following future directions might help us better benefit from the Buddha's teachings from a broader and comprehensive perspective. The following recommendations are made to augment the current synthesis and expand it in new directions:

1. The relevance and usefulness of the Buddha's teachings for the emerging trends in psychology, such as positive psychology, cultural psychology, parapsychology, and transpersonal psychology, need to be studied in more detail. For instance, how could the early Buddhist teachings on consciousness help us better understand the nature of near-death experience? How could the early Buddhist teachings of the cultivation of wholesome state, such as compassion or love, help us advance the field of positive psychology?
2. Within Buddhist scholarship, a greater emphasis needs to be placed on the study of nonordinary states of consciousness. To this end, the distinction between the *Dhammika* monks and the *Jhayin* monks as described in the *Nikayas* needs to be explored in more detail. The field will also benefit from exhibiting the flexibility and openness that the life and teachings of the Buddha attest to.

3. The field of religion and spirituality could benefit from the Buddha's teachings by reevaluating the role and experience of the individual in religious and spiritual quest.
4. The early Buddhist sources on the nature of higher states of consciousness should be utilized more broadly to inform the contemporary debate on what is termed as *the problem of pure consciousness*.
5. Last, the psychological implications of our infatuation and attachment to views and theories need to be studied. We have become, what may be popularly termed, an "argument culture." Early Buddhist teachings on the nature and efficacy of arguments, theories, and views might help us better understand the psychological implications of an *argument culture*.

Conclusion

This last quote from the *Nikayas* brings us to a full circle. We began with Siddhartha's attempt to face and understand the cyclical events of human life. The old age, disease, death, and the human pain prompted Siddhartha to embark on his spiritual journey to seek and find answers to the questions that bothered him. Siddhartha's spiritual inquiry led him to many teachers and many teachings of his time. As discussed in the previous sections, although Siddhartha experimented with many teachings of his time, they did not answer his questions or point a way out of the causal chain of dependent co-origination that bound one to suffering and the cyclical existence of human life. As part of his existential search, the Buddha developed his own method and charted his own path. The knowledge of the higher states of consciousness and the transcendence practice developed by the Buddha help us understand that just as there is a causal chain that binds one to suffering, that there is a causal chain that liberates one from suffering. Both these causal chains are linked, although their contents are very different. As it is said in the *Sutta Nipata*, "Even as the white lotus sprung up in the water with its thorny stalk is not sullied by water and mud, even so the sage who professes peace and is free from avarice is not sullied by the sense desires and by the world" (Saddhatissa, 1994, p. 99). The Buddha's spiritual inquiry into the nature of reality and his spiritual method help us understand both the arising and passing of the ordinary states of consciousness as well as the arising of the higher states of consciousness.

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Select Glossary

A Pali to English dictionary is available online at <https://dsal.uchicago.edu/dictionaries/pali/>

The terms in the following list are identified by a letter indicating their language as follows: P, Pali; S, Sanskrit. Some terms explained in the main body of the text are not repeated here.

Abhidhamma <P>: The higher *dhamma* or advanced teaching. One of the three caskets of the *Pali* canon. The *Theravada* school of Buddhism relies heavily on the teachings of *Abhidhamma*.

Acintiya <P>: Inconceivable.

Akala <P>: Timeless.

Amata <P>: Deathless.

Anatta <P>: No-self.

Anicca <P>: Impermanent.

Animitta-ceto-samadhi <P>: Signless concentration of consciousness.

Anupadisesha <P>: Without remainder.

Appamana <P>: Immeasurable, the opposite of *pamana*.

Arahat <P, S arahant>: Enlightened person who has the Buddha as his/her teacher. The *Pali canon* identifies some direct disciples of the Buddha as *arahat*.

Ariya-sacca <P>: The four noble truths.

Arupavacara <P>: The formless sphere (of consciousness).

Ayatana <P>: Sense sphere.

Bhagava <P, S bhagvan>: The Blessed One.

Domanassa <P>: Sorrow.

Ekagatta <P, S ekagrata>: One-pointed concentration.

Iddhi <P, S siddhi>: Paranormal accomplishment such as flying through the air or appearing from nowhere.

Kilesa <P, S klesha>: Defilement of the mind leading to a conflict.

Kusala/Akusala <P>: Wholesome/unwholesome states of mind.

Magga <P, S marga>: Path. In early Buddhism and Theravada Buddhism, it refers to the eightfold path.

Paccakha <P, S pratyaksha>: Perception.

Pamana <P, S pramana>: Proof of evidence based on measurement.

Panna <P>: Wisdom.

Paramattha <P, S paramartha>: Ultimate. This is in contrast to conventional (*vohara*).

Paticcasamuppada <P, S pratityasamutpada>: Codependent origination.

Phalasamapatti <P>: Attainment of fruit.

Saddha <P, S sraddha>: Faith.

Sankappa <P, S sankalpa>: Resolve.

Sankhara <P, S sanskara>: Sense-impression.

Sanna <P>: Perception.

Sati <P>: Awareness based on the arising and passing of the phenomena.

Sunna <P>: Void or empty.

Sutta <P, S sutra>: A concise and unambiguous explanatory description of a concept or a theory.

Tanha <P>: Craving.

Tipitaka <P, S tripitaka>: Three caskets of the Pali canon.

Upadana <P>: Clinging to an arising.

Vedana <P, S>: Feeling (generally identified as a painful feeling).

Vimokkha <P, S vimoksha>: Special liberation.

Yathabhutam <P, S>: The reality as is.

The Spirituality–Physical Health Linkage: The Key Roles of Emotions

Crystal L. Park, Jeanne M. Slattery, and Tingyi Cao

Abstract

A large and expanding literature demonstrates links between religiousness/spirituality (R/S) and physical health; many different mediators of this relationship have been proposed. This chapter focuses specifically on one of these pathways, positive and negative emotions. We briefly review the literature regarding the effects of R/S on physical health and the effects of physical health on R/S, then present a model of the reciprocal influences of R/S and health and how positive and negative emotions may serve as potential mediators of these relationships. The chapter then reviews theory and research findings regarding these links, concluding with suggestions to guide future research.

Key Words: religion, spirituality, positive emotions, negative emotions, physical health

Spirituality, Emotions, and Physical Health

Religiousness and spirituality (R/S) have been well-established as being consistently and moderately strongly associated with physical health and well-being (see, Koenig, 2015, for a review). These relationships are complex and the directionality of influence appears to go both ways: R/S can affect physical health and physical health can affect R/S. However, the mechanisms underlying these relationships remain relatively poorly understood: Many pathways have been proposed to explain these linkages, but little evidence exists regarding many of those proposed pathways (Park & Carney, 2019).

Emotion, the focus of this review, has been shown to mediate both the influence of R/S on health status and the influence of health status on R/S (Park & Slattery, 2012). The present chapter focuses explicitly on the role of emotions in this link between R/S and health. In our model of the reciprocal influences of R/S and health, we propose that emotion is an important mediator of their mutual effect. We conclude with questions that may guide future research.

Relationships between R/S and Health

The literature on relationships between R/S and health suggests that the two are related, but not in a clear, linear way. It seems likely that (a) R/S affects health *and* (2) health affects.

Religiousness and Spirituality Affect Health

In recent years, researchers have become increasingly interested in the influence of religion and spirituality on physical health (see Koenig, 2015). Epidemiological studies have long demonstrated that higher levels of religiousness, as assessed by membership and service attendance, are related to lower mortality rates (Oman, 2018). These relationships between R/S and health may be stronger for women than for men (Schnabel, 2018). These superior health outcomes appear to be related to a variety of factors, including that people attending religious services are more likely to receive social support and to engage in health-promotive behaviors like exercise and less likely to engage in health-adverse behaviors like cigarette smoking (e.g., VanderWeele, 2017). However, the positive health consequences of R/S hold up even when potential covariates such as baseline health, social support, and health behaviors are taken into account (e.g., Li et al., 2016).

Religiousness and spirituality have also been reported to have negative consequences on health. Among these factors are that some religions oppose certain health interventions (e.g., transfusions and contraception) and may stigmatize certain illnesses, thus preventing adherents from receiving medical help; members of religious groups who expect divine intervention with their illnesses may delay medical care relative to people with other belief systems; prejudice against members of religious or spiritual groups may cause stress that, in turn, causes problems in mental or physical health; and perceived spiritual and religious transgressions can cause spiritual pain and decrements in physical health (Köteles et al., 2016). Some religions promote a more fatalistic approach to life, which can interfere with health-promoting behaviors (Vu et al., 2016). These problems can be exacerbated by religious leaders or fellow congregants who predict dire outcomes, such as eternal damnation, for those who violate religious beliefs and precepts.

Recognizing the multidimensional nature of religiousness and spirituality, researchers have more recently broadened their focus from group membership and religious service attendance to private religious behaviors, commitment, spiritual transcendence, and religious coping (Morris et al., 2019; Park & Carney, 2019). Research has yielded generally positive, although somewhat mixed, findings regarding relationships between R/S and health (Speed, 2018). For example, aspects of religiousness predict lower rates of disability and of a range of illnesses, including alcoholism, cardiovascular disease, hypertension, and myocardial infarction (Rafferty et al., 2015). Specific religious activities like prayer, meditation, and yoga are associated with positive physical and mental health outcomes (Simão et al., 2016; Birdee et al., 2017). In addition, to the extent to which individuals regard their bodies as sanctified (e.g., as a temple of God), they are more likely to engage in higher levels of health-promotive behaviors (Kopp et al., 2017).

One difficulty in interpreting this literature is that R/S is associated with other factors that may themselves be associated with health. These factors include tobacco use, alcohol and other drug use, social support, sexual behaviors, and education (L. B. Koenig & Vaillant, 2009). There is, however, some evidence that R/S itself, in addition to these

covariates, influences subsequent health (cf. Lee & Newberg, 2010). For example, in a sample of 177 people living with HIV, even after controlling for a host of covariates, spiritual coping was associated with positive health indices such as maintaining long-term viral load (VL) suppression, having less likelihood of substance use disorder relapse over time, having reduced risk of HIV transmission via VL suppression, and preserving immune functioning (Kremer et al., 2015).

In addition, R/S may facilitate adherence to treatment regimens (Romero et al., 2018), which can substantially improve physical health (Rowe et al., 2019), although little research has tested this proposition. One study of congestive heart failure (CHF) patients found differential effects for different dimensions of religion and spirituality on different aspects of adherence (Park et al., 2008). In particular, religious commitment predicted adherence to CHF-specific behaviors (e.g., fluid/weight monitoring) and advice regarding alcohol and tobacco use. Religious social support also predicted self-reported adherence to physician's advice regarding substance use. No religious or spiritual variables were related to adherence to diet, and neither positive nor negative religious coping was related to adherence to treatment.

On the other hand, some aspects of R/S are related to worse health outcomes. For example, in a study of individuals with heterogeneous health conditions, having more negative religious beliefs (e.g., feeling abandoned or punished by a higher power) was associated with poorer physical and mental health and higher levels of pain (Jones et al., 2015).

Health Affects R/S

Health crises have been documented to lead to reports of both positive and negative shifts in dimensions of R/S. For example, in a study of medical rehabilitation patients, 37% reported that they became significantly more spiritual during their rehabilitation (Kim et al., 2000). Indeed, a large body of literature has documented reports of more general perceived posttraumatic growth in those with physical health problems (Park et al., 2008), ranging from heart disease (Magid et al., 2018) and brain injury (Pais-Hrit et al., 2019) to cancer (Walsh et al., 2018). The majority of the research on perceived posttraumatic growth has been conducted with cancer survivors (Walsh et al., 2018), and whereas self-reports of increased spirituality are common, cancer survivors typically do not appear to differ in their spirituality on objective measures from control participants when appropriate covariates are included in analyses (e.g., Andrykowski et al., 2005; Costanzo et al., 2009; cf. Helgeson & Tomich, 2005).

On the other hand, not everyone reports an increased sense of meaning or closeness to God when experiencing a health crisis (Cole et al., 2008). In times of sickness, people may withdraw from God and disavow their religious and spiritual beliefs (Trevino et al., 2016). For example, in the above-cited study of medical rehabilitation patients, 32% reported that they became significantly *less* spiritual (Kim et al., 2000). Finally, some

people may withdraw from their religious and spiritual activities because their poor health interferes with their ability to engage in these practices (Sowa et al., 2016).

The opposite may be true for those in good health, in that those who are feeling healthy and able-bodied may become more engaged in the everyday activities of life, including religious or spiritual ones. Being able-bodied and healthy may also allow people to attend services and other religious or spiritual programming such as congregational life and volunteer work (Principi et al., 2016). Indeed, poor health is one of the main barriers to participation in religious volunteer activities (Principi et al., 2016).

A Model of Religiousness/Spirituality–Health Relationships

Figure 22.1 highlights the reciprocal nature of physical health and dimensions of R/S, and specifically focuses on the mediational role of emotions in the R/S-health links. Although R/S and health are clearly associated, the direction of this influence is less clear. Research has mostly been conducted using cross-sectional designs, and even longitudinal studies have rarely adequately tested alternative directions of influence. Our model is based on the presumption that both directions of influence are not only plausible but likely (e.g., Park et al., 2010). That is, aspects of R/S influence physical health and well-being, and physical health and well-being influence aspects of R/S. Moreover, given that these influences likely recur over a lifetime, a recursive model seems to best represent these influences, as seen in figure 22.1.

In addition, our model examines emotion as a mediational pathway that likely operates in both directions. Many different theories have been advanced to explain how religion and spirituality may exert salutary influences on well-being (e.g., Park & Carney, 2019). For example, a study of university students found that religious service attendance benefits mental health through increased social support and intrinsic religious motivation

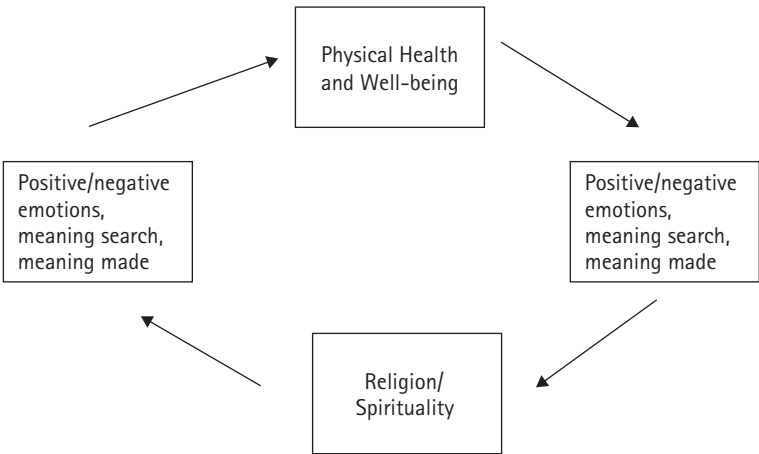


Figure 22.1 Reciprocal Model of Hypothesized Relationships Among Religiousness/Spirituality, Health, and Emotion

(Steffen et al., 2017). The stories told by religious traditions and the modeling of R/S leaders may also influence health behaviors in either positive or negative ways (Speed, 2018).

Among the many pathways linking R/S and health is emotion (Hossain & Rizvi, 2016), which appears to mediate both directions of the reciprocal model (i.e., R/S to health and health to R/S). Copious research has demonstrated that emotions and affect are related to health, in part by influencing the immune (Kabat-Zinn, 2018), cardiovascular (Tuck et al., 2017) and endocrine systems (Lopez et al., 2018), but also by influencing coping and health behaviors (Lansing et al., 2019). A large but fairly separate body of literature has linked R/S and emotions (Hossain & Rizvi, 2016). In this chapter, we focus on emotions as mediators of the reciprocal R/S-health relationships. Our model is not intended to minimize the influence of other possible mediators on R/S-health relationships, but rather focuses, for purposes of explication, on this particular piece of the puzzle.

Emotion as the Mediator of the Influences of R/S on Health

Clearly, different dimensions of R/S can have different influences on emotions, which would be expected to have a variety of effects on health. For example, R/S may promote positive emotions through religious practices such as prayer and meditation; through religious beliefs, which may provide comfort and salutary interpretations that help to buffer potentially stressful life events; and through particular spiritual-related states such as gratitude, forgiveness, or compassion, which have been related to better physical health. In addition, there are ways by which R/S can also lead to negative emotions, which can have deleterious effects on health. These health-promotive and health-inhibiting influences are detailed below.

Religious beliefs can be comforting in the face of major illnesses and can also provide avenues for coping that may lead to better physical as well as emotional outcomes (Oman, 2018). Most religions provide ways to understand, reinterpret, and even redeem suffering, as well as ways to find the work of a loving or purposeful God within it (Wilt et al., 2016), and individuals often turn to religion in their coping efforts (e.g., Eppsteiner & Hagan, 2016). Research has documented that positive religious coping has positive effects on psychological as well as physical health, plausibly mediated through increased positive emotions (Oman, 2018; Van Cappellen et al., 2016). For example, in two cross-sectional studies, relations between R/S and well-being were mediated by positive emotions such as awe, gratitude, love, and peace (Van Cappellen et al., 2016).

Further, many religious traditions promote forgiveness (Krause, 2015) and gratitude (Kraus et al., 2015), states that are related to better physical health. Regarding forgiveness, a national probability sample found it to be related to better self-reported mental and physical health, especially for middle-aged and older adults (Rasmussen et al., 2019; Toussaint et al., 2018). In a workplace setting, forgiveness may be associated with salutary occupational outcomes by reducing stress related to workplace offenses (Toussaint et al., 2018). A meta-analysis of 103 independent samples found a reliable overall association

between forgiveness and physical outcomes, with association stronger for psychological health than physical health. The results found that forgiveness might improve psychological health (depression, anxiety, and posttraumatic stress disorder) and physical health (blood pressure, cortisol levels, bodily pain, and cardiovascular stress) (Rasmussen et al., 2019).

The effects of gratitude on physical health are less well-established, although suggestive of a positive relationship between gratitude and positive health. In a study of people with cancer, being grateful was positively related to quality of life (Souza, 2018). These same favorable effects have been found in healthy participants too. For example, an experimental study of healthy participants found that those assigned to the gratitude condition (i.e., to keep daily gratitude journals for 21 days) showed greater increases in positive affect than those in the control condition, who reported a reduction in well-being (Lai, 2017). This research is limited, though, in that such interventions are relatively brief and unlikely, as a result, to greatly shift health symptoms and complaints, which tend to be fairly stable.

In addition to forgiveness and gratitude, religions often promote other positive states such as compassion, optimism, and hope (Worthington et al., 2015). Although researchers have proposed that these qualities may lead to positive affect and thus to higher levels of positive physical as well as psychological well-being, little evidence exists tracing the physical health effects of religion or spirituality to or through these positive psychological qualities and concomitant positive emotions.

Some aspects of R/S have detrimental influences on health and well-being, especially negative aspects associated with spiritual strain or religious struggle, including anger, guilt, or doubts about the existence of God (Abu-Raiya et al., 2016). For example, a large-scale study of Americans found that people who engaged in religious disaffiliation experienced poorer health and lower well-being than did those who remained either consistently affiliated or unaffiliated (Fenelon & Danielson, 2016). One widely cited prospective study found that, for a sample of inpatients with a variety of problems, the use of negative religious coping in the hospital (in particular, interpersonal religious discontent and appraisals of the illness as a punishment from God) was associated with subsequent declines in health and significantly increased mortality rates at two-year follow-up, even controlling for relevant demographic and baseline characteristics (Pargament et al., 2001). In a study of people aged 50 or older from low-income and predominantly minority neighborhoods, negative religious coping was associated with greater anxiety, worry, and depression (O'Brien et al., 2019). In a study of Iraq and/or Afghanistan veterans, negative religious coping was uniquely associated with suicidal risks (Currier et al., 2017). Among a sample of HIV-positive patients, negative feelings toward God and passive coping were negatively associated with health-related quality of life (Moharer et al., 2018). Similarly, negative spiritual experiences were associated with poorer general health perception in another sample of rehabilitation patients (Taheri-Kharamah et al., 2016). In the above-mentioned

study of survivors of a variety of cancers, spiritual struggle, mediated through guilt, was related to poorer health behaviors and treatment adherence (Zamanian et al., 2015). In a study of women with breast cancer, negative religious coping was significantly associated with worse quality of life (Zamanian et al., 2015).

Emotion Mediates the Impact of Health on R/S

The bulk of the literature on the role of emotions mediating the impact of physical health on subsequent R/S focuses on negative health states and physical disability rather than more positive states. As noted above, studies of medical patients dealing with various health issues have shown that a significant portion become less religious and spiritual following their diagnosis, although a significant number also become more religious and spiritual during the same period (Eppsteiner & Hagan, 2016; Trevino et al., 2016). It is plausible that these changes depend on changes in emotion, but to date the literature is merely suggestive. Extensive research has demonstrated that perceptions of posttraumatic growth (including a spiritual component) following serious illness, cited above, are common (Mazor et al., 2018). This perceived growth is sometimes associated with higher levels of positive affect and lower levels of negative affect (e.g., Jim et al., 2015; Ochoa et al., 2017). In a meta-analysis of studies on R/S and physical health of cancer patients, perceived spiritual growth was related to better health (Jim et al., 2015). However, the direction of any causal influences has not been clearly demonstrated.

As noted above, there is little research documenting that positive health states and able-bodiedness influence R/S. There is even less literature regarding the potential for emotion to mediate this influence. It is plausible that individuals who are healthy feel gratitude and happiness, which may lead them to a deeper level of spirituality; such links await scholarly examination but may be a fruitful direction based on recent work in positive emotions. For example, an experimental analog study in which participants viewed videos demonstrated that inducing intense positive emotions, such as wonder and awe, increased religious beliefs (Saroglou et al., 2008). Positive emotions following from one's own heightened sense of vigor and health might function similarly.

Future Directions

Although connections between religiousness and spirituality and physical health are well-established, the direction of these relationships, and the pathways of influence, remain only partly understood. It appears that R/S and physical health influence one another in multiple and reciprocal ways. We propose a model in which positive and negative emotions are mediators of both directions of effect. In reviewing the literature regarding this model, evidence regarding some of these links is fairly strong (e.g., between spiritual struggle and subsequent health decrements), while for others, the links remain merely speculative (e.g., between healthfulness and subsequent R/S). However, the model we

have developed in this chapter is quite promising as a framework for future theory and research to develop a solid understanding of these relationships.

Recursive Relationships

Our model supposes that R/S and health influence each other, such that R/S can lead to changes in health status and health status can lead to changes in R/S. We view this recursive relationship as taking place across time, such that, in the course of a lifetime, many such transactions may take place. Descriptive studies of retrospective recollections of these influences could be quite useful for generating hypotheses; even more useful, albeit much more difficult, would be longitudinal research to track these interchanges between health status and R/S across time. As most research on R/S and health is correlational in nature, longitudinal research could help establish causality and the nature of the causal relationship (Lee & Newberg, 2010).

The Influences of Positive Health on Religiousness and Spirituality

Our search of the literature found much to suggest that R/S can be a resource for promoting positive health, and that negative health states can spur changes in R/S. However, we found no literature examining the question of how positive physical health states (e.g., vitality, strength, and healthfulness) related to subsequent R/S dimensions. Given the prominence of positive psychology in recent years (Donaldson et al., 2015), the question of how positive health states might influence an individual (including his or her religious or spiritual life) seems an obvious one to ask. Research remains to be conducted.

Emotions as Mediators of Religiousness/Spirituality–Health Linkages

Many potential mediators of the relations between R/S and physical health have been proposed (Park & Carney, 2019). Our model hones in on only one of these, emotion. Emotional states have been related to health outcomes in a variety of illnesses (e.g., Potijik et al., 2016), as well as to mortality (Xu & Roberts, 2010). Furthermore, positive and negative emotions have been shown to be two distinct constructs, each uniquely related to health outcomes (Xu & Roberts, 2010). We propose that positive and negative emotions may prove to be a key mediator of the mutual influences of R/S and health. However, our review suggests that these linkages are still largely conjectural. That is, the positive health outcomes of forgiveness, for example, may be primarily due to cognitive or behavioral changes, rather than the associated affective changes, per se. Future research could profitably address how positive and negative health states may lead to R/S changes through various positive and negative emotions, and how R/S influences the experiencing of positive and negative emotions, which may lead to changes in physical well-being.

Given that positive and negative emotions are two distinct phenomena, researchers must be careful to assess a variety of both positive and negative states in examining emotion's ability to mediate between R/S and health outcomes. Furthermore, researchers must

determine whether religiousness and spirituality provide a unique contribution to predicting health outcomes, over and above their ability to elicit positive or negative affect.

Individual Differences

Findings regarding the relationships between R/S and health are intriguing, yet readers must keep in mind that these findings comprise averages of groups of individuals, and that within these groups, large individual differences exist. For example, in Kremer et al.'s (2009) study of HIV+ participants, many identified their HIV diagnosis as a positive turning point leading to increased spirituality, although others found their diagnosis to have led to decreased spirituality. In a health crisis, some people's previous religious beliefs have been shown to decrease while others may turn to religion for help (Eppsteiner & Hagan, 2016; Trevino et al., 2016). In one study of Arab women living in Israel, some reported religious and cultural values encouraging breast and cervical cancer screenings (e.g., body sanctification), while others described beliefs interfering with those screenings (e.g., fatalism and believing that one's life and death is in God's hands) (Azaiza & Cohen, 2008). Ultimately, research needs to understand more about the roles of R/S, especially what causes some people to perceive negative health states as positive turning points, leading to greater R/S, while others perceive these changes more negatively and become more alienated from their faith.

Difficulties in Measuring Religiousness and Spirituality

Finally, most research on the relationship between R/S and health has been conducted using self-report measures. However, self-report measures are problematic, in that participants may make inaccurate observations and reports of religious behaviors (e.g., Marler & Hadaway, 1999; Nisbett & Wilson, 1977), respond according to social desirability biases (Marler & Hadaway, 1999), have difficulties reading materials (Hill & Pargament, 2003), or feel disengaged in the research and assessment process (Hill & Pargament, 2003). Alternative assessments of beliefs, attitudes, and behavior (e.g., children's drawings of God, narrative responses about coping with illness, and observations of religious behavior) may further elucidate the relationships between R/S and health (Lee & Newberg, 2010).

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Spirituality, Religion, Health, and Professional Psychology

Thomas G. Plante

Abstract

Most people believe in the divine in some form and consider themselves to be spiritual, religious, or both. However, most psychologists and other mental health professionals perceive themselves as not religious and have little if any training or interest in spirituality and religious diversity. Psychologists and other healthcare professionals can use spiritual principles and practices to better serve their clients, even if they do not share the same or any religious or spiritual engagement. Benefits of religious/spiritual engagement for physical, social, and mental health are discussed in this chapter along with religious hazards to health. Spiritual tools commonly found within the major religious traditions are also discussed and suggested for use by psychologists and others. Assessment, intervention, ethical, and research issues are discussed as well.

Key Words: spirituality, religion, faith, health, counseling, psychotherapy, professional issues

Introduction

What accounts for the growing interest in health-related disciplines and professions, such as psychology and medicine, in religion and spirituality, especially its relationship to health, disease, and well-being? In recent decades, many professional books have been published (e.g., Koenig et al., 2012; Koenig et al., 2001; Oman, 2018a; Paloutzian & Park, 2014; Plante, 2018a; Plante & Thoresen, 2007). Countless empirical articles have been published as well and scores of conferences and continuing education workshops have been conducted for healthcare professionals too. In fact, a comprehensive professional literature review revealed more than 2.5 million published books, chapters, and peer-reviewed professional articles on the general topic of faith and health. Furthermore, 235,000 books, chapters, and peer-reviewed professional articles have been published on the more specific topic of religion, spirituality, health, and psychological practice, with 11,800 books, chapters, and articles published during 2018 alone. Additionally, the relationship between faith and health has been frequently featured in many popular news magazine and television programs. In part, the growing interest has come from a public fascinated with spirituality, religion, and its connection with health outcomes

(e.g., Oprah introduced “Spirituality 101” as a regular feature of her once very popular television program).

Perhaps mindfulness-based stress reduction and yoga are the current most popular spiritually based practices that have captured the public’s imagination the most (Germer et al., 2013; Hofmann, 2013; Horovitz & Elgelid, 2015; Kabat-Zinn, 1990, 1994, 2003; Norcross et al., 2013; Rajesh, 2015). Yoga studios are now typically found in shopping strip malls and fashionable shopping centers in cities and suburbs across the land. And organizations, businesses, and institutions now offer mindfulness training and workshops for their employees and clients. In fact, Aetna, a major insurance company, has a chief mindfulness officer as part of their senior executive team. And young school children are offered mindfulness training as part of their regular secular school curriculum (e.g., Eggleston, 2015).

The popular interest also comes from a society seeking a greater sense of meaning, purpose, and significance in life, especially during so much turmoil in society associated with political divisiveness, economic disparity, incivility in public discourse, and various technological advancements and consequences such as the explosion of social media. What really matters in life? What is sacred? Help with these questions is not readily found in today’s fast-paced society where there is less involvement in social and community groups and organizations, less involvement in developing and maintaining close personal and intimate relationships, and diminishing participation in structured religious organizations that provide support and social and moral capital (Drescher, 2016; Putnam, 2000).

Current intrigue with spirituality and religion is found not only among the general population and some healthcare professionals but also among the psychological and counseling community as well. Although indifferent and antagonistic toward religion and spirituality for decades, psychology, among other disciplines, seems to be rediscovering its religious and spiritual roots with renewed interest which is most especially apparent in service delivery such as psychotherapy (Pargament et al., 2013; Plante 2009, 2018a).

This chapter focuses on the growing relationship between psychology and religion and spirituality, especially as it pertains to professional psychological practice, such as psychotherapy, counseling, and consulting. Empirical research regarding the mental and physical health benefits of spiritual and religious involvement is reviewed as well as its hazards to health. Also mentioned are spiritual and religious principles and tools that professionals can use ethically and with sensitivity in their professional work, regardless of their personal beliefs or religious affiliation. Important ethical issues as well as some empirical research challenges are discussed as well.

In the spirit of full disclosure, I am actively engaged in religious and spiritual practices and a practicing Roman Catholic married to an engaged Jew from the Reform tradition. I am committed to fostering a greater overall understanding of the role of spirituality and religion in psychology as a scientific discipline and as a health-related helping profession. As an academic conducting research and teaching students as well as a licensed

psychologist in clinical practice, I use a variety of quantitative and qualitative research methods in addition to teaching, supervising, and consulting activities.

Definitions, Ethics, and Diversity Issues

Before continuing, three important issues should be introduced. They concern defining key terms, ethical precautions, and diversity related issues.

Defining Religion, Spirituality, and the Sacred

People are sometimes confused about the definition of the words “religion” and “spirituality.” Such confusion is understandable since these terms are multidimensional (e.g., social, emotional, and cognitive) and multilevel concepts (e.g., processes within the person, within local organizations, within regions, within nation-states, and within the world at large). For example, the term “religion” can be used on a societal level as a social institution with organizational structures. It can also be defined on a group level as a faith community or on an individual level as involved with the search for significance in life in ways related to what is perceived as sacred (Pargament, 2007). Emmons and Paloutzian (2003) among others (e.g., Drescher, 2016), in reviewing theory and research over the past several decades, observed that the recent years have seen major changes in how religion and spirituality are conceptualized and understood. Mention is made of changing religious landscapes in the broader culture, especially with a “new breed of spirituality that is often distinct from traditional conceptions of religion” (p. 381). Zinnbauer and Pargament (2005) offer the many pros and cons of viewing spirituality as a part of religion or viewing religion as a part of spirituality.

One of the biggest changes has been the broadening perspective of how spirituality is conceived. Essentially, the term is no longer exclusively tied directly or indirectly to religious institutions and traditions. Now it is also applied to situations and experiences that are independent of any formal ties with particular religions or religious organizations. One of the most significant recent developments concerning spirituality has been the emerging relationship of spirituality with positive emotions viewed from an evolutionary perspective (e.g., Vaillant, 2008).

Religion is broadly viewed as a social institution with organizational and community structures that offer ways for people to understand and honor the wisdom traditions, generally through scriptures or religious writings and through rituals and beliefs viewed as sacred. Religious institutions generally offer an articulated doctrine or belief structure describing the specific values and beliefs of a faith community. Stated somewhat differently, religion commonly provides answers to (or at least reflections on) what have been called perennial questions about life and death (e.g., What really matters? Why do people suffer? Why am I here? What happens after I die?). It also provides structure and ways to deal with life transitions (e.g., birth, death, marriage, sickness, and coming of age). Religion especially highlights or elevates one or more revered religious leaders or spiritual

models to emulate, such as Jesus, Buddha, Moses, or Mohammed. In fact, research on spiritual modeling finds that spirituality is primarily “caught not taught” (e.g., Bandura, 2003; Oman & Thoresen, 2005, 2018a; Oman et al., 2012).

The world’s major religious faith traditions emerged during the Axial age and include Christianity, Judaism, Buddhism, Hinduism, Islam, and Taoism (Armstrong, 2006). Each tradition includes various branches, some highly similar and some quite differing from others in specific beliefs, values, and practices (Armstrong, 2006). For example, Christianity includes Roman Catholics; many Protestant denominations, such as Methodists, Presbyterians, and Baptists; and countless nondenominational churches not affiliated with an organized religious institution but based on their individual and sometimes unique interpretation of the Bible and the teachings of Jesus as well as other religious leaders. Within the Jewish tradition variations exist as well, such as Orthodox, Conservative, or Reform versions of Judaism. As noted earlier, a key role of a religion as an organized faith community is to help members and others better understand and relate to what is sacred through community engagement and through rituals, traditions, beliefs, and practices. While some religions are quite centralized and highly structured (e.g., the Roman Catholic Church), others are much decentralized with little organizational structure (e.g., Buddhism). Some traditions focus more on dogma and beliefs (i.e., orthodoxy) while others focus on desired behavior (i.e., orthopraxis). Some focus on liturgical activities, others on preaching, and still others on service, while still others balance all three components and much more.

Spirituality is understood at the level of the individual’s experiences in seeking what is perceived as sacred in life and associated in some way with the transcendent belief that a higher power or spirit exists that is greater than oneself. This connection might be associated with God, however defined or understood, to religious models, such as Jesus or Buddha, or to the natural world in general. The word “spirituality” comes from the Latin word, *spiritus*, meaning that which is vital to life, such as the breath or life force (Hage, 2006). William James (1902/1936) defined spirituality in relational terms as “the feelings, acts and experiences of individual men in their solitude, as far as they apprehend themselves to stand in relation to whatever they may consider the divine” (p. 32). In many ways spirituality can be perceived as a blend of positive emotions mixed with prosocial behaviors, such as the joy of feeling connected to something greater than oneself or with “heartfelt” gratitude associated with feeling loved or loving another person (Fredrickson, 2009; Plante, 2009, 2012).

Sacred is defined as what is perceived as holy, divine, eternal, or meaningful. Pargament (2007) defined the sacred as “concepts of God, the divine, and transcendent reality, as well as other aspects of life that take on divine character and significance by virtue of their association with or representation of divinity . . . at the heart of the sacred lies God, divine beings, or a transcendent reality” (pp. 32–33). In effect, a person can perceive many different things and experiences as sacred. Clarifying what a person

deems as sacred can help one better understand a major basis of motivation and focus in that person's life.

The phrase “spiritual but not religious” or “nones” has become a popular way to describe some people's religious/spiritual identity. Estimates of those identifying themselves in the United States as spiritual but not religious range from 20% to 35% (Drescher, 2016; Fuller, 2001; Hood, 2005; Mercadante, 2018). For example, in a study of 1,010 college students in four American universities (in the West, East, and South), 30% described themselves as “spiritual but not religious” while 41% saw themselves as “spiritual and religious” (Oman et al., 2009). Interestingly such data compare favorably to other major studies of spirituality and religion in young adults (Astin et al., 2005). However, in most recent years the numbers of students claiming to be “nones” (i.e., those who are unaffiliated with any religious institution or particular identity) has increased (Drescher, 2016).

The “spiritual but not religious” designation represents a fairly heterogeneous group. Some have rejected religious organizations for many reasons, such as their perceived rigid dogma, decrees, demands to be submissive or subservient, and requirements to accept unquestionably specific religious beliefs, traditions, and practices. For some, the connotation of being spiritual is currently perceived as quite positive whereas being religious is often viewed as negative. For example, many LBGQTI + people have felt especially rejected, judged, and condemned by religious organizations and thus turn away from organized religion seeking spirituality through other noninstitutionally religious means (Copeland & Rose, 2015). Several authors (e.g., Delaney et al., 2013; Pargament, 2007; Plante, 2009) report that psychologists and other contemporary mental health professionals often view spirituality among their clients as a good thing while religiousness is typically a bad thing. The extremely negative press associated with various religious scandals (e.g., clergy sexual abuse in the Roman Catholic Church, white evangelical pastors supporting alt-right political extremism and racism, and financial and sexual scandals within multiple church groups) as well as religiously inspired terrorism and violence has contributed to the notion that organized religion is destructive, hypocritical, dangerous, and outdated (e.g., Cragun, 2015; Hitchens, 2007). Perhaps it is a typical American penchant to be individualistic, such that they seek and select some elements of spirituality and religion that work for them and simply reject the rest (Drescher, 2016; Fuller, 2001). Yet while some have rejected organized religion altogether, others have held fast onto their faith traditions and communities, even following remarkable religious scandals and embarrassments.

It is interesting to note the results of the first major national study of spirituality and religion of the so-called millennium generation, those born in the mid to late 1980s (Astin et al., 2005). In this study of 112,232 youth, a clear majority viewed themselves as both spiritual and religious. Of these students, four of five believe in God, have attended at least one religious service in the past year, and frequently have discussed religion with friends and family. Almost one of two believe that it is “essential” or “very important” to seek ways to grow spiritually, 69% pray regularly, and more than 75% reported that they

are searching for greater meaning and purpose in life. These students expressed a great deal of interest in spiritually related questions, such as “What am I going to do with my life?” “What kind of person do I want to be?” “How do I know I am doing the right thing?” Almost two of three indicated that most people can grow spiritually without being religious.

Importantly, a great deal of diversity emerged among students in different faith traditions and from attending colleges in different regions of the United States. For example, students in southeastern colleges and universities were less likely to be interested in spirituality (cf. religion) than students from other regions. Those who identified with more conservative denominations were less likely to be interested in social issues, such as gender and sexual orientation, and they were less interested in worldwide humanitarian issues (e.g., world hunger, poverty, and discrimination). Students from Catholic and particularly Jesuit institutions tend to be more engaged by social justice activities and ministries (Plante & Halman, 2016; Plante & Pistoresi, 2017). Clearly the topic of spirituality and religion holds interest among many young adults regardless of their denominational affiliations or not.

Ethical and Diversity Issues

There are many ethical issues and concerns that need to be mentioned in this area of research and practice. First, when it comes to matters of spirituality and religion, professionals need to work within their area of competence and must not overstep their professional bounds as well as their professional licenses to practice. We as psychologists and other healthcare professionals are obligated to perform our duties consistent with our training, experience, licensure, and ethics codes. That means following ethical guidelines of competence as well as legal requirements that license to practice demands (American Psychological Association, 2017; Plante, 2018b). Second, professionals must carefully avoid potential dual relationships, especially when their clients are members of their own faith tradition and perhaps part of the same spiritual and faith community. Unforeseen dual relationships and conflicts can easily emerge. One must be very sensitive to potential exploitive dual relationships as well as the unforeseen consequences that can unfold when working with fellow congregants (Plante, 2018b). Finally, professionals must be careful to avoid potential bias or proselytizing by not promoting one particular religious belief system over another, most especially their own.

Professionals, as well as the general population, often may have certain positive or negative perceptions about particular religious or spiritual communities. As noted earlier, one needs to be attentive to the rich diversity of beliefs and practices, even within each particular religious or spiritual tradition. We must steer clear of religious stereotyping of others, a problem that is prevalent in many cultures. Healthcare professionals and psychologists can experience and perpetrate bias and prejudice especially if they are not interested in or experienced with religion and spirituality. This is especially true for those

psychologists who have had little or no contact with members of a particular religious group in either their professional or personal lives (Delaney et al., 2013; Plante, 2009, 2018b).

Literally all religious and spiritual communities, along with their beliefs, rituals, and practices, exist as a part of a particular culture or subculture. Spiritual and religious customs are commonly deeply steeped in ethnic and cultural diversity. For example, Roman Catholics from Europe may engage in different religious traditions and practices relative to fellow Catholics from Latin America. Jews from Israel may experience their faith and cultural tradition quite differently than those from parts of Europe or North America. Subtle and not-so-subtle cultural, ethnic, geographic, and political differences may be part of religious experience, customs, and traditions. In fact, many religious and spiritual beliefs and practices originated within a particular ethnic and cultural community before being adopted more broadly by a particular religious tradition. Two very simple examples: Christmas trees and Easter bunnies. The point here is that specific cultural influences are often intimately woven into religious and spiritual experience and expression (American Psychological Association, 2003, 2017).

Benefits of Religious and Spiritual Engagement

Mills (2002) reported that almost 1,700 empirical studies of religion and health had been published in professional and research-oriented journals by the year 2000. During the same time, about 700 had been published on spirituality and health. Since the year 2000, 1.8 million articles, chapters, books, and reports have been published according to a recent Google Scholar search. The field has exploded during the 21st century.

The term “health” itself has expanded to include not only “conditions of the body” but, more important, “states of mind” (Ryff & Singer, 1998; Thoresen & Eagleston, 1985) using a contemporary biopsychosocial perspective (Franke et al., 2003). Although most people still associate health with medicine, biology, and disease, many have expanded its meaning to include a person’s overall life experiences. Examples include the hospice care movement, the association between stress and health, global environmental factors, and positive emotions. Some have suggested that while in the 20th century, psychology first lost its soul and then its mind, it is now beginning to recall them both in the 21st century. In doing so, psychology may be becoming more focused on human nature and the whole person in context, rather than only focused on a person’s behaviors, cognitions, or personality (Frankel et al., 2003; Miller & Delaney, 2005).

The vast majority of high-quality research supports a positive relationship between religious involvement and beneficial health outcomes (King & Koenig, 2013; Koenig et al., 2001, 2012; Pargament, 1997; Plante, 2009, 2018a; Plante & Sherman, 2001; Plante & Thoresen, 2007; Richards & Bergin, 2005). People engaged in participating regularly in a religious and spiritual tradition tend to be healthier and happier, maintain better habits, and experience more social support compared to those less active or not at all involved.

Mental Health Benefits of Spirituality and Religion

An extensive review of research involving literally hundreds of studies of mental health benefits of spirituality and religious involvement suggests that it is related to less anxiety, depression, chronic stress, and greater perceived well-being and self-esteem (King & Koenig, 2013; Koenig et al., 2012; Koenig et al., 2001; Plante, 2009, 2018a; Plante & Sharma, 2001; Plante & Thoresen, 2007; Thoresen, 2007). They often tend to cope better with major and minor life stress. They are, for example, less likely to have alcohol and other substance abuse problems, have eating disorders, and be divorced, and less likely to attempt suicide or homicide or to engage in criminal behavior. Generally, they live a healthier overall lifestyle, with better social support, usually avoiding health-damaging behavior patterns. In general they have better mental health functioning, including mood and general affect control, than those not regularly involved religiously or spiritually.

Despite hundreds of studies, the evidence does not demonstrate or prove that religion or spirituality by itself *directly* causes better mental or physical health. Instead the evidence clearly implicates spiritual or religious practices over time in processes involved with better physical and mental health compared with non-religiously active people. Specific causes of this beneficial relationship, however, remain unclear. Religion and spirituality many serve as a positive factor in good health and well-being but not as the only factor. Rather, spiritual and religious factors appear to serve as one of many other *indirect* but significant factors in promoting good health and well-being (King & Koenig, 2013; Koenig et al., 2012; Oman, 2018b; Thoresen & Harris, 2002).

Physical Health and Longevity

Research thus far has suggested that the physical health benefits associated with spirituality and religious involvement are impressive (Koenig et al., 2012; Powell et al., 2003). Spiritual and religiously active people tend to live longer, to be less likely to develop serious medical illnesses, and to recover faster from illnesses than others. In fact, meta-analytic research based on long-term prospective studies involving tens of thousands of adults shows that religiously oriented people, in general, live on average seven years longer than non-religiously minded people. This is the case even when statistically controlling for age; gender; socioeconomic status; family history of disease; health behaviors, such as smoking, drinking alcohol, and diet; and other known risk factors for risk of mortality, such as social support (McCullough et al., 2000; Oman & Thoresen, 2005; Powell et al., 2003). For example, Hummer et al. (1999) investigated more than 21,000 adults in a national sample examining disease and mortality. They controlled for 15 likely factors that influence health outcome, such as those mentioned previously plus others. Compared to the highest religious attendance group (attending some kind of religious service more than once per week), the non-religious attendance group suffered 50% more deaths, the occasional religious attendance group (defined as once per month) had 24% more deaths, and the group attending religious services once per week had 15% more deaths. Examining

results in years of life, the highest religious attendance group lived 7.6 more years than nonattendees. These results provide the kind of evidence that mandates the need to clarify what factors best explain these results. Unexamined, however, in most studies were indicators of quality of life and several other mental health indicators, particularly positive indicators that could shed even more light on these extraordinary findings.

When 29 independent studies of religious involvement were reviewed using meta-analysis totaling 125,826 adults and 15 potentially influencing factors were controlled, weekly or more religious attendance yielded 29% fewer deaths than nonattendance. This figure dropped to 23% when social support was included in the analysis. The longevity benefit for frequent church attendance was seven additional years of life (McCullough et al., 2000). Using a more qualitative review process focused on the quality of the research designs, statistical analyses used, and precision of other measures, Powell et al. (2003) found that in nine highly rated studies, higher religious service attendance mortality rates were 25% lower than for nonattendees in general population samples of reasonably healthy adults.

The National Institutes of Health convened an expert panel (see Miller & Thoresen, 2003; Powell et al., 2003) to conduct a critical evaluation using rigorous scientific criteria. The panel concluded that “persuasive” evidence exists that active religious and spiritual involvement is significantly correlated over time in controlled prospective studies with lower all-cause mortality. The overall results indicated a 25% to 30% reduction in mortality. On average, people who are active in religious or spiritual activities can expect to live about seven years longer than nonreligious or less religiously active people. In one major study African Americans males lived almost 14 years longer than nonactive African males (see Powell et al., 2003). Clearly, active religious and spiritual engagement for many consistently appears to enhance their health broadly viewed over time.

Tragically, many mental and physical health problems are self-inflicted and thus could be prevented. Roughly 50% of all deaths in Americans and in the developed world are due to lifestyle habits and behaviors, such as smoking cigarettes, excessive eating and drinking, and lack of regular physical exercise (Centers for Disease Control and Prevention, 2018). As already discussed, those who are actively engaged in religious and spiritual practices live a healthier lifestyle than those less active or not at all active. In doing so, they minimize many risks associated with the major chronic diseases, such as various cardiac diseases (e.g., Koenig et al., 2012; Koenig et al., 2001; Oman, 2018a; Oman & Thoresen, 2005; Plante, 2018a; Powell et al., 2003).

In response to these and other findings, the Association of American Medical Colleges has expressed the value of spirituality and religion in quality health care, stating:

Spirituality is recognized as a factor that contributes to health in many persons. The concept of spirituality is found in all cultures and societies. It is expressed in an individual's search for ultimate meaning through participation in religion and/or belief in God . . . (and) . . . can

influence how patients and health care professionals perceive health and illness and how they interact with one another. (Association of American Medical Colleges, 1999, pp. 25–26)

Community Benefits

Many community benefits exist for active spiritual and religious involvement. Since those who tend to be religious and spiritual also tend to stay married and are less likely to engage in behaviors that could harm others, such as unsafe sexual practices, drunk driving, and criminal activity, spirituality and religiousness appears to foster a more livable and healthy community. Spiritually and religiously oriented people tend to take better care of their local as well as the global community, supporting charitable causes, and especially participating in volunteerism. In fact, an added benefit of helping others in need through volunteerism is less disease and longer life (Oman & Thoresen, 2005).

To illustrate, in one major study, Oman et al. (1999) followed almost 2,000 older persons in Northern California for over two decades in terms of how many regularly volunteered to help others in the community (i.e., they received no material compensation). Roughly one-third of the sample volunteered regularly on a scheduled basis for four to six hours a month. Volunteers had 40% fewer deaths than those who did not regularly volunteer. That difference increased to more than 60% fewer deaths if the person who volunteered also was religiously active. These dramatic differences were found even after statistically controlling for more than 12 known mortality risk factors. In a large nationally stratified sample, Harris and Thoresen (2005) found about 15% volunteered regularly. They experienced significantly fewer deaths, but when the other factors known to predict higher deaths were added to the analysis, only those who volunteered *and* who were regularly religiously active had significantly fewer deaths (30% fewer deaths).

Those engaged in spiritual and religious activities tend to be good citizens of the world who make the community a better place for others. In doing so, they also seem to benefit themselves by gaining a greater sense of meaning and significance in life as well as enjoying better health and longevity along with heightened quality of life.

How Could Religious Involvement Benefit Health?

Several theories have been suggested. First, religious involvement is often conducted within a particular social structure termed a congregation. This social structure provides for many ready-made groups (including smaller groups) with similar interests and values often providing invaluable social and emotional support. Supportive congregational activities may help prevent mental health problems from developing or may help reduce these problems by offering better ways to cope with serious challenges and troubles. Second, spiritual and religious practices often involve activities similar to secular relaxation or mind-calming strategies. Mental health professionals often suggest various kinds of relaxation strategies to help clients cope with anxiety, depression, substance abuse, and other mental health problems. Many spiritual and religious practices, such as meditation, prayer,

and attending various kinds of services, can be considered forms of mental and physical relaxation strategies. However, such practices also offer, compared to secular relaxation practices, the added value of bolstering a diminished sense of meaning or significance in life, along with strengthening perceptions of self-efficacy about coping better with life's challenges (Oman & Thoresen, 2005). This strengthened perceived self-efficacy to cope with mental health challenges may depend on the person's perception that a relationship exists for them with a higher power or source, such as God.

McAdams (2006), for example, offers a fascinating perspective based on the study of personal narratives ("life stories") focused on Erikson's stage of generativity (the person's concern and commitment to promoting the well-being of others, such as future generations). Some who are actively involved in religion and spirituality seem to benefit greatly in having been able to reframe their suffering and pain as actually beneficial to them (sometimes called "benefit finding"). For such persons, the pain and suffering is often viewed as having redemptive consequences.

The field of positive psychology with its focus on human virtues (e.g., courage, humanity, and transcendence) and specific character strengths (e.g., hope, forgiveness, and gratitude) are significantly related to better mental health functioning (Lopez et al., 2018; Plante, 2012; Seligman et al., 2005). Spiritual and religious people are much more likely, for instance, to forgive others, express compassion, display gratitude, and engage in volunteerism (helping others in need without material compensation). Not surprisingly, positive psychology endorses the need for more positive emotions in daily life that may result in better mental health functioning. It is possible that the relationship between spirituality and religious involvement and positive mental health benefits and outcomes could most likely be indirectly related through a variety of causal mechanisms or pathways.

Recently, positive emotions and positive social behaviors, mentioned earlier, have been described in evolutionary terms when it comes to spirituality. For example, many authors (e.g., Armstrong, 2006; Keltner, 2009) make a compelling case that humans survived over thousands of years not only because of their individual fitness but because of their collaborative kindness and their spiritual and social capacities as well. That is, survival of the human species over 200 million years was not due to their physical genetics as much as due to their social and spiritual capacities, especially those selected for positive and prosocial emotions toward others. These included, for example, faith, hope, love, joy, compassion, and gratitude. One could argue that it was more of a survival of the kindest than just a survival of the fittest, especially fitness viewed only as physical and intellectual abilities. This spiritual evolutionary perspective finds support in a number of studies, primarily in psychology, neuroscience, ethology/animal studies, and cultural anthropology (e.g., Balter, 2005; Dalai Lama & Ekman, 2008; Damasio, 1994; Panksepp, 1998).

In an excellent overview, Vaillant (2008) makes a strong case that spirituality as positive emotional experiences within social contexts, such as hope and compassion, have

evolved over the past 200 million years. Some of the major points he makes include the following:

- Three kinds of evolution exist—genetic, cultural, and individual—having evolved and having continually influenced each other. For example, evolving cultural changes have altered the size and functions within the brain, leading to more likely selection for those living in more supportive, affiliative, and cooperative cultures characterized as fostering positive social emotions and strong social attachments.
- The human brain shares with all mammals and primates, a part of the brain called the limbic system (or paleomammalian brain), the neurophysiological home of positive emotions, empathy, and communal bonding and cooperation. This limbic system processes information from other organs of the body, coordinates emotions with past memories, and sends and receives information from the neocortex (the left prefrontal cortex), leading to more subtle and nuanced thoughts and motivation.
- The supremacy of words, texts, logic, and language in Western science (the primary domain of the left prefrontal cortex) has construed human experience and consciousness much too narrowly, leaving out the vital role of emotional thinking and intuitive wisdom in understanding human experiences, perceptions, decisions, and judgments.
- Spirituality is clearly not the same as religion. Spirituality is individual oriented, more emotional, universal in humans, more experiential, and more tolerant; religion is institutional and interpersonal oriented, more cognitive, more culture bound, more dogmatic, and less tolerant. Note, however, that religion is the greatest depository of spiritual resources, such as religious texts, rituals, music, and prayers/meditations.

This evolutionary perspective in highlighting the primary role of positive emotions in spirituality can help dispel the oversimplified dichotomy about cognitions and emotions, science and spirituality, and causes and effects.

Oman and Thoresen (2002) proposed a combination of four major causal pathways that could in combination explain mental and physical health benefits of spiritual and religious factors: (a) strong social and emotional support; (b) health-enhancing behaviors (e.g., no or moderate drinking and not smoking); (c) positive psychological states (e.g., faith, hope, inner peace, and positive emotions); and (d) subtle processes not yet understood scientifically (e.g., nonlocal processes such that cognitions can be transmitted over long distances). Although contemporary science cannot at present assess some of these unidentified factors, this does not necessarily mean that they do not exist. The history of science is a story of phenomena that at one time were thought to be inconceivable yet

alone measurable, such as the proposition that Earth revolves around the Sun or that emotions are linked to certain areas of the brain or to the body's immune system.

If religious and spiritually minded people tend to live a healthier lifestyle, live more ethically, act more compassionately, and are more forgiving toward others and toward themselves, then they are more likely to have better psychological functioning, which, in turn, could influence several physiological processes. Thus, the processes involved mutually enhance each other and other related processes. For example, engaging in daily spiritual meditation can lead to more social support and less depression, which, in turn, can foster more spiritual fellowship as well as more optimistic thoughts and expectations. All these may impact several major organ systems of the body (e.g., immune competence, cardiovascular functioning, and metabolism) and may also, for example, impact left prefrontal cortical processes, related to more positive self-perceptions, wiser decisions and judgments, and a richer consciousness.

Methodological Concerns

Conducting well-controlled studies, such as randomized experiments or prospective longitudinal studies, to examine important research and clinical questions has always been challenging. This is especially true in examining the influence of religion and spirituality on mental, social, and physical health. Researchers, for example, obviously cannot randomly assign people to different religious and nonreligious groups and then examine health outcomes. Researchers are of course not permitted to coerce people to engage in randomly assigned religious activities, prayer, and meditation or to attend religious services. Therefore, research in this area to date has been mostly limited to correlational designs, including nonexperimental or quasi-experimental designs that do not randomize participants to different groups.

However, many important problems related to human health and well-being have been successfully studied without having to randomize some participants to the hypothesized disease condition. For example, decades of successful research on the effects of tobacco on health did not require randomizing participants to become smokers for several years, nor has successful research on the causes and processes of morbid obesity required randomizing normal weight participants to become clinical obese over time. Science clarifies causality by gathering and critically examining patterns of evidence from a variety of sources and settings over time. There is no one best scientific method used in understanding complex human experience, such as the health effects of spiritual or religious practices that can unequivocally establish causality. Instead, there are a variety of research designs using a variety of data and analytic techniques, depending on the specific topic, that can shed light on the role of spiritual and religious factors in health. Clearly the almost exclusive use of self-report questionnaires or inventories is inadequate for many topics in spirituality and religion (Hill & Pargament, 2003; Oman & Thoresen, 2002). Studies need to also include behavioral observation data,

for example, along with assessments of physiological markers indicative of the issue or question being studied.

To illustrate, Ironson et al. (2002) demonstrated that a comprehensive spiritual and religious self-report measure failed to directly predict mortality in HIV/AIDS patients. Instead, the relationship was mediated by reduced cortisol, which in turn predicted less mortality. In the same way, the behavior of helping others significantly mediated the relationship between overall spirituality and mortality. Such studies highlight an important point cited earlier: The spirituality and religion connection with all-cause mortality exists because of several health-related factors that mediate the relationship rather than having an independent, direct influence (Oman & Thoresen, 2002).

Most studies to date have focused on questions as to whether religious people or those actively engaged in spiritual and religious practices tend to benefit overall from better mental and physical health when compared to those not engaging in spiritual and religious behaviors. This kind of correlational research is clearly worthwhile, especially longitudinal studies that assess participants more than once over time (often called prospective designs). However, correlational evidence has important limitations in trying to pin down possible causes of observed change, such as improved health. Well-designed prospective studies, sometimes with relatively small prospective samples ($n = 25$ to 50), can nevertheless shed valuable light on identifying possible causes. For example, the fascinating finding of a small study of participants' daily ratings for one month of the effectiveness of their spiritual coping in reducing chronic pain that day turned out to be the most powerful predictor of actual pain experienced the very next day (Keefe et al., 2001). Such evidence encourages consideration of why that happened and how spiritual coping could be linked to reduced pain. One possibility is that reduced pain from a spiritual coping practice, such as using a short mantra (viz., short sacred word or phrase often repeated during the day), could alter the person's perception of their perceived competence (self-efficacy) to manage pain.

The Down Side of Religion and Health Outcomes

Are there mental and physical health hazards to health and well-being associated with religion and spirituality? The answer is yes (e.g., Pargament, 2007; Plante & McChesney, 2011). For some the policies and practices of organized religion, including the actions of religious professionals (e.g., pastors, priests, sisters, imams, NS rabbis), have at times been harmful, if not devastating, to a person's or a group's health and well-being. Historically, over hundreds of years, grave abuses were authorized and sometimes implemented by religious authorities based upon a variety of reasons and doctrines. Some have noted that even today abuses associated with religion continue to happen (e.g., Hitchens, 2007; Plante & McChesney, 2011). For example, clerics and religious leaders often hold much power over their followers and congregants and in some traditions, that power and influence can be overwhelming. The famous and tragic deaths associated with religious cults

such as the Branch Davidians in 1993 who followed David Koresh and the Peoples Temple in 1978 who followed Jim Jones are especially well known.

One area of religious hazards to health lies in those experiencing religious struggles, that is, when a person perceives that he or she is being punished or abandoned by God in the face of a major trauma or by a perceived threat to one's existence. While some religious beliefs and worldviews offer a greater sense of meaning and purpose as well as direction in life along with sources of comfort and support, for others certain beliefs and worldviews can create very serious problems and threats that endanger health. When a person struggles chronically with their faith, doing so can lead to serious health problems, sometimes with fatal consequences.

For example, Edmondson et al. (2008) studied the negative impact of religious struggles in terminally ill heart failure patients suffering from their fear of death. Those struggling in terms of their religious beliefs were much more likely to suffer more serious depressive symptoms that were linked to their elevated fears of death. Such concerns were found to fully mediate the positive relationship of religious struggles and depression, which is a serious mortality risk for those suffering from advanced cardiac diseases. Another example includes research that suggests that religious African American women with breast cancer often delay traditional medical intervention relying on prayer first (e.g., Gaston-Johansson et al., 2013).

Religious involvement can be destructive to self, to others, and to the community. Tragically, religious beliefs have been used to wage war; oppress women; murder others who do not share the same religious beliefs and practices; and instill guilt, depression, and anxiety among many. Religiousness can also be associated with harmful if not fatal health practices, such as the rejection on religious grounds to seek needed medical and psychiatric care. Religious beliefs and practices can and unfortunately continue to be used in certain areas of the world to inflame group conflicts as well. Curiously, religious conflicts about moral transgressions can be significant predictors of panic disorder (Trenholm et al., 1998). Patients with HIV/AIDS can suffer poorer health if they hold a more rigid view of a punishing and judgmental God, compared to a compassionate and forgiving view of God or an impersonal view of God or higher power (Kremer & Ironson, 2007).

Clearly, empirical evidence exists that religion can be mentally and physically hazardous to health under certain circumstances. These negative effects unfortunately remain understudied and deserve more study using well-controlled research designs. Such designs need to be especially sensitive to assessing ongoing cognitive, social, and emotional experiences as well as specific contexts (e.g., time, place, others present, cultural factors, and internal narratives in the setting). Methods are available to capture much of this but seldom have been used. Tennen et al., (2000) offered, for example, useful research designs to study daily processes, such as very specific experiences. These could include specific ways to cope with distress, such as perceived spiritual support and daily spiritual self-efficacy

perceptions. As mentioned, Keefe et al. (2001) offered an excellent example of this kind of much needed research.

Almost all the world's major religions have urged people, for example, to avoid smoking, excessive drinking (or no use of alcohol), and unsafe sexual practices and to engage regularly in physical exercise and eat healthy foods. While these health behaviors are vital to better health and to preventing disease, religious traditions also have long been focused on helping people cope or manage a broad variety of major and minor life stressors and distress associated with enhanced psychological functioning. These coping approaches have included optimism, positive emotions, compassion for self and others, and forgiveness of others, and they have resulted in less anxiety, depression, and perceived stress (Pargament et al., 2013; Plante, 2012, 2018b; Plante & Thoresen, 2007).

Overall, research clearly supports the many mental, physical, and community health benefits for those who engage in spiritual and religious activities. It is likely that many spiritual and religious people generally lead lifestyles that are more health promoting and less health damaging than those who are not actively religious or spiritual. They also have generally provided a variety of ways that offer social support through involvement in their religious communities that help people to cope with life's challenges and troubles. Finally, the focus on love, compassion, and serving others in need, along with emphasis on ethical conduct, linked to specific religious and spiritual beliefs and traditions, can have the effect of making the world a better place to live. This is especially true for the vast majority of people who often live impoverished and marginalized lives. However, as discussed, there is evidence that involvement in some religious communities contributes to personal and social problems, such as anxiety; panic; obsessive–compulsive symptoms; terrorism; and various forms of abuse, oppression, violence, and hatred. Typically, for most normal expressions of spiritual and religious beliefs and practices, positive mental and physical health benefits can be expected. We believe it is therefore reasonable for professionals to expect that spiritual and religious engagement could be useful and to at least consider the role of spiritual and religious factors in an overall psychological treatment plan.

Above all, given the fact that the clear majority of Americans are religious or spiritually active, we believe that the practicing psychologist, as well as other healthcare professionals, should at least broach the topic of religious and spiritual involvement initially with a client. In fact, most ethics codes insist that professionals treat religion and spirituality like any other kind of diversity (e.g., American Psychological Association, 2017). Thus, attending to religion and spirituality is needed to provide state-of-the-art competence services. But how would one do that in a way that would not be perceived as offensive or insensitive?

Barriers to Spirituality and Health Benefits in Psychotherapy

Although religious and spiritual engagement can result in a variety of mental and physical health benefits, there are many barriers to implementing evidence based religious and

spiritual strategies into psychotherapy and consultation. Barriers include biases as well as arrogance on the part of some providers.

Public Is Religious, Psychologists Are Not

The vast majority of people in the United States and across the globe describe themselves as being spiritual, religious, or both. Most belong to an established faith community and are affiliated and identified with a major religious tradition. Others view themselves as spiritual but not being interested in organized or structured religion. Most participate in regular formalized religious services, celebrate religious holidays, and pray often or daily. In fact, about 90% of Americans report that they believe in God and 40% attend religious services once a week or more (Newport, 2013, 2016). Thus, religion and spirituality is clearly an important component to life for most people.

By contrast, most psychologists are not spiritual or religious (e.g., Delaney et al., 2013; Miller & Delaney, 2005; Shafranske, 2000). Only 33% are affiliated with a religious tradition, only 72% report belief in God or a higher power, and 51% report that religion is *not* important to them (Shafranske, 2000). Miller and Delaney (2005) poignantly observed that in the 20th century, of all the scientific, professional, or academic disciplines, psychology became by far the one least interested in religion and spirituality in the United States. Despite the work of some early major psychologists (e.g., William James, Gordon Allport, and Carl Jung) in the 20th century on spirituality and religion, Miller and Delaney (2005) observed that at best, “The modal response of psychologists to religion in research, practice, and training, however, became one of silence and neglect” (p. 4).

Remarkably, 68% of current training directors of clinical psychology internship programs state that they “*never* foresee religious/spiritual training being offered in their program” (Russell & Yarhouse, 2006, p. 434). Perhaps people who pursue a career as a psychologist are more secular and less religious or spiritual than the average person. Perhaps psychologists develop a “trained incapacity” in college or graduate school such that they view religion as inherently antiscientific or spirituality as involving supernatural hocus-pocus. Shafranske (2000) suggested that most psychologists who bring this topic into their research or clinical practice do so because of a unique training experience, compared to anything systematic in their training program, or to their own personal faith commitment. Whatever the reason, the fact is that whereas most people are religious, spiritual, or both, most psychologists studying or serving people are neither religious nor spiritual.

As noted, some of our famous and influential psychology forefathers, such as William James, Carl Jung, and Gordon Allport, wrote extensively about the relationship between psychology and religion (e.g., Allport, 1950; James, 1890/1936; Jung, 1938). Nevertheless, the topic of religious and spiritual beliefs, attitudes, and behavior has been largely ignored by psychological writers (Collins, 1977; Delaney et al., 2013; Miller & Delaney, 2005; Shafranske, 2000). Glancing through the subject index of any basic psychology text, for example, one seldom finds mention of religion or spirituality. Psychologists in the 20th

century undoubtedly have been influenced by the perspectives of important leaders in the field, such as Sigmund Freud, B. F. Skinner, John Watson, and Albert Ellis. These leaders seldom had anything positive to say about religion or spirituality (e.g., Ellis, 1971; Freud, 1927/1961; Watson, 1924/1983). For example, in *Future of an Illusion*, Freud referred to religion as an “obsessional neurosis” (Freud, 1927/1961, p. 43). Watson referred to religion as a “bulwark of medievalism” (Watson, 1924/1983, p. 1). These and other leaders clearly implied that religious interest or concerns typically served as signs of pathology, not good health.

Psychology has long prided itself in working hard to be viewed as a rigorous, empirical, “hard science” discipline. Many psychologists appear to hold a dualistic if not stereotyped perception about religious and spiritual constructs; that is, if a construct is perceived as religious or spiritual, then it is viewed by definition as nonscientific or antiscientific. This dualistic attitude about anything religious or spiritual as antiscientific has been especially evident in the applied professional areas of psychology. For example, the efforts to focus on evidence-based manualized treatments and clinical guidelines (e.g., American Psychological Association, 2018; Task Force on Promotion and Dissemination of Psychological Procedures, 1995) as well as more rigorous scientific approaches to psychological services is evidence for the continuing emphasis on science, which may have little if any interest in spiritual or religious issues.

A related issue concerns the secularization of traditional religious or spiritual practices used in interventions (e.g., procedures to manage distress, calm the body, or quiet the mind). This may have been done, in part, to make them more acceptable to the professional community. For example, the field of positive psychology has categorized some topics as major *virtues* (e.g., humanity, wisdom, and transcendence) and related subtopics as *specific character strengths* (e.g., love, gratitude, and forgiveness). These topics have been secularized for the most part—that is, presented outside any religious tradition or practice (see Lopez et al., 2018; Seligman et al., 2005). The widely used mindfulness-based stress reduction (Germer et al., 2013; Kabat-Zinn, 1990, 1994, 2003; Shapiro & Walsh, 2007) and yoga (Horovitz & Elgelid, 2015; Park et al., 2015; Rajesh, 2015) also offers an example of secularizing of spiritual and religious practices (e.g., Buddhist meditation). Perhaps a secular approach was perceived as less controversial or more subject to empirical study than using a spiritual or religious approach.

A question worthy of attention, given that most clients or patients are religiously active and seeking greater spirituality in their lives, is to ask whether spiritual practices when secularized have the same effectiveness as those used within a spiritual or religious tradition. Few studies have addressed this topic. One, however, is worthy of some detailed comment because it is based on a well-controlled randomized clinical trial design in an area lacking any such studies (Wachholtz & Pargament, 2008).

The study examined a spiritually focused meditation practice to reduce the frequency of long-term chronic migraine headache sufferers compared with two highly similar

meditations and a relaxation control procedure without any spiritual focus. Two questions were asked in the investigation: is spiritual meditation more effective in enhancing pain tolerance and in reducing the frequency of migraine headaches over a 30-day period? Does spiritual meditation create better mental, physical, and spiritual health outcomes compared to secular meditation and relaxation techniques? Eighty-three headache sufferers were randomized to one of four conditions. One included the spiritual meditation group in which each person selected among a list of spiritually focused meditations such as “God is love” or “God is peace.” Participants in two other secular experimental groups (internal or external meditations) selected meditation statements, such as “I am joy” or “I am good” in the internal group or “Sand is soft” or “Grass is green” in the external group. Progressive muscle relaxation was used in the fourth comparison group.

After 30 consecutive days of 20-minute daily meditations, outcome results were impressive. Those in the spiritually focused experimental condition experienced significant reductions in headaches compared to modest reductions in the other three secular conditions. Reductions in pain tolerance (using the cold pressor task where participants place their hand in circulating freezing water until pain is too great to tolerate) were significant and dramatic as well. The baseline pain tolerance for all four groups was 45 seconds. The spiritual meditation group’s pain tolerance rose to almost 2 minutes, while the other three groups showed either no change or modest gains up to only 20 seconds. Gains in spiritual measures such as existential well-being and spiritual experiences also favored the spiritual meditation group as well as reductions in trait anxiety and negative emotions.

The Wachholtz and Pargament (2008) intervention study suggests that the inclusion of a spiritual focus might enhance, if used in a sensitive, appropriate, and respectful manner, the effectiveness of psychological practices and interventions. Ideally, other researchers will pursue this promising topic using appropriate research designs and assessments exemplified by Wachholtz and Pargament (2008).

Perhaps more problematic, if not destructive, is the fact that often secular and nonreligious psychologists working with religiously oriented or spiritually minded clients may unwittingly preconceive or interpret their client’s interest in spirituality and religion as a sign or symptom of pathology, delusion, or weakness. Or a psychologist may be oblivious of how clients could draw upon their religious or spiritual beliefs or practices in trying to overcome problems. Are the interests of a client best served if a psychologist ignores completely anything in the spiritual and religious realm, or would a client be better served if a psychologist at least inquires about the client’s interests and perceptions about spirituality and religion? This and other related questions are discussed later in this chapter.

Despite the long history of “silence and neglect” in modern psychology of spirituality and religion, in recent years, change has come. A greater recognition of the value of religious and spiritual concerns in psychology is under way, and in other social and behavioral sciences. This recognition seems greatest in health and disease, where professional and public support is expanding (e.g., Hartz, 2005; King & Koenig, 2013; Koenig et al.,

2012; Koenig et al., 2001). Many secular professional organizations, such as the Society of Behavioral Medicine and the American Psychological Association, now offer special interest groups that focus on spirituality and health research and practice. Major foundations such as Templeton, Lilly, and Fetzer, as well as government granting agencies such as the National Institute of Health, have also funded large research projects in this area. And new journals have emerged that address these important topic areas (e.g., *Psychology of Religion and Spirituality*, *Spirituality in Clinical Practice*).

The American Psychological Association has also embraced these changes. For example, the 1999 National Multicultural Conference and Summit sponsored by the American Psychological Association stated: “spirituality is a necessary condition for a psychology of human existence” and that “people are cultural and spiritual beings” (Sue et al., 1999, p. 1065). The ethics code for psychologists states: “Psychologists are aware of and respect cultural, individual, and role differences, including those based on age, gender, gender identity, race, ethnicity, culture, national origin, religion, sexual orientation, disability, language, and socioeconomic status and consider these factors when working with members of such groups” (American Psychological Association, 2002, p. 1064). Thus, being “aware of and respect(ful)” of religious issues is now demanded by the ethics code. Finally, the American Psychological Association has itself published a number of books on psychology, spirituality, and religion during the past few decades when previously they offered almost none.

Psychology Can Learn From Religion and Spirituality

Psychology as a scientific discipline has been around for about 125 years, while religion and spirituality has been around for thousands of years. Perhaps psychology could learn something from its older cousin. After all, the goal of counseling and psychological services is, in part, about developing more healthy strategies for living and better ways of coping with many stressful life events. Psychotherapy seeks to help people manage their lives in a more thoughtful, significant, and healthy way. Since spiritual and religious traditions have long offered wise council on these issues for thousands of years, perhaps the professional psychological community could learn a few things from the collective wisdom of these faith traditions. At least one needs to consider carefully and respectfully ways to incorporate some spiritual concepts and practices into one’s scientific and professional work in psychology.

What concepts or practices might be considered? Some possibilities include the following: focusing on forgiveness (self, situations, others), promoting greater acceptance of others as well as self-acceptance, using significant rituals, providing group and community support (i.e., physically, socially, emotionally, and materially), emphasizing selfless love, encouraging kindness, and volunteering regularly to serve others in need. At a broader level, the concept of learning to perceive oneself as a part of something much larger than just oneself (i.e., less egoistic) seems significant as does the concept of enhancing a greater

sense of meaning and purpose in life. Note that these and others topics have been thoughtfully considered in many ways in all the major religious and spiritual wisdom traditions over thousands of years (Armstrong, 2006; Smith, 1991).

The field of psychology has indeed matured as an independent and international discipline, offering rigorous scientific inquiry with state-of-the-art methodologies and statistics to study many human issues, some quite challenging. The many complexities of human perception and judgment, for example, continue to be better understood by using more sophisticated concepts and methods. The study of personality is another complex, multidimensional, if not multilevel topic. The field of psychology deals with complex and challenging concepts and it is capable with sustained commitment of dealing with the complexities of spiritual and religious concepts as they relate to health and well-being (King & Koenig, 2013; Koenig et al., 2012; Miller & Delaney, 2005; Pargament et al., 2013).

Whereas relatively few psychologists, with the exception of some in Division 36 (Society for the Psychology of Religion and Spirituality), have studied religion or spirituality thus far, noticeably more are now starting to do so, thereby helping to expand the scope and depth of inquiry. Psychology as a discipline can and will benefit from the challenge of trying to better understand, especially empirically, the number of religious and spiritual constructs and practices involved. Psychology as a behavioral and social science discipline is known for its primary focus on the individual and the many differences within and among individuals. Spirituality is eminently personal and individual as well as experiential. It works within each person at various levels of conscious personal experiences, seasoned by a range of beliefs, emotions, and behaviors across time (past, present moment, future). Religions were created by people in part to help individuals within a perceived community deal with issues of making life more meaningful, gaining a greater sense of purpose and direction, such as how to live a “good life” and deal with suffering, pain, tragedy, and life transitions. Building and sustaining communities of faith that provide support for living a values-centered life is what religions seek to do. How successful they are in doing so is another issue.

As psychologists we need to be more attentive to the broad range of diversity issues that individuals represent, such as religious and spiritual beliefs and practices. Since the American Psychological Association (2017) ethics code mandates that psychologists be respectful and mindful of cultural diversity that includes religious traditions and beliefs, psychologists should not ignore or automatically pathologize religious and spiritual issues among their clients and students.

Implementing Spiritually Oriented Interventions

There are a number of ways that evidence based best practices in integrating religion and spirituality into clinical practice can occur in professional psychotherapy. The religious and spiritual traditions offer the clinician, including secular professionals, a variety of tools for their psychotherapeutic toolbox.

What the Religious and Spiritual Traditions Offer the Professional Psychological Community

Given the fact that religion and spirituality may offer many mental and physical health benefits, how might professional counselors use the research findings to enhance their clinical activities with clients? First, here are two important steps in ways to think about what the religious and spiritual traditions offer the professional mental health professional.

In the now classic book, *The World's Religions* (1991), Huston Smith well articulates an ancient view that the world's great religions are much more similar than different. He refers to the Hindu notion that the "various religions are but different languages through which God speaks to the human heart" (p. 73). Quoting *Ris-Veda* (4000 BCE), the often quoted Hindu sage, states, "Truth is one; sages call it by different names" (p. 73).

Smith provides an illustration of how to understand the world's religions that we believe can be helpful to use. He states: "It is possible to climb life's mountain from any side, when the top is reached the trails converge. At base, in the foothills of theology, ritual, and organizational structure, the religions are distinct. Differences in culture, history, geography, and collective temperament all make for diverse starting points" (p. 73). He then describes that as we move higher toward the top of the mountain, the world's religious traditions become one path seeking truth stating, "But beyond these differences, the same goal beckons" (p. 73). He quotes Sri Ramakrishna, a 19th-century Hindu teacher, stating: "God has made different religions to suit different aspirations, times, and countries. All doctrines are only so many paths; but a path is by no means God Himself. Indeed, one can reach God if one follows any of the paths with whole-hearted devotion. One may eat a cake with icing either straight or sideways. It all taste[s] sweet either way" (p. 74). At their best and most thoughtful, the religious traditions converge and ultimately saying much of the same thing but with different languages, customs, and traditions.

Concepts from all of the major contemporary religious traditions as well as Greek philosophical rationalism can be traced to the 9th-century BCE during the Axial age in four different regions of the then civilized world (Armstrong, 2006). They all struggled with similar questions and came to similar conclusions about religious, ethical, and social views. This includes "the spirit of compassion . . . lies at the core of all our traditions" (Armstrong, 2006, p. 476). However, all of the religious traditions have "fallen prey to exclusivity, cruelty, superstition, and even atrocity. But at their core, the Axial faiths share an ideal of sympathy, respect, and universal concern" (Armstrong, 2006, p. 466). The Golden Rule, or treating others as you would like to be treated, is the main point and is well articulated in the sacred texts of all of the religious traditions (Armstrong, 2006; Pargament, 2007; Peterson, 1986). In fact, Armstrong states that the Axial sages concluded that "religion *was* the Golden Rule" (Armstrong, 2006, p. 468).

Some Spiritual Principles and Tools for the Professional

What do religious traditions at their best offer the psychological community? At the top of the metaphorical mountain where the traditions converge, there are a number of highly desirable and useful principles and values that are beneficial. These include a focus on the sacredness of life and of the world, ethical behavior toward others, prayer and meditation, community and service involvement, and love and respect for all. Many also conveyed the notion that God, while existing in many forms and settings, could be found within every person, regardless of status and gender, as well as in other life and inanimate forms. The task of the person, however, was to use spiritual practices to access this divine presence within. The religious traditions emerging from the Axial age all emphasized compassion toward oneself and toward all others (Armstrong 2006). These values and principles can be helpful to many, regardless of their particular religious traditions or affiliations, including those with no interest in any religious traditions or beliefs (Plante, 2009, 2012, 2018).

The variety of empirically supported treatment programs and protocols now available can integrate spiritual and religious tools and perspectives in services offered by psychologists and other mental health professionals. Alcoholics Anonymous (AA) is perhaps the oldest and most well-known self-help and peer-led program that integrates spiritual and religious perspectives (Leach & Norris, 1977). Of course, AA is not an empirically supported treatment program administered by mental health professionals. However, the program well illustrates the popular integration of spirituality into self-help services for alcohol and other addictions. In recent years, professionally developed empirically supported treatments and evidence-based processes have been developed and tested that integrate spiritual and religious principles in professionally administered treatment services. This includes interventions for substance abuse, eating disorders, and marital discord, to name a few; they have used bibliotherapy, meditation, forgiveness training, and other spiritual and religiously based interventions with roots in all of the major religious traditions. In addition to mental health and relationship problems, interventions have also been developed to help those coping with a number of medical disorders as well such as HIV/AIDS and coronary heart disease. Table 23.1 provides a list of empirically supported treatment interventions that integrate spiritual and religious principles and tools, along with an appropriate reference for further information.

Caregiving of Health Professionals: A Spiritual Practices Example

How might a practicing psychologist or other health professional use spiritual practices in a work setting? The example of a large Denver hospital that was seeking help to reduce perceived stress of staff and foster better care of patients and their families is presented here (Oman et al., 2006). A physician connected with the hospital suggested that a comprehensive, spiritually based, nonsectarian program called the Eight-Point Program (EPP)

Table 23.1 Examples of Empirically Supported Spiritual/Religious Interventions for Psychological Treatment

Name of Intervention Program	Reference
Opening Your Heart (coronary heart disease and prevention)	Ornish, 1990
Christian Marriage Counseling	Worthington, 1990
Becoming a More Forgiving Christian	Worthington, 2004
Coping With Divorce	Rye & Pargament, 2003
Solace for the Soul	Murray-Swank & Pargament, 2005
Lighting the Way (group treatment for women with HIV/AIDS)	Pargament et al., 2004
Spiritual Renewal (eating disorders)	Richards et al., 2000
Re-Creating Your Life (group treatment for serious mental illness)	Cole & Pargament, 1998
From Vice to Virtue	Ano, 2005
Eight-Point Spiritual Skills Program	Easwaran, 1978/1991
Mindfulness Meditation	Kabat-Zinn, 2003
Mantra Training	Bormann et al., 2006
REACH Model for Forgiveness	Worthington, 2004

be used (Easwaran, 1991/1978; Flinders et al., 2007). Box 23.1 provides a brief description of each spiritual practice drawn from the wisdom traditions spanning all major religions. See also an introductory primer that provides case material and narratives focusing on using the mantra, slowing down, and one-pointed attention to reduce worries, foster inner peace, and encourage kindness (Easwaran, 2005).

Working with a psychologist and other health professionals, this physician, with others assisting, conducted eight weekly, two-hour sessions on the EPP for 29 professionals with another 30 randomized to a wait-group condition. A variety of assessments were conducted just before the weekly group started, at the end, and at 8-week and 19-week follow-ups, spanning almost six months. More than 90% remained active in the study, and attendance at weekly sessions was above 85%.

Briefly, participants were mostly female (86%), had at least five years of full-time work experience, identified themselves as “spiritual but not religious” (50%) or “spiritual and religious” (45%), or neither (5%). Of all, 77% stated that they were very or moderately spiritual. Very few stated they were “very religious.” Each session focused on one or more of the eight points with initial attention on what is termed “passage meditation,” use of the mantra, slowing down, and being more one-pointed in attention.

Results were encouraging. First, the reductions in perceived stress were impressive and were maintained through the last follow-up (roughly six months). Effect sizes were significant

Box 23.1 Brief Description of Eight-Point Program of Easwaran (1991/1978)

1. Passage Meditation: Silent repetition in the mind of memorized inspirational passages from the world's great religions, such as the 23rd Psalm, the Prayer of Saint Francis, or the Discourse on Good Will of the Buddha's *Sutta Nipata*. Practiced for one-half hour each morning.
2. Repetition of a Holy Word or Mantra: Silent repetition in the mind at times other than meditation of a single chosen Holy Name, hallowed phrase, or mantra from a major religious tradition.
3. Slowing Down: Setting priorities and reducing the stress and friction caused by hurry.
4. Focused/One-Pointed Attention: Giving full concentration to the matter at hand.
5. Training the Senses: Overcoming conditioned habits and learning to enjoy what is beneficial.
6. Putting Others First: Gaining freedom from selfishness and separateness; finding joy in helping others.
7. Spiritual Association: Spending time regularly with others following the Eight-Point Program for mutual inspiration and support.
8. Inspirational Reading: Drawing inspiration from writings by and about the world's great spiritual figures and from the scriptures of all religions.

at posttreatment and at follow-ups: -0.63 , -1.00 , -0.84 , respectively. Translated into levels (%) for this measure in national population samples, baseline scores for these health professionals were in the high stress range (above 80%), while the immediate posttreatment score dropped to 50% or average stress level. The two follow-up levels stayed below 50%.

In addition, the Caregiving Self-Efficacy Scale (32 items tapping the perceived confidence level to do something successfully, such as "Control my temper with patients," "Help families of patients to deal with the death of patients," and "Sense the needs of other co-workers [so I can help them without being asked]") was used. Encouraging effect sizes were found in the moderately strong range (0.48, 0.59, 0.47). Improvements in other mental health indicators were less significant but all in the desired direction. Importantly, no evidence emerged that practicing the specific eight points from a spiritual perspective was associated with any kind of negative effect on health and well-being (see Oman et al., 2008, for detailed information on a qualitative, structured interview narrative study that offers some confirmation of the results cited earlier).

Conducting a Spiritual Inquiry in the Initial Interview

Recently, a team of psychologists with others developed a simple, short, yet sensitive and respectful way to do conduct a spiritual inquiry. Jean Kristeller and others, including physicians, learned from survey data that a majority of physicians believed that a patient's spirituality could be important in understanding the patient's health status, but that in fact physicians seldom (fewer than 10%) brought the topic up with patients. When asked why, physicians often mentioned that they were unsure how to do so and did not want to be seen as imposing upon the patient's privacy. Kristeller and others developed a standardized

brief protocol called the Patient-Centered Spirituality protocol that could be routinely used by physicians (Kristeller et al., 2005). They conducted a controlled study with 118 oncology patients to assess the effect of using this protocol with oncology patients. Patients were alternately assigned to intake with a brief spiritual inquiry group included or the usual intake interview group. Most patients were Caucasian, 55% were women with mixed diagnoses, and 81% identified themselves as being Christian in background.

Assessments of mental health factors plus patient and physician ratings of the interview were conducted just before the initial interview and three weeks later. Physicians rated themselves comfortable with inquiry with 85% of patients and 76% of patients rating inquiry as somewhat or very useful. At three weeks' follow-up, patients in the spiritual inquiry group showed significant improvements compared to the comparison group (at least $p < 0.05$) in quality of life, spiritual well-being, and perceived sense of interpersonal caring by their physician. The major steps in this protocol with some of the suggested words in quotes used by the health professional are as follows:

1. Introduce the issue in neutral inquiring manner.
"When dealing with this problem, many people draw on religious or spiritual beliefs to help cope with it. It would be helpful to me to know how you feel about this."
2. Inquire further, adjusting inquiry to client's initial response. If it is a:
 - a. Positive-Active Faith Response: "What have you found most helpful about your beliefs since this problem came up?"
 - b. Neutral-Receptive Response: "How might you draw on your faith or spiritual beliefs to help you?"
 - c. Spiritually Distressed Response (e.g., anger or guilt): "Many people feel that way . . . what might help you come to terms with this?"
 - d. Defensive-Rejecting Response: "It sounds like you're uncomfortable I brought this up. What I'm really interested in is how you are coping . . . can you tell me about that?"
3. Continue to explore further as indicated:
"I see. Can you tell me more (about . . .)?"
4. Inquire about ways of finding meaning and a sense of peace:
"Is there some way in which you are able to find a sense of meaning or peace in the midst of this?"
5. Inquire about resources.
"Whom do you have to talk to about this/these concerns?"
6. Offer assistance as appropriate and available.
"Perhaps we can arrange for you to talk to someone . . . there's a support group."
7. Bring inquiry to a close.
"I appreciate you discussing these issues with me. May I ask about it again?"

Obviously, the wording would need to be modified to fit the specific mental or physical health problem (e.g., posttraumatic stress disorder, marital conflict, and leadership management issues). But the general format can provide a structure that could be taught in graduate training programs and also used by practicing psychologists with some brief training. Doing so could help the client and also could help psychologists fill the mandate of honoring the spiritual and religious diversity of their clients.

Plante (2009) outlined 13 spiritual and religious tools useful for therapists to have in their therapeutic toolbox, regardless of their interest in specific religious faith traditions. These include (1) meditation; (2) prayer; (3) seeking a sense of vocation, meaning, purpose, and calling in life; (4) bibliotherapy, including sacred scripture reading; (5) attending community services, ceremonies, and rituals; (6) volunteering and charitable works and service; (7) ethical values and behavior with others; (8) approaching others with forgiveness, gratitude, love, kindness, and compassion; (9) engaging in social justice issues; (10) learning from spiritual models; (11) accepting oneself and others (even with faults); (12) being part of something larger than yourself; and (13) understanding the sacredness of life. Some are likely to be appropriate and helpful with particular clients and counselors, while others are not. These tools can add value to the effectiveness of professional services and research offered by counseling and other psychologists involved in health.

Some Conclusions and Future Directions

The religious and spiritual wisdom traditions have evolved over thousands of years. A careful reading of the history and development of these traditions indicates that all have grappled with much of the same theological and philosophical issues. Wisdom traditions also offer guidance in how to live a more satisfying, happy, and meaningful life, one based on a foundation of knowing and understanding perennial human virtues and character strengths (Armstrong, 2006). These traditions offer advice about learning how to discover the sacred in life and make specific suggestions about building and maintaining intimate relationships with others, including a transcendent relationship with a power or spirit greater than oneself, sometimes called God. Ways to manage major and minor stressful life events have also been recommended in dealing with common problems in the contexts of marriage, family, work, and community.

Although religious traditions use different languages, customs, beliefs, and rituals about life's perennial questions, they have reached very similar conclusions over thousands of years. "When religions [traditions] are sifted for their best qualities," wrote Houston Smith (1991), the eminent scholar of the world's major religions, "they begin to look like data banks that house the winnowed wisdom of the human race" (p. 5). Undoubtedly as human institutions, organized religions have also been a source of hatred, fear, violence, deprivation, and hypocrisy. At times certain religious policies and practices have contradicted the essence of spirituality and the sacred, such as love, hope, and compassion. We

need, however, to look beyond specific cultural differences and the dogma that goes along with very questionable practices and acknowledge and seek what religions offer at their best.

Every major religion, for example, offers life stories, in effect spiritual models, that convey admirable human qualities and character strengths (e.g., Jesus, Buddha, Gandhi, Moses, and Mother Teresa). These traditions and historical spiritual exemplars also have been used to illustrate how persons faced with great challenges were able to deal with them by using spiritual practices and perspectives. We can learn from spiritual exemplars, regardless of the status of our own spiritual and religious affiliation, beliefs, and practices (“Spirituality is caught more than taught”).

Empirical evidence clearly supports the view that people actively engaged in spiritual or religious activities on average are physically, socially, and mentally far better off than those seldom or not engaged. This robust empirical relationship between active involvement and health, as noted earlier, does not demonstrate that a direct and specific cause-and-effect relationship exists, such as religion directly causes better health. Rather, what has been demonstrated is that a consistent relationship exists between active spiritual and religious involvement and health benefits for most people. Studies also suggest that clients prefer to have their religious and spiritual issues and traditions at least acknowledged and possibly integrated into their professional health care services.

As noted, the great wisdom traditions provide a variety of useful tools and practices used over more than three millennia. These can be employed by the competent and interested psychologists. Importantly, many of these practices can be used in a secular manner, depending of course on particular circumstances. For example, mindfulness-based stress reduction has been often used in secular settings, yet it has roots in a particular religious tradition (Tibetan Buddhism). While clients are not required to be religious or spiritually active to benefit from the tools derived from religious traditions, it remains unclear if use of a completely secularized practice is more or less effective than when used in a more spiritually or religiously framed manner.

Religious and spiritual beliefs and practices clearly can be harmful and hazardous to overall health. Frankly, this topic has been seldom examined rigorously, and with the needed sensitivity. Candid and comprehensive examinations of possible negative effects merit using rigorous empirical methods, and the collaboration of professional colleagues are needed in such areas such as specific religious beliefs and spiritual practices (Pargament et al., 2013; Plante, 2009, 2018; Thoresen et al., 2005).

Most people report that they are religious, spiritual, or both. Some such as Vaillant (2008), discussed earlier, believe that all humans are by nature spiritual but not religious due to cultural factors. Overall, a clear majority of people in the United States are affiliated with a religious tradition, believe in God (however defined), and pray regularly. Roughly 40% of Americans attend spiritual or religious ceremonies, services, or rituals weekly or more often. By contrast, in Northern European cultures only a clear minority

are actively religious. Interestingly, a clear majority of mental health professionals in the United States and in European cultures are not active religiously or spiritually or identified with a particular religious tradition. Furthermore, although there has been considerable focus on cultural diversity in recent years, the vast majority of graduate training programs in the mental health professions continue to ignore religious and spiritual issues, offering no instruction or training on religious diversity. The American Psychological Association (2017) ethics guidelines (and other codes) in the mental health disciplines now require attention, training, and respect for religious diversity. Since a majority of clients studied and served by psychologists and other health professionals are religiously engaged and spiritually focused, we believe that it makes good professional and clinical sense for counseling psychologists and other health professionals to at least understand the role of spiritual and religious factors.

The field of clinical and counseling psychology has a long history within the discipline of psychology as a specialty devoted to understanding and serving those dealing with life's inevitable problems. How can the field of counseling psychology capitalize on the collective wisdoms of the world's major religions discussed earlier? Much of this wisdom relates to fundamental issues of character, conduct, and consciousness. Recently, the terms "virtues" and "character strengths" have been essentially reintroduced in psychology by the positive psychology movement (e.g., Lopez et al., 2018; Seligman et al., 2005). As noted earlier, these virtues (e.g., humanity, temperance, and transcendence) each involve several character strengths (e.g., humanity includes love, kindness, and leadership; temperance includes forgiveness, humility, and self-regulation; and transcendence includes gratitude, hope, and humor). Most would view these character strengths as important if not essential personal and social qualities.

How do people learn to be virtuous and to honor a character in their daily lives that displays such strengths as forgiveness, humility, and gratitude in their thoughts and actions? We believe that an important future direction for counseling psychology lies in focusing more on virtues and character strengths, given that many can benefit from acquiring these virtues and strengths: the person, the family, the community, and in effect all on Earth. Recent work in spiritual modeling, drawing on social cognitive theory and the distilled wisdom of all major religious traditions, offers an empirical-based strategy to help people learn spiritual skills and practices that can enhance health in its broadest sense (Bandura, 2003; Oman & Thoresen, 2003, 2007).

Four important future directions for work in this area of spirituality and religion clarify some major current issues:

1. Exploring the growing trend in American as well as other cultures of those who perceive themselves as "spiritual but not religious" as well as the "nones."

2. Studying relationships between social, mental, and physical factors among those who are more spiritually or religiously active compared to those less or not active
3. Identifying and understanding possible mediating factors that may help explain how a spiritual or religious factor may play a causal role in one's overall health status. Possible mediators include various forms of meditation, volunteering to serve others, attending religious or spiritual services weekly or more often, and experiencing positive social emotions.
4. Consider further the evolutionary evidence that spirituality is inherently linked to positive emotions, suggesting that humans are by nature spiritual but may need certain cultural experiences to express their spirituality in positive, prosocial ways

We should learn more about the increasing number of people, especially youth, who identify themselves as spiritual and not religious. In what ways is this group a mix of several subgroups as to such factors as age, gender, socioeconomic status, educational level, ethnic identity, and geographical region? Are there significant differences among spiritual but not religious compared to other subgroups (e.g., religious only or spiritual and religious) when it comes to health? What does it mean in terms of attitudes, beliefs, and actions for one who describes oneself as spiritual but not religious? What difference exists, if any, in the kind of problems persons present for counseling services if identified as spiritual only or religious only or both or neither?

Few studies, if any, have documented the relationships of those who are very active spiritually and those less or not active in terms of physical, mental, and social health problems. Typically, studies have seldom used a variety of assessments other than survey questions, especially not different modes of assessment (interviews, structured diaries, daily behavior ratings, and ambulatory electronically based devices). Issues of assessing one's spiritual beliefs and practices have been usually based on one short questionnaire. Seldom has one's experiences of what is sacred in life been assessed. Little has been done in gathering a person's "narrative identity" with a focus on spiritual experiences, as discussed by McAdams (2006). Interviews can provide data that speak more deeply to a person's spiritually related experiences, especially if gathered on more than one occasion. Rather than using only interviews or only surveys, using both can provide confirming evidence that survey questions could never reveal. See the study by Oman et al. (2008) for an example of using repeated interviews to complement a variety of survey measures used on four occasions in a hospital-based spiritual intervention with health professionals.

How might a spiritual practice, such as frequent attendance at religious or spiritual services, play a causal role in less stress or less mortality? Recall that this attendance and mortality relationship offers to date the strongest empirical evidence in the United States that spirituality and religion may enhance health in most people (Miller & Thoresen,

2003). This question reveals the impressive complexity of factors at play in seeking answers. For example, what is there about attending services that “gets under the skin” in ways that alters at some points in time physiological processes that in turn leads eventually to death? Such a question speaks to the search for mediators, factors that help explain what can be called indirect causes of an outcome, such as the connection between attendance and mortality. To date, several possible answers have been suggested involving lifestyle issues, such as health behaviors (e.g., less smoking and high-risk behaviors), beliefs, perceptions and emotions (e.g., believe in something greater than oneself and sense of meaning and significance), community/social and spiritual support (e.g., emotional support from congregation), and possible processes not assessable by current scientific methods. Psychologists and other health professionals can help clients understand that a number of factors are at work that will help mediate the solutions to their problems. Spiritual practices and perspectives can be good candidates to serve as mediators in helping clients work out solutions to their problems of living.

As long as psychologists and other health professionals are open minded, are well trained, have access to appropriate consultation, and closely monitor ethical issues with competence, respect, integrity, and responsibility in mind, they can learn a great deal from spiritual and religious wisdom traditions. In doing so, their clients can benefit greatly as well.

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Spirituality and Recovery From Psychosis and Serious Mental Disorders

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Abstract

This chapter summarizes theory, research, and treatment regarding spirituality and recovery from psychotic disorders and severe mental disorders. The incorporation of spirituality into the recovery model was initiated by patients/consumers starting in the 1970s and has become widely accepted in the United States and around the world. Research shows the generally beneficial effects of spirituality on health, including mental health problems; surveys document the role that spiritual beliefs and practices play in many who are recovering from psychosis and severe disorders and the importance of religious coping for people facing serious mental health problems. Some successful therapeutic approaches for integrating spirituality into recovery are discussed.

Key Words: recovery, religion, spirituality, schizophrenia, bipolar disorder, coping, psychosis, severe mental disorders, schizoaffective, psychiatric survivor movement

Introduction

The therapeutic value of spirituality in substance abuse treatment has been acknowledged for many years due to widespread recognition of 12-step programs, but this recognition is new in the treatment of psychosis and severe disorders such as bipolar disorder and schizophrenia. Spirituality is incorporated into treatment as part of the mental health recovery model, which has become widely accepted in the United States and around the world. In 1999, the U.S. Surgeon General in a landmark report urged that *all* mental health systems adopt the recovery model (U.S. Surgeon General, 1999).

What distinguishes the recovery model from prior approaches in the mental health field is the perspective that people can fully recover from even the most severe forms of mental disorders. Thus, services and research should be reoriented toward recovery from severe or long-term mental illnesses: recovery creates an orientation of hope rather than the “kiss of death” that diagnoses like schizophrenia once held. One hundred years ago, Emil Kraepelin named the disorder now known as schizophrenia “dementia praecox,” and

considered it a chronic, unremitting, gradually deteriorating condition, with a progressive downhill course that ends in dementia and incompetence (Kraepelin, 1904). However, researchers in the past four decades have established that people diagnosed with schizophrenia, bipolar disorder, psychosis, and other serious mental disorders are capable of regaining significant roles in society and of managing their own lives. The Vermont State Hospital study, for example, showed that many long-term hospital patients previously considered “chronic” and “hopeless” did indeed move on to fulfilling lives (Harding et al., 1987). There is strong evidence that most persons do “recover,” that is, enjoy lengthy periods of time free of psychotic symptoms, with some having those symptoms abate entirely, and can partake of community life as independent citizens. Daniel Fisher, hospitalized briefly with psychosis after taking LSD, now a psychiatrist and internationally recognized advocate for the recovery model, maintains:

Believing you can recover is vital to recovery from mental illness. Recovery involves self-assessment and personal growth from a prior baseline, regardless of where that baseline was. Growth may take the overt form of skill development and resocialization, but it is essentially a spiritual revaluing of oneself, a gradually developed respect for one’s own worth as a human being. Often when people are healing from an episode of mental disorder, their hopeful beliefs about the future are intertwined with their spiritual lives, including praying, reading sacred texts, attending devotional services, and following a spiritual practice. (Fisher, 2019)

Recovery vs. Medical Model

The medical model tends to define recovery in negative terms (symptoms and complaints that need to be eliminated, disorders that need to be cured or removed), and to emphasize the finality of diagnosis rather than growth and change in life experience. In the recovery approach, severity of impairment is not denied where it is present, nor is suffering romanticized, but resignation, hopelessness, and community exclusion are replaced by engagement, a hopeful attitude, and inclusion.

In the recovery model, health care professionals act as coaches helping to design a rehabilitation plan that supports the patient’s efforts to achieve a series of functional goals. The focus is on motivating the patient’s own efforts to help themselves. Respecting and supporting a patient’s spiritual journey, as described later in this chapter, is often an important component of their recovery. Ridgeway provides this definition: “Recovery is an on-going journey of healing and transformation. It involves reclaiming hope and a positive sense of self despite the experience of psychiatric disability, self-managing one’s life and mental health to reduce psychiatric symptoms and achieve higher levels of wellness, and reclaiming a life and roles beyond being a consumer in the mental health system” (Onken et al., 2002, p. 2). McAdams et al. (2001) conducted studies of people recovering from a range of adversities, and based on his findings and the extant

literature concluded that successful recovery often depends on developing a positive sense of self:

The take home message from the empirical literature on benefit-finding is that people who perceive benefits in adversity tend to show better recovery from and adjustment to the negative events that brought them into adversity in the first place . . . survivors of illness and trauma often report increased self-reliance and broader self-understanding, enhanced self-disclosure and emotional expressiveness in relationships and a changed philosophy of life. (p. 485)

These findings suggest that the process of recovery can occur even while the person continues to experience symptoms.

Importance of Spirituality in the Consumer Movement

The increasing adoption of the recovery model evolved from the growing movement throughout the United States and the world of people calling themselves consumers, service-users, survivors, or ex-patients. Having been diagnosed with mental disorders, they began working to challenge with health professionals to make changes in the mental health system and in society. The recognition of spirituality as an important component of recovery has been driven by these consumer and family grass-roots movements. In the late 1950s, with the advent of the civil rights movement, people began organizing to fight against inequality and social injustice. By 1970, the women's movement, gay rights movement, and disability rights movement had emerged. In this cultural context, in 1975, former patients in several cities across the country began what was first known as the psychiatric survivor movement with groups such as the Network Against Psychiatric Assault. The movement grew out of the idea that individuals who have experienced similar problems, life situations, or crises can effectively provide support to one another. Ex-mental patients organized protests, drop-in centers, artistic endeavors, and businesses.

Sally Clay, a pioneer of this movement and founder of the Portland Coalition for the Psychiatrically Labeled, wrote a seminal article in 1987 on spirituality and recovery that illustrated consumer concerns about the neglect of spirituality in their treatment. She has written about the important role that spiritual experiences played in her recovery following two years of hospitalization when she was diagnosed with schizophrenia at the Yale-affiliated Hartford Institute of Living (IOL). While hospitalized, she had a powerful spiritual experience that led her to attend religious services.

My recovery had nothing to do with the talk therapy, the drugs, or the electroshock treatments I had received; more likely, it happened in spite of these things. My recovery did have something to do with the devotional services I had been attending. At the IOL I attended both Protestant and Catholic services, and if Jewish or Buddhist services had been

available, I would have gone to them, too. I was cured instantly—healed if you will—as a direct result of a spiritual experience. (Clay, 1987, p. 91)

Many years later Clay went back to the IOL to review her case records and found herself described as having “decompensated with grandiose delusions with spiritual preoccupations” (Clay, 1987, p. 90). She complains that “not a single aspect of my spiritual experience at the IOL was recognized as legitimate; neither the spiritual difficulties nor the healing that occurred at the end” (p. 92). Clay is not denying that she suffered severe impairment at the time, but she makes the case that, in addition to the disabling effects she experienced as part of her psychosis, there was also a profound spiritual component that was ignored. She describes how the lack of sensitivity to the spiritual dimensions of her experience on the part of both mental health and religious professionals was detrimental to her recovery. Nevertheless, she has persevered in her belief that

for me, becoming “mentally ill” was always a spiritual crisis, and finding a spiritual model of recovery was a question of life or death. Finally I could admit openly that my experiences were, and always had been, a spiritual journey—not sick, shameful, or evil. (Clay, 1994)

The consumer movement has maintained since its early days that recovery from psychosis is experienced by many as part of their spiritual journey. This was eloquently expressed by Jay Mahler, consumer advocate and program director of the Mental Health Division of Contra Costa County. During a conversation with Dan Weisburd, then editor of the CAMI’s (California Alliance for the Mentally Ill) *The Journal*, Jay mentioned that he viewed his disorder as a spiritual journey. When Dan questioned how a devastating mental disorder could be a spiritual journey, Jay responded:

Regardless of what anyone else chooses to call it, that’s what it’s been for me. The whole medical vocabulary puts us in the role of a “labeled” diagnosed victim. . . . But as they go through trial and error to control your symptoms, it doesn’t take a genius to realize they haven’t got the answers. No clue about cures! And oh boy, those side effects! I don’t say medications can’t help, or that treatments won’t have value. But what I do say is that my being aware that I’m on a spiritual journey empowers me to deal with the big, human “spiritual” questions, like: “Why is this happening to me? Will I ever be the same again? Is there a place for me in this world? Can my experience of life be made livable? If I can’t be cured can I be recovering. . . even somewhat? Has my God abandoned me?” Bottom line is . . . we who have it have to wonder whether what remains constitutes a life worth living. That’s my spiritual journey, that wondering. That’s my search. (Weisburd, 1997, p. 2)

Starting in the 1970s, Jay Mahler and Frank Leonard organized spirituality groups in the San Francisco Bay Area. But it was in later conferences that consumers, mental health

professionals, and religious professionals started holding dialogs and began networking to deal with the issue of addressing spirituality in recovery more effectively. Among the many events funded by National Institute of Mental Health was the 1993 Alternatives Conference, “A Celebration of Our Spirit” held in Columbus, Ohio.

The movement activism of the 1970s gave rise to a movement of consumers who are taking an active role in shaping the recovery model that is being widely adopted throughout the mental health system. A grass-roots network of family members of consumers also organized and founded the National Alliance for the Mentally Ill (NAMI) which includes their FaithNet network which conducts outreach and engagement of faith communities with mental health since 1998. NAMI’s national conventions have featured many programs on spirituality, such as the 2006 NAMI Conference presentation on “Mental Illness as Spiritual Journey” by Rev. Susan Gregg-Schroeder as well as presentations by Jay Mahler and David Lukoff (Lukoff et al., 2009).

Pat Deegan, who is both a consumer and a psychologist, also makes the point that an episode of psychosis can be a genuine route to spirituality:

Distress, even the distress associated with psychosis, can be hallowed ground upon which one can meet God and receive spiritual teaching. When we set aside neurobiological reductionism, then it is conceivable that during the passage that is madness, during that passage of tomb becoming womb, those of us who are diagnosed can have authentic encounters with God. These spiritual teachings can help to guide and encourage the healing process that is recovery. (Deegan, 2004)

Studies have shown that religious content occurs in 22% to 39% of psychotic symptoms in schizophrenia (Anderson-Schmidt et al., 2019; Siddle et al., 2002). A study of hospitalized bipolar patients found that religious delusions were present in 25% and more than half of the hallucinations were brief, grandiose, and usually religious (Goodwin & Jamison, 1990). Ouwehand, Wong, Boeije, and Braam (2014) observed that some clients in their study “reported intense spiritual experiences during mania, accompanied by feelings of happiness or freedom. Mystical experiences of a sense of unity, of enlightenment, of the ascending of the soul or of the presence of the divine were reported” (p. 621). Edward Podvoll, a psychiatrist who developed a Buddhist mindfulness-based treatment model in use in Colorado, pointed out that genuine mystical experiences often occur in manic states: “There is a general agreement among those who have experienced it, that religious truths are realized, the religious truths, the ones of the desert fathers and the great mystics” (Podvoll, 1990, p. 118).

Since the earliest recorded history, experiences seen as psychotic from the modern perspective have been considered spiritual in different contexts. Hallucinations and visions of biblical prophets and saints, for example, have played an essential role in religion and the foundation of society itself for thousands of years. Socrates, who had a personal daemonic

voice that guided him, declared, “Our greatest blessings come to us by way of madness, provided the madness is given us by divine gift” (Dodds, 1951, p.61). Based on a cross-cultural survey, anthropologist Raymond Prince (1992) concluded: “Highly similar mental and behavioural states may be designated psychiatric disorders in some cultural settings and religious experiences in others” (p. 289).

Within cultures that invest these unusual states with meaning and provide the individual experiencing them with group support, at least a proportion of these individuals may be contained and channeled into socially valuable roles. For example, McGruder’s (2002) study of mostly Muslim Swahili people of Tanzania showed how tolerance, inclusion, and a religious interpretation resulted in higher rates of recovery for people meeting the diagnosis of schizophrenia than people with the same diagnoses in Western developed countries.

In a study of visions among Hispanic clinic patients, Lata (2005) found that “psychotic phenomena could occur in connection with spiritual experiences. Visions of loved ones who have died occur constantly, as well as visions of saints, angels, Jesus, and Mary” (p. 27). Other anthropological accounts show that babbling confused words, displaying curious eating habits, singing continuously, dancing wildly, and being “tormented by spirits” are common elements in shamanic initiatory crises. In shamanic cultures, such crises are interpreted as an indication of an individual’s destiny to become a shaman, rather than a sign of mental illness (Halifax, 1979). In Asian cultures, problems associated with spiritual practices, such as disorientation and hallucinations, which in the West could be labeled “psychotic” are instead recognized as phenomena distinct from psychopathology.

Research on Spirituality and Recovery From Serious Mental Problems

Studies have shown that spirituality plays an important role in the recovery process. In fact, religious practices such as worship and prayer appear to protect against severity of psychiatric symptoms and hospitalization, enhance life satisfaction and speed recovery from psychosis and severe disorders (Koenig et al., 2012). Many patients make use of use of religious and spiritual practices during their recovery. In a survey of California service recipients, many reported they rely on the following religious/spirituality practices to support their mental health: prayer (73%), meditation (47%), spending time in nature (41%), and reading sacred texts or spiritual self-help books (36%) (Yamada et al., 2019). In a systematic review of studies among hospital clients on the relationship between client well-being and private prayer, Hollywell and Walker (2009) found that that prayer frequency was associated with less depression and anxiety. They concluded that prayer can be conceptualized as “a coping action that mediates between religious faith and well-being” (p. 634). Participation in church and other faith communities involves many of these supportive practices, including prayer, meditation, religious ritual, religious reading, and singing. In addition to the aforementioned benefits, studies have found that spirituality increases resilience to stigma (Chaudoir et al., 2012). Huguelet et al. (2011) found that

the importance of spirituality was predictive of fewer negative symptoms, better social functioning, and improved quality of life among the 83% of patients who reported that religion had been helpful to them prior to their illness. Spirituality was unrelated to outcomes among the 14% with negative religious coping prior to their illness. Duran and Walters (2004) suggested that spirituality, including engagement in religious rituals and ceremonial practices, increases resilience to historical trauma among American Indians and Alaskan Natives, and perhaps others. In addition, spirituality may play a role in reducing substance abuse among people receiving mental health services, a well-documented problem that interferes with recovery (Huguelet et al., 2009).

Fallot (1998) analyzed the key religious and spiritual themes in recovery narratives drawn from spiritual discussion groups, trauma recovery groups, and other clinical groups at Community Connections, a mental health facility for people diagnosed with psychosis and severe disorders. He found that although organized religion had been experienced as stigmatizing and rejecting on some occasions, on the whole a personal, spiritual experience of a relationship with God was helpful in building hope, a sense of divine support and love, the courage to change, and to accept what cannot be changed. Participation in church and other faith communities provided clients with supportive practices including prayer, meditation, religious ritual, religious reading, and listening to religious music. In addition, spirituality played a positive role in coping with stressful situations as well as avoiding drug use and negative activities.

In another qualitative study, Jacobson (2001) conducted a thematic dimensional analysis of 30 recovery narratives. She identified “spiritual or philosophical” as an important theme in most of the narratives:

In this model the “what happened” is a spiritual or philosophical crisis during which the self is destroyed and then recreated in the light of a newly realized truth. The crisis is an altered state of being . . . The greatest help comes when individuals are able to connect with some source of enlightenment; a community of practicing Buddhists, the Bible, treatises of philosophy or physics. Recovery is about enduring and coming out the other side . . . Coming back to life, in a recreated and enlightened self, the individual discovers new “wisdom and compassion.” Those who have recovered, then, are obligated to demonstrate this wisdom and to practice compassion by reaching out to others who are in the midst of their own crises. (pp. 252–253)

Contemporary research on religious coping has generally supported the value of spirituality for persons with psychosis and severe mental disorders (Milner et al., 2019; Phillips et al., 2009). In a survey of more than 2,500 individuals receiving mental health services, 80% reported that their religious beliefs and behaviors helped them cope with their symptoms, and agreed or strongly agreed that spirituality was important to their mental health (Yamada et al., 2019). In another study, 80% of a group of 406 individuals with psychosis and severe disorders in Los Angeles reported that their religious beliefs and behaviors

helped them cope with their symptoms (Tepper et al., 2001). Thirty percent of this group agreed of the statement that religious beliefs and practices “were the most important thing that kept [them] going” (Tepper et al., 2001, p. 662). Some benefits from religion include feelings of optimism and comfort from giving up some sense of control over the difficulties surrounding psychosis and severe disorders, instead placing that control in the belief of a divine force. People with psychosis and severe disorders report that spirituality provides a sense of connection and support through contacts with like-minded individuals (Bussema & Bussema, 2000). Hope and security can also be derived from religious figures and texts that provide a model for persevering in the face of adversity, and from attributing difficult life circumstances to part of a divine plan in which the individual has a purpose (Fallot, 1998). Many people with psychosis and severe disorders experience fear, confusion, and helplessness that disrupt the internal order of their personality. According to Fallot (2001), “Religious faith develops in an unconscious, involuntary way. The faith creates an internal source of security; it offers the individual peace, inner strength and hope . . . faith in these circumstances can be regarded as the strongest defense mechanisms” (p. 115).

Phillips and Stein (2007) used a longitudinal design to examine religious attributions and their relationship with adjustment to psychosis and severe disorders. They administered subscales of the RCOPE (Pargament et al., 2000), a well-validated measure of religious coping, and measures of psychological adjustment to young adults living with bipolar disorder and schizophrenia in 2000 and again one year later. These participants, compared to nonpsychiatric samples from previous studies, were just as likely to use benevolent religious reappraisals (viewing one’s challenges such as psychosis and severe disorders as part of a divine plan and an opportunity to grow spiritually). This form of religious coping has been associated with positive outcomes from stressful life events (Gall & Guirguis-Younger, 2013). In a study of adults experiencing their first psychotic episode, religious coping was related to better outcomes as well. Such strategies were found to be helpful for coping with mental health problems by offering hope and reestablishing a stronger sense of self (Miller & McCormack, 2006). Religious coping strategies may be especially helpful for some individuals with psychosis and severe disorders who receive services outside the public mental health system and may rely on alternative therapies (Sarris et al., 2011).

However, “punishing God reprisals” were linked to higher levels of distress and greater feelings of loss of a normal life as a result of psychosis and severe disorders (Phillips & Stein, 2007). Similarly, although Tepper et al. (2001) found a positive relationship between general religious coping methods and outcomes (the more time spent utilizing religion to cope with mental problems, the fewer symptoms patients reported) some specific religious coping activities were associated with poorer outcomes.

Pargament et al. (1998) have described a form of “transformational religious coping” which involves aspects of religion and spirituality that call for a radical change in living,

a change in the major objectives in life (“ends”), and ways to obtain these end states (“means”). Certain psychotic states, such as those described by Perry (1998), Grof and Grof (1989), and Lukoff (2007, 2016), could fit these criteria. The psychotic break in these cases is a spiritual crisis and involves the restructuring of one’s worldview. Pargament (2007) spoke mostly of traditional conversion experiences and rituals of purification and forgiveness as examples of transformational religious coping. Spiritual emergencies may be another form of religious coping that can lead to transformation. With further refinement, mainstream psychological theory may be able to integrate transpersonal insights with regard to the spiritual dimensions of some psychotic episodes. Nixon et al. (2010) studied six people who self-identified as having benefited from psychosis in a spiritual and/or transformative manner. Themes that emerged from their interviews include: “embracing a spiritual pathway,” and “re-alignment of career path.” Overall, they conclude that “the results suggest that at least for some individuals, the experience of psychosis can be an important catalyst for spiritual and personally transformative growth” (p. 1). Because outcomes can be so variable, the risk is assessments of poor prognosis risk becoming a “self-fulfilling prophecy.” Emerging perspectives encourage broad spiritual competency among professionals and a general awareness of and openness to the possibility of developmental progress through crisis, similar to the positive outcomes after trauma termed “posttraumatic growth” (Bola & Mosher, 2003; Brook, 2019).

The Hearing Voices Movement distinguishes distress, isolation, and a sense of empowerment as distinct from the presence or absence in themselves of nonordinary experiences such as voice hearing (Romme et al., 1992). The movement, which brings together patients and professionals to advocate for change on the research, policy, and clinical practice levels, emphasizes the need to understand coping with the experience and finding a new relationship to it, not simply viewing it as psychopathology and then trying to remove it (Corstens et al., 2014). Other nonordinary experiences, such as unusual beliefs (including spiritual beliefs) and paranoia, also have wide prevalence: most do not find these experiences distressing or in need of any treatment (Bürgy, 2008; van Os, 2003; van Os & Reininghaus, 2016). This suggests the importance of greater openness to nonordinary experiences as expressions of human diversity, and for greater understanding how many people live with and benefit from these experiences.

At the same time, some patients have been found to hold distressing spiritual beliefs. One study of 52 psychiatric inpatients found that 23% believed that sin-related factors, such as sinful thoughts or acts, were related to the development of their illness (Sheehan & Kroll, 1990). This is clearly a guilt-inducing belief for which there is no evidence, and one that the vast majority of religious professionals would challenge. When I (DL) was a psychologist at Camarillo State Hospital, I collaborated with a rabbi in leading groups for patients, and this was one of the beliefs we regularly encountered. He made a point of disputing such assertions when they were voiced, using both Old and New Testament citations.

Treatment of Serious Mental Problems: Case Example

To illustrate the role spirituality can play in therapy, I (DL) will describe how spirituality was important in my own recovery from an episode of psychosis (see Lukoff, 2014, for a fuller account). Joseph Campbell once said if there was a sign in a hallway that said: “Lecture on God turn right. Meet God turn left,” most people would go to the lecture. I was one of those who not only turned left to meet God but became God—or at least Buddha and Christ. This happened in 1971 when, at the age of 23, following my first LSD trip, I spent two months firmly convinced that I was a reincarnation of both Buddha and Christ. I spent many sleepless nights holding conversations with the “spirits” of eminent thinkers in the social sciences and humanities, including talks with R. D. Laing, Margaret Mead, Freud, and Jung. I also conversed with Bob Dylan and Cat Stevens to learn about how to get the new “Holy Book” I was writing out into the world which would unite all the peoples of the world for the first time. I made 40 photocopies of the book and mailed them to my family and friends, and passed them out in the streets of Berkeley, California.

For those two months, my episode met the diagnostic criteria for acute schizophrenic reaction in the second edition of *Diagnostic and Statistical Manual* (DSM) (which was in use at the time). In the current DSM-5 (American Psychiatric Association, 2013), that experience could be diagnosed as a hallucinogen induced psychotic disorder. As has happened to others (Lukoff & Everest, 1985), I could have been diagnosed with a psychotic disorder if I hadn’t been supported by friends who took me in for a total of eight weeks. They provided sanctuary for me and helped me to get grounded again in the everyday social world and consensual reality. Without their help, I might have been confined in a psychiatric hospital, diagnosed with a lifelong psychotic disorder, and “treated” with medication.

The support of my friends during this time emulated the Diabasis program that was developed in 1974 in San Francisco by Jungian analyst John Perry for people undergoing a first psychotic break such as mine. Diabasis created a homelike atmosphere where diagnostic labels were not used. Staff members were selected for their ability to be comfortable with the intensive inner processes of persons in psychotic states. Patients were encouraged and supported to follow their inner journeys while being taken care of and protected from harm. The average length of stay was 48 days. Perry (1998) reported that many severely psychotic clients recompensated within two to six days *without* medication. Unfortunately, outcome data were not collected for this sample. Diabasis closed down after a few years due to budget cutbacks and political opposition in the mental health system.

A similar program, Soteria House, located in San Jose, California, provided more empirical support for this model (Mosher & Menn, 1978, 1979). Soteria House ran from 1971 to 1983, roomed six clients at a time up to several months, with three to four staff on premises. The nonprofessional staff were trained to view psychotic experiences as a developmental stage that can lead to growth, and which often contains a spiritual component such as mystical experiences. The staff were trained to “be with” in a nonintrusive

and nonjudgmental way, similar to “being with” individuals going through a difficult psychedelic drug experience. Medication was typically not prescribed unless a client showed no improvement after six weeks (only 10% of clients used medication at Soteria), since it was believed medication stunted the possible growth-enhancing process of the psychotic episode (Mosher & Menn, 1979).

Outcomes from Soteria were compared to a standard program, a community mental health center inpatient service consisting of daily pharmacotherapy, psychotherapy, occupational therapy, and group therapy (Mosher et al., 1975). Clients’ length of stay was longer at Soteria than in the comparison program (mean of 166 days vs. 28 days) (Mosher & Menn, 1979). But most patients recovered in six to eight weeks without medication (Mosher et al., 2004). A recent meta-analysis of data from two carefully controlled studies of Soteria programs found better two-year outcomes for Soteria patients in the domains of psychopathology, work, and social functioning compared with similar clients treated in a psychiatric hospital (Bola & Mosher, 2003).

In Western Finland, psychiatric crisis services are provided by the Open Dialogue approach, which has gained growing attention worldwide by achieving significantly higher rates of recovery than traditional care for schizophrenia and psychotic disorders. At five years, among the sample of 75 patients, 79% were asymptomatic and 80% were working, in school or seeking employment. Only 20% were continuing to take antipsychotic medication, and antipsychotic medications were not used with 70% during treatment, in stark contrast to areas where Open Dialogue is not used (Seikkula et al., 2006). Persons experiencing a psychotic crisis are treated within 24 hours, primarily in their homes, by a family therapy-trained team that maintains consistent contact through ongoing treatment meetings with the family and close social network. The person going through the crisis is included in conversations about the crisis and how to respond; delusions or perceptions with religious content are listened to equally in the conversation, from a standpoint of tolerance of uncertainty and trust that meaning will eventually emerge. Treatment with antipsychotic medication is routinely delayed or found to be unnecessary, and socialization into a new identity as a mental patient is avoided (Seikkula et al., 2003). Psychosis is understood not as arising from individual disease or deficit but within the relationships and communication between people (Bergström et al. 2018). While reliance on a clinical team, flexibility and mobility, and frequent extended therapeutic meetings at the earliest onset of a crisis are initially labor-intensive, Open Dialogue’s high recovery outcomes have led to reduced costs for mental health services overall (Seikkula et al., 2003).

The findings from Soteria and Open Dialogue also suggest reduced reliance on antipsychotic medication as a component of recovery. In addition to reducing stigma and the risk of facilitating career patients, less medication might enable some people to increase access to the positive potential within their spiritual experiences. Growing interest in medication reduction and withdrawal reflects both the escalating use of medications in society and increased recognition of adverse effects and limited efficacy for many (Hall, 2018;

Larsen-Barr et al. 2018; Whitaker, 2010). Some patient advocates including The Icarus Project have encouraged a “harm reduction” approach where using medications is more tailored to individual choice around risks and benefits, rather than a one-size-fits-all treatment for everyone with a certain diagnosis. In addition, The Icarus Project also supports individuals who want to explore withdrawing from their medications flexibly, avoiding more absolutist approaches (Aldridge, 2012; Hall, 2010). Consumer-driven organizations focus on finding alternative approaches to manage symptoms and avoid crisis. This often means redefining experiences in a spiritual framework, with an emphasis on self-compassion when challenged by the difficult parts of one’s life journey, rather than seeing things through a disease and illness lens (Larsen-Barr et al., 2018).

Therapeutic Approaches

Psychotherapy can help patients shape their psychosis and severe disorders into a coherent narrative, to see the “message” contained in their experiences, and to create a life-affirming personal myth (belief system) that integrates their experience. As I (DL) have documented in published case studies (Lukoff, 1988, 1993, 2015a; Lukoff & Everest, 1985), and observed in my clinical practice, psychotherapy can help some individuals probe the personal meaning of their symptoms and also see the universal dimensions of their experiences. Based on what I learned in my own integration process, and through my work with other individuals who had similar episodes, psychotherapy focused on integrating such experiences involves three phases:

Phase 1: Telling One’s Story

Phase 2: Tracing Its Symbolic/Spiritual Heritage

Phase 3: Creating a New Personal Mythology

PHASE 1: TELLING ONE’S STORY

People with psychosis and severe disorders are usually not asked to recount or reflect on their experiences. Yet telling one’s story is an important first step in recovery. Some clinicians have expressed the concern that having patients discuss their delusional experiences could exacerbate their symptoms by reinforcing them. I developed and led a 12-week holistic health program conducted at a state psychiatric hospital in which participants were encouraged to actively explore their psychotic symptoms. They participated in groups such as “Schizophrenia and Growth,” which encouraged them to compare their experiences to mystical experiences, Native American vision quests, and shamanic initiatory crises. Patients were assessed biweekly for psychopathology, and the data showed that telling their stories did not result in exacerbation of symptoms (Lukoff et al., 1986).

PHASE 2: TRACING ITS SYMBOLIC/SPIRITUAL HERITAGE

Jungian analyst John Beebe (1982) has noted:

Minimally, the experience of psychotic illness is a call to the Symbolic Quest. Psychotic illness introduces the individual to themes, conflicts, and resolutions that may be pursued through the entire religious, spiritual, philosophical and artistic history of humanity. This is perhaps enough for an event to achieve. (p. 252)

My personal call to the symbolic quest began after discovering the works of Joseph Campbell a few months after my episode. He saw the Hero's Journey as similar to the inward journey of schizophrenia (Campbell, 1972). He posits that whereas myths are metaphors for journeys into the psyche, psychosis is an actual journey into the psyche.

But like others with whom I have worked who developed grandiose delusions such as that they were god or the messiah, these stereotypical delusions of power were embarrassing to me later. I entered a five-year Jungian analysis a few years after the episode, which enabled me to make many positive links between my experiences and the worlds of myth and religion. Many religious professionals now recognize the potential spiritual value of mental health episodes. Father Jerome Stack (1997), a Catholic chaplain for 25 years at Metropolitan State Hospital in Norwalk, California, has observed that people with psychosis and severe disorders often do have genuine religious experiences:

Many patients over the years have spoken to me of their religious experience and I have found their stories to be quite genuine, quite believable. Their experience of the divine, the spiritual, is healthy and life giving . . . It is important not to presume that certain kinds of religious experience or behavior are simply "part of the illness" (p. 23).

James Hillman (1983) pointed out that "recovery means recovering the divine from within the disorder, seeing that its contents are authentically religious" (p. 10). The search for genuine spiritual aspects of psychosis and severe disorders by exploring parallels in traditional myths and religious texts has played a role in the recovery of others (Lukoff, 1988, 1993, 2015; Lukoff & Everest, 1985). In my own case, soon after my episode, I realized that I really had very little knowledge of Christ or Buddha at the time I assumed their identity. This led me to explore Christianity, Buddhism, and other forms of spirituality for the first time in my life. Perry (1998) noted that after a psychotic episode, "What remains . . . is an ideal model and a sense of direction which one can use to complete the transformation through his own purposeful methods" (pp. 34–35). I now view my own experience of having "been" Buddha and Christ as revealing ideal models for my life and as my spiritual awakening.

PHASE 3: CREATING A NEW PERSONAL MYTHOLOGY

Personal mythology is an individual's belief system of complementary and contradictory themes that shape a person's view of the world, shape expectations, and guide decisions

(Feinstein & Krippner, 2008). Personal myths address life's most important concerns and questions, including the following:

1. Identity (Who am I? Why am I here?)
2. Direction (Where am I going? How do I get there?)
3. Purpose (What am I doing here? Why am I going there? What does it all mean?)

Weaving the experience of psychosis and severe disorders into a life-affirming personal mythology is essential for recovery. Experiences of nonordinary reality, such as dreams and psychedelic drug experiences, as well as delusional and hallucinatory experiences from psychosis and severe disorders can play a significant role in shaping positive personal mythologies. All of these involve transcendence of ordinary life concerns and an experience with a "higher" or "deeper" reality. Such experiences can become the foundation for a new personal mythology that is growth-enhancing and spiritually supportive.

My personal journey of finding Purpose has involved publishing case examples highlighting the role spirituality has played in the recovery of others as well as my own recovery. I also published research and literature reviews on this topic, and presented at American Psychological Association, American Psychiatric Association and rehabilitation conferences in order to increase the awareness of mental health professionals about the important role of spirituality in recovery and in mental health in general. This work also led me to propose a new category for the DSM-IV (also in the current DSM-5) entitled Religious or Spiritual Problem (V62.89).

During the past 30 years in my clinical practice as a psychologist at UCLA-NPI, Camarillo State Hospital, the San Francisco VA Medical Center, and private practice, I have often found myself face to face with individuals who are having or have had delusions and hallucinations similar to mine. I believe that my ability to work effectively with those individuals has been aided by being given a rare opportunity to journey through the complete cycle and phenomenology of a naturally resolving psychotic episode. For my dissertation, I developed and led a holistic health program for patients at Camarillo State Hospital that included meditation, yoga, and exploration of the similarities between the patients' experiences and those of shamans, Native American vision quests, and artists such as van Gogh. Thus my psychotic episode held within it the archetypal gift of becoming a Wounded Healer, which has provided me with the ability to work more effectively with persons in the midst of or recovering from psychotic episodes.

My (WH) recovery journey has some overlap with Dr. Lukoff's. I was told I would be managing a chronic thought disease, schizoaffective disorder schizophrenia, for the rest of my life, and I spent 15 years on a disability check struggling to regain my life. Today I no longer take medications and have become a therapist working actively to create alternative approaches to psychosis and severe mental disorders, including my work with the Hearing Voices Movement and Open Dialogue. Key for my recovery was connecting

with a supportive patients' community, including Freedom Center and The Icarus Project, where we view ourselves beyond the medical psychiatric model. I learned about the rich history of alternatives to the medical model, and interviewed scientists, journalists, doctors, activists, and artists on the Madness Radio show I host and in the book *Outside Mental Health: Voices and Visions of Madness* (Hall, 2015). Through years of work with community support groups I wrote *Harm Reduction Guide to Coming off Psychiatric Drugs* (2010), which has been translated into 14 languages and is widely used in the mental health recovery movement. Currently, I am a Ph.D. candidate at Maastricht University School for Mental Health and Neuroscience as I strive to stay on the forefront of leading innovations in psychosis treatment in the United States and around the world. The death sentence of chronic mental illness was for me not a breakdown but a breakthrough to a different version of who I am.

As I challenged mainstream understandings of the altered states I experience, I drew strength from my mixed Choctaw American Indian heritage. Different realities became for me not signs of illness but spiritual messengers inviting my curiosity and discovery. Today I am less isolated, more in control, and less terrified than I was that day when a team of doctors gathered around a consulting table to pronounce me schizophrenic. But my most “florid” symptoms of that time, my unusual beliefs, my conversations with voices, my paranoia, my contemplation of suicide, my silent inward withdrawal, my perception of prophetic omens . . . all of that remains. I meet these experiences not with fear I am relapsing or as signs of disease, but as challenges to discover guidance from the dimension of spirit and ancestors. I am doing something completely different from what medical and mass media narratives say I should be doing: I am regaining my well-being in the world while at the same time losing touch more and more with “reality.” My madness is leading me somewhere that is more real than what everyone seems to say is real. I’m leaving behind not just the doctors’ diagnosis, but also the mechanistic, soulless, and “objective” reality that gave rise to it (Hall, 2015).

Consumer Movements Focused on Spirituality

In November 2004, the passage of Proposition 63—the Mental Health Services Act—by voters in California provided the California Department of Mental Health with increased funding to support county mental health programs. Long-time consumer advocate Jay Mahler saw this as an opportunity to develop a systematic approach to remediating the neglect of spirituality in the public mental health system. In August 2006, Mahler invited a diverse group of 20 consumers, family members, and service providers, including DL, to form a “spirituality workgroup.” This group convened monthly in its first year to share knowledge about diverse spiritual practices, religious traditions, and ethnic and cultural experiences in recovery. This dialogue led to the development of a concept paper for a state-wide project to find effective, collaborative means to lead the public mental health system in California to inquire about, embrace, and support the spiritual lives of the people it

serves. The recently formed California Mental Health & Spirituality Initiative was funded by 53 of the state's 58 counties. Specific activities of the initiative have included conferences on mental health and spirituality, a website (<http://www.mhspirit.org>), community dialogues, teleconferences, development of online and face-to-face curricula, as well as surveys of mental health service recipients (individuals and families), provider agencies, and county mental health directors. The surveys showed that both patients and California County Behavioral Health Directors are supportive of integrating spirituality into mental health services. In the survey conducted face-to-face or by phone, more than 90% of the county health directors said "strongly agree" or "agree" in response to the following three statements.

- Q1. "Spirituality is an important recovery resource in mental health treatment." (92%)
- Q2. "Spirituality is an important wellness resource in mental health prevention." (94%)
- Q3. "Spirituality is an important element of multicultural competency for mental health providers." (98%)

This was even higher than the percentage of consumers who agreed that "Spirituality is important to my mental health"—82%. These findings provide support for county and other public mental health programs to include spirituality as a component of recovery (Yamada et al., 2019).

Conclusion

The mental health professions have a long history of ignoring and pathologizing religion. For instance, Freud reduced the "oceanic experience" of mystics to "infantile helplessness" and a "regression to primary narcissism" and described religion as an obsessional neurosis (Freud, 1989/1927). Albert Ellis asserted, "The less religious [patients] are, the more emotionally healthy they will tend to be" (Ellis, 1980, p. 637). But the data reviewed earlier show otherwise: Religion is overwhelmingly associated with positive mental health. For many people, both with and without psychosis and severe disorders, having a relationship with a higher power is the foundation of their psychological well-being. Providing spiritual support involves supporting a person's sense of connection to a higher power (i.e., God or other transcendent force) that is actively supporting, protecting, guiding, teaching, helping, and healing. Some researchers have suggested that the subjective experience of spiritual support may form the core of the spirituality–health connection (Mackenzie et al., 2000).

In most cases, mental health service providers can provide spiritual support to people coping with psychosis and severe disorders by devoting some time to exploring spiritual issues and asking questions to discover a client's perspective on the deeper meanings in their life. They can initiate support of a patient's spirituality through a spiritual assessment

such as the SSOPP interview created to elicit religious and spiritual beliefs and practices, which is currently being used in public county behavioral health agencies in California. After some screening questions (the first “S” in SSOPP) to determine if conducting a spiritual assessment is appropriate for a given patient, this interview addresses the following:

- **Strengths:** Religious/spiritual strengths and coping resources
- **Organized religion** participation
- **Personal religion/spirituality**
- **Problems:** Religious/spiritual problems

The SSOPP is designed to be administered in three to five minutes as part of an intake or the questions can be asked as religious or spiritual issues arise in treatment (Lukoff, 2015b).

Other ways mental health service providers can provide spiritual support that are both evidence based and appropriate include the following:

Educating the client about recovery as a spiritual journey with a potentially positive outcome.

Encouraging the client’s involvement with a spiritual path or religious community that is consistent with their experiences and values.

Educating clients about individuals who have recovered through accepting and living with nonordinary and altered states experiences otherwise seen as psychosis, such as hearing voices, seeing messages, and having strange beliefs. Such education can include joining hearing voices groups and patient support groups where experiences and tools for coping are shared.

Encouraging the client to seek support and guidance from credible and appropriate religious or spiritual leaders.

Encouraging the client to engage in religious and spiritual practices consistent with their beliefs (e.g., prayer, meditation, reading spiritual books, acts of worship, ritual, forgiveness, and service). At times, this might include engaging in a practice together with the patient such as meditation, silence, or prayer.

Modeling one’s own spirituality (when appropriate), including a sense of purpose and meaning, along with hope and faith in something transcendent.

People recovering from psychosis and severe mental disorders have rich opportunities for spiritual growth, along with challenges to its expression and development. They will find much needed support when they are clinically guided to explore their spiritual lives.

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Transformation of Brain Function Associated With Spiritual Experience

Andrew B. Newberg

Abstract

This chapter reviews the transformations of brain structure and function associated with various spiritual experiences by considering the current state of neurophysiological investigations of spiritual experiences in terms of brain imaging, neurotransmitter studies, and hormone function. There are currently a number of techniques for studying the brain and its related functions. Such techniques include single photon emission computed tomography (SPECT), positron emission tomography (PET), and functional magnetic resonance imaging (fMRI). As discussed in this chapter, these imaging techniques can observe the very broad function of different structures of the brain as well as detailed neurotransmitter systems with regard to spiritual experience. Additional studies of various hormone levels, autonomic activity, and other physiological processes can also be integrated into a comprehensive model that can be utilized to help better understand the biological correlates of spiritual experiences.

Key Words: brain, spirituality, religion, experience, fMRI, PET, SPECT, neurotransmitter

Introduction

The study of spiritual experience is ultimately the study of a complex mental process. However, the study of spiritual experiences is also potentially one of the most important areas of research that may be pursued by science in the next decade. This may not be an understatement since spiritual experiences offer a fascinating window into human consciousness, psychology, and experience. This field of study, sometimes referred to as neurotheology, evaluates the relationship between mental states and body physiology; emotional and cognitive processing; and the biological correlates of religious and spiritual experiences (Newberg, 2018). In the past 30 years, scientists have explored the biology of various components of spiritual experiences and practices in some detail. Many studies have focused on particular practices such as prayer or meditation rather than the specific moment of transformation that might be associated with such practices (Tang et al., 2015).

Since these practices can lead to spiritual experiences, there certainly is value in understanding them. Thus, initial studies of such spiritual practices have measured changes

in autonomic activity such as heart rate and blood pressure as well as electroencephalographic (EEG) changes. Further studies have explored changes in hormonal and immunological function associated with meditation. Although many of these studies have utilized serum measurements of different substances, they are consistent with a number of central neurochemical changes. And there are now several studies that have specifically targeted changes in neurotransmitter systems related to spiritual practices and experiences. Studies have also explored the clinical effects of such practices in both physical and psychological disorders. Functional neuroimaging has opened a new window into the investigation of states associated with spiritual practices by exploring the neurobiological correlates of these experiences. These studies have observed changes in a number of brain structures and more recently have attempted to group these structures according to various networks including the default mode network, the salience network, and the central executive or attentional network (Raffone et al., 2019). The default mode network is comprised of several midline structures including the medial parts of the frontal lobe, the cingulate cortex (posterior), and the inferior parietal lobe (Tang et al., 2015). This network generally is active when the brain is at rest but seems to quiet down when the brain becomes active such as during meditation. The salience network is comprised of the anterior cingulate cortex, the orbital fronto-insular cortex, and the limbic system and is generally involved in integrating interoceptive, emotional, and autonomic nervous system information (Seeley et al., 2007). The “executive-control network” links the dorsolateral frontal and parietal neocortices and is involved in focusing attention and other executive processes that are also part of the intentional aspects of meditation practices.

Neuroimaging techniques include positron emission tomography (PET; Herzog et al., 1990–1991; Lou et al., 1999), single photon emission computed tomography (SPECT; Newberg et al., 2001), and functional magnetic resonance imaging (fMRI; Lazar et al., 2000). Each of these techniques provides different advantages and disadvantages in the study of spiritual practices. Functional MRI, while having improved resolution over SPECT and the ability of immediate anatomic correlation, can be very difficult to utilize for the study of a variety of spiritual practices because the noise from the machine and the requirement of having the subject lie down often are not conducive to spiritual practices. With regard to spiritual experiences, brain imaging studies are also somewhat problematic since the actual moment of a spiritual experience is almost impossible to predict, and if it were interrupted in order to obtain a scan or assess the exact mental state, then the spiritual experience might be severely altered. On the other hand, individuals performing spiritual practices, especially those with great proficiency, can often engage in their practice in spite of the distractions. One other possibility would be to image individuals before and then after a spiritual experience has occurred, to determine longer-term, or “trait”-related, changes in the brain’s function. Thus, functional brain imaging offers potentially important techniques for studying spiritual experiences and their associated practices, although the best approach may depend on a number of factors.

By reviewing the existing data on neurophysiology and physiology with regard to spiritual experiences and the practices that may bring on such experiences, we can attempt to integrate the existing data into a comprehensive neurophysiological model. However, there are many possible neurophysiological changes that may occur during spiritual practices or experiences, even though they may not occur in every type of practice or experience, or in each individual. This model might be based on practices such as deep meditation or prayer which have been the initial target of research. We can also consider a variety of experiential elements of spiritual experiences to determine how each element may be related to specific brain processes. As will be described below, a neurobiological model of the effects of such practices on spiritual experiences (fig. 25.1) may provide a framework of the neurological and physiological correlates of spiritual experiences and create a springboard for future research.

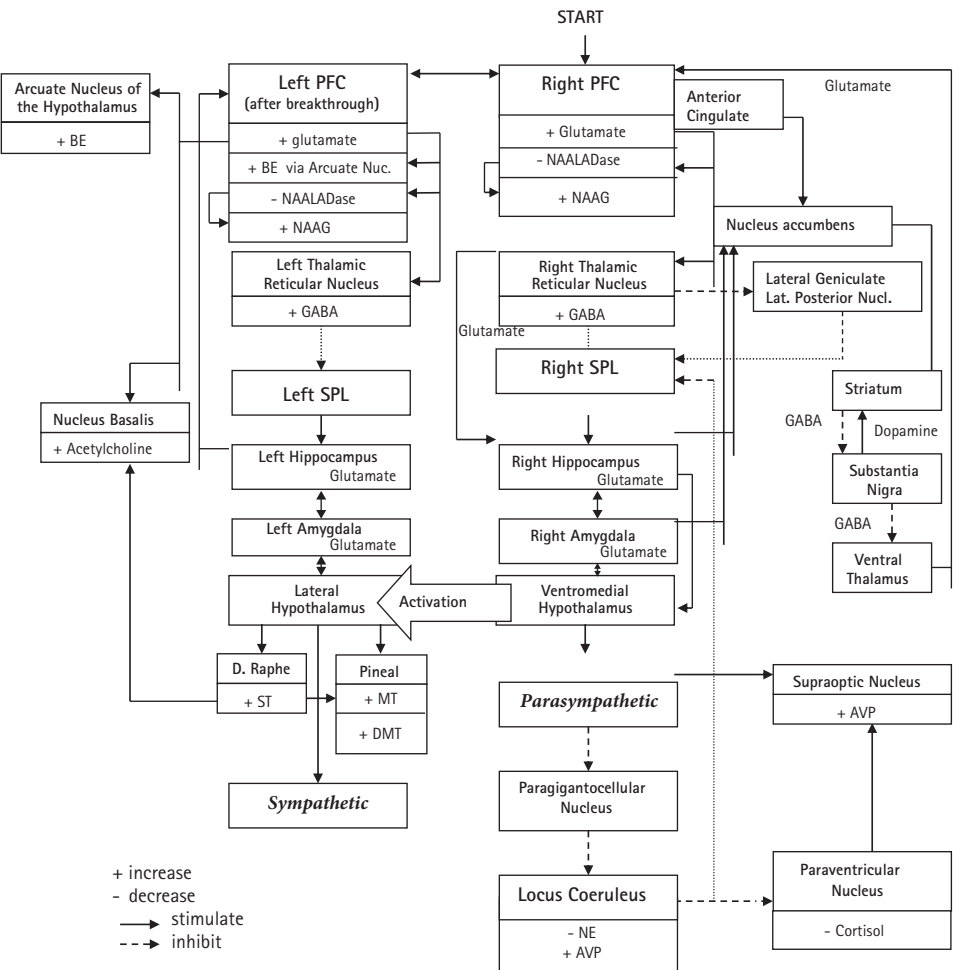


Figure 25.1 Schematic Overview of the Neurophysiological Network Possibly Associated With Meditative States

Activation of the Prefrontal and Cingulate Cortex

Since some approaches to spiritual experience involve practices in which the person on their own volition attempts to enter into such a state, we can begin with the structures of the brain that might be associated with the human will. Brain imaging studies suggest that willful acts and tasks that require sustained attention are initiated via activity in the prefrontal cortex (PFC), particularly in the right hemisphere (Doll et al., 2016; Frith et al., 1991; Pardo et al., 1991; Scheibner et al., 2017). The cingulate gyrus has also been shown to be involved in focusing attention, probably in conjunction with the PFC. Since spiritual practices such as meditation or prayer require intense focus of attention, it seems that there should be activation of the PFC as well as the cingulate gyrus. This notion is supported by the increased activity observed in these regions on several of brain imaging studies of volitional types of meditation (Herzog et al., 1990–1991; Lou et al., 1999; Newberg et al., 2001; Tang et al., 2015). For example, a study of Tibetan Buddhist meditators, who meditated for approximately one hour were found to have increased activity in the PFC bilaterally (greater on the right) and the cingulate gyrus during the practice of meditation.

Therefore, meditation appears to start by activating the prefrontal and cingulate cortex associated with the will or intent to clear the mind of thoughts or to focus on an object. The frontocingulate interaction is considered part of the brain's salience network which is particularly involved in a variety of spiritual practices (Seeley et al., 2007). Of course, meditation does not necessarily lead to spiritual experiences, so frontal lobe activity alone does not seem to provide a complete understanding of these experiences. In fact, some spiritual experiences are associated with feelings in which the self feels “overtaken” by the experience itself. The self feels as if it becomes absorbed or lost into the experience. If the frontal lobe is involved in willful activity, then a spiritual experience associated with a feeling of losing the self or of the original self being overcome by something spiritual, might be associated with a decrease of activity in the frontal lobes. This has also been evaluated with a SPECT study of the practice of speaking in tongues which is the Pentecostal practice associated with having the self-surrender itself to the spirit of God. During such a practice, the vocalizations that occur sound like language, although they do not correlate with any particular language (Newberg et al., 2006). For the individual, the practice is experienced as the spirit of God “moving through them.” During brain scan studies of speaking in tongues, the frontal lobes, particularly the areas involved in the willful generation of language, had reduced activity compared to the normal production of language. Similarly, different types of meditation practices, different levels of meditation expertise, and the duration of the practice appear to influence frontal lobe function with decreases occurring with greater expertise and duration of practice (Manna et al., 2010). Thus, if the frontal lobe activity increases, the spiritual experience might be perceived as having intense focus whereas if the frontal lobe decreases, the spiritual experience might be perceived as losing the sense of willful focus.

Thalamic Activation

Several neuroimaging and evoked potential studies have demonstrated that activity in the thalamus is altered during spiritual practices and experiences (Newberg et al., 2001; Newberg et al., 2015; Singh & Telles, 2015). Some studies have shown an increase in thalamic activity while others have suggested a more complex process involving asymmetric changes in thalamic activity during spiritual practices. These studies are also consistent with what is generally known about thalamic functions. For example, activation of the PFC is able to activate the reticular nucleus of the thalamus (Cornwall & Phillipson, 1988), particularly as part of a more global attentional network (Portas et al., 1998). Such activation may be accomplished by the PFC's production and distribution of the excitatory neurotransmitter, glutamate, which the PFC neurons use to communicate among themselves and to innervate other brain structures (Romo et al., 1986). The thalamus itself governs the flow of sensory information to cortical processing areas via its interactions with two structures called the lateral geniculate and lateral posterior nucleus and also likely uses the glutamate system in order to activate neurons in other structures (Armony & LeDoux, 2000). The lateral geniculate nucleus receives raw visual data from the optic nerve and routes it to the visual cortex for processing (Andrews et al., 1997). The lateral posterior nucleus of the thalamus provides the superior parietal lobule with the sensory information it needs to help determine the body's spatial orientation (Impieri et al., 2018).

When excited, the reticular nucleus elaborates the inhibitory neurotransmitter, gamma aminobutyric acid (GABA), onto the lateral geniculate and lateral posterior nucleus, cutting off input to the superior parietal lobe and visual centers in proportion to the reticular nucleus activation (Destexhe et al., 1998). During practices such as meditation or prayer, because of the increased activity in the PFC, particularly on the right, there should be a concomitant increase in the activity in the reticular nucleus of the thalamus. While brain imaging studies of meditation have not had the resolution to distinguish the reticular nucleus, several studies have demonstrated a general increase in thalamic activity that was proportional to the activity levels in the PFC (Newberg et al., 2001). This is consistent with, but does not confirm, the specific interaction between the PFC and reticular nuclei. If the activation of the right PFC causes increased activity in the reticular nucleus during meditation, the result may be decreased sensory input entering into the superior parietal lobe, also called "deafferentation." Several studies have demonstrated an increase in GABA during meditation, possibly reflecting increased central GABA activity (Elia et al., 2000; Streeter et al., 2007). This functional deafferentation related to increased GABA would mean that fewer distracting outside stimuli would arrive at the visual cortex and superior parietal lobe enhancing the sense of focus. During spiritual experiences, similar mechanisms might be in place although the interaction between the frontal lobe and the thalamus might be more complex as part of the salience network (Seeley et al., 2007). Such states may be associated with mutual increases in both arms of the autonomic

nervous system, some with mutual decreases, and some with one turned on and the other off. The mechanism of the later is less clear at this time.

It should also be noted that the dopaminergic system, via the basal ganglia, is believed to participate in regulating the glutamatergic system and the interactions between the prefrontal cortex and subcortical structures. A PET study utilizing ^{11}C -Raclopride to measure the dopaminergic tone during Yoga Nidra meditation demonstrated a significant increase in dopamine levels during the meditation practice (Kjaer et al., 2002). They hypothesized that this increase may be associated with the gating of cortical–subcortical interactions that leads to an overall decrease in readiness for action that is associated with this particular type of meditation. Similarly, there might eventually be a reciprocal decrease in prefrontal cortex activity associated with the inhibitory function of the thalamus. This decrease may effectively take the frontal lobes “offline” and result in the sense of losing control. It is also well known that the dopaminergic system is involved in euphoric states and thus may be associated with spiritual experiences of high emotional states. A recent study of a spiritual retreat program showed a downregulation of the dopamine transporter which may potentiate the effects of dopamine release during such practices (Newberg et al., 2018). The result suggests that meditation and other spiritual practices “prime” the brain for intense spiritual experiences. Future studies will be necessary to elaborate on the role of dopamine in spiritual experience as well as the interactions between dopamine and other neurotransmitter systems.

Deafferentation of the Parietal Lobe

The superior parietal lobe is involved in the analysis and integration of higher-order visual, auditory, and somaesthetic information (Adair et al., 1995). It is also involved in a complex attentional network that includes the PFC and thalamus (Fernandez-Duque & Posner, 2001; Hasenkamp et al., 2012). Through the reception of auditory and visual input from the thalamus, the superior parietal lobe is able to help generate a three-dimensional image of the body in space, provide a sense of spatial coordinates in which the body is oriented, help distinguish between objects, and exert influences in regard to objects that may be directly grasped and manipulated (Szczepanski & Saalmann 2013). These functions of the superior parietal lobe might be critical for distinguishing between the self and the external world. It should be noted that another study has suggested that the superior temporal lobe may play a more important role in body spatial representation (Karnath et al., 2001). Although the actual relationship between the parietal and temporal lobes in terms of spatial representation remains to be seen, these structures likely play a mutual role in the spatial effects associated with spiritual experiences.

In particular, deafferentation of these orienting areas of the brain may be an important aspect in the physiology of spiritual practices and experiences. If, for example, there is deafferentation of the superior parietal lobe by the reticular nucleus’s GABAergic effects, the person may begin to lose their usual ability to spatially define the self and help to

orient the self. This is an experience frequently associated with meditative and prayer practices as well as more generally with spiritual experiences. Deafferentation of the superior parietal lobe has also been supported by imaging studies demonstrating decreased activity in this region during intense meditation (Barnby et al., 2015; Newberg et al., 2001). Further, brain imaging studies have also shown a correlation between increasing activity in the thalamus and decreasing activity in the superior parietal lobe.

Hippocampus and Amygdala Activation

In addition to the complex cortical–thalamic activity, spiritual practices and experiences might also be associated with altered activity in the limbic system, particularly since stimulation of limbic structures is associated with profound emotional responses (Saver & Rabin, 1997). The hippocampus acts to moderate cortical arousal and responsiveness, via rich and extensive interconnections with the prefrontal cortex and other neocortical areas incorporated into the default mode network (Chan et al., 2017) as well as with the amygdala and hypothalamus (Mégevand, et al., 2017). Hippocampus stimulation has been shown to diminish cortical responsiveness and arousal; however, if cortical arousal is initially at a low level, then hippocampal stimulation tends to augment cortical activity (Redding, 1967). The ability of the hippocampus to stimulate or inhibit neuronal activity in other structures likely relies upon the glutamate and GABA systems, respectively (Booker & Vida 2018).

It has been suggested that the blocking of sensory information (i.e., deafferentation) of the superior parietal lobe might be associated with the loss of the sense of self and/or the orientation of that self to other objects in the world (Newberg & Iversen, 2003). Since this loss of orientation of the self is often described in spiritual experiences, the deafferentation of the superior parietal lobe might be an important mechanism underlying such experiences. If partial deafferentation of the right superior parietal lobe occurs during a spiritual experience, the result may be stimulation of the right hippocampus because of the inverse relationship between hippocampus and cortical activity. If, in addition, there is simultaneous direct stimulation of the right hippocampus via the thalamus (as part of the known attentional network) and mediated by glutamate, then a powerful recruitment of stimulation of the right hippocampus might occur. Right hippocampal activity may ultimately enhance the stimulatory function of the PFC on the thalamus via a structure called the nucleus accumbens which gates the neural input from the PFC to the thalamus via the neuromodulatory effects of dopamine (Chow & Cummings, 1999; Newman & Grace, 1999).

The hippocampus greatly influences the amygdala, such that they complement and interact in the generation of attention, emotion, and certain types of imagery. It seems that much of the prefrontal modulation of emotion is via the hippocampus and its connections with the amygdala (McGary & Carter, 2017). Because of this reciprocal interaction between the amygdala and hippocampus, the activation of the right hippocampus

likely stimulates the right amygdala as well. The results of several imaging studies support the notion of increased activity or functional connectivity associated with the amygdala and hippocampus during practices such as meditation (Barnby et al., 2015; Gotink et al., 2016). However, whether such functional changes are associated with spiritual experience more broadly remains to be seen.

Hypothalamic and Autonomic Nervous System Changes

The hypothalamus is extensively interconnected with the limbic system. Stimulation of the right amygdala has been shown to result in stimulation of the hypothalamus with a subsequent stimulation of the peripheral parasympathetic system (Davis, 1992). Increased parasympathetic activity should be associated with the subjective sensation first of relaxation, and eventually, of a more profound quiescence. Activation of the parasympathetic system would also cause a reduction in heart rate and respiratory rate. All these physiological responses have been observed during meditation (Amihai & Kozhevnikov, 2015; Jevning et al., 1992). Spiritual experiences can have a number of strong emotional responses ranging from bliss to ecstasy. Blissful elements of such experiences may be mediated in part by activity in the parasympathetic system.

Typically, when breathing and heart rate slow down, the paragigantocellular nucleus of the medulla in the brain stem ceases to innervate a structure called the locus coeruleus (LC), also in the brain stem. When stimulated, the LC produces and distributes the stress molecule, norepinephrine (NE; Foote, 1987; Marzo et al., 2014), a neuromodulator that increases the susceptibility of brain regions to sensory input by amplifying strong stimuli, while simultaneously gating out weaker activations and cellular “noise” that fall below the activation threshold (Waterhouse et al., 1998). Decreased stimulation of the LC should result in a decreased level of NE (Van Bockstaele & Aston-Jones, 1995). The breakdown products of catecholamines such as NE and epinephrine have generally been found to be reduced in the urine and plasma during meditation practices (Infante et al., 2001; Walton et al., 1995) which may simply reflect the systemic change in autonomic balance. However, it is not inconsistent with a cerebral decrease in NE levels as well. During a spiritual practice, the reduced firing of the paragigantocellular nucleus may cut back its innervation of the LC, which densely and specifically supplies the parietal lobe and the lateral posterior nucleus with NE (Huang et al., 2015). Thus, a reduction in NE would decrease the impact of sensory input on the superior parietal lobe, contributing to its deafferentation described earlier and helping to enhance the experience of the loss of the sense of self and space. Thus, spiritual experiences could be facilitated by such neuronal interactions.

Several models of meditation practices implicate the importance of the locus coeruleus (Craigmyle, 2013). If the above processes occur during spiritual practices, it might be expected that the LC would also deliver less NE to the hypothalamic paraventricular nucleus. The paraventricular nucleus of the hypothalamus typically secretes corticotropin-releasing hormone (CRH) in response to innervation by NE from the LC (Ziegler et

al., 1999). This CRH stimulates the anterior pituitary gland to release adrenocorticotrophic hormone (ACTH; Livesey et al., 2000). ACTH, in turn, stimulates the adrenal cortex to produce cortisol, one of the body's primary stress hormones (Davie et al., 1985). Decreasing NE from the LC during meditation or prayer would likely decrease the production of CRH by the paraventricular nucleus and ultimately decrease cortisol levels (Heckenberg et al., 2018; Jevning et al., 1978; Ray et al., 2014; Sudsuang et al., 1991) reflecting a reduced stress state. This could have important clinical implications with regard to reducing anxiety and the stress response.

A reduction in blood pressure associated with increased parasympathetic activity would be expected to relax the arterial baroreceptors that monitor blood pressure and lead to the caudal ventral medulla in the brain stem to decrease its GABAergic inhibition of the supraoptic nucleus of the hypothalamus. This lack of inhibition can provoke the supraoptic nucleus to release the vasoconstrictor arginine vasopressin (AVP), thereby tightening the arteries and returning blood pressure to normal (Renauld, 1996). But AVP has also been shown to decrease self-perceived fatigue and arousal and significantly improve the consolidation of new memories and learning (Pietrowsky et al., 1991; Weingartner et al., 1981). Although there is limited data, one study reported an increase in AVP associated with meditation (O'Halloran et al., 1985) which could help to enhance the memory of a particular experience, perhaps supporting the subjective phenomenon that meditative experiences are remembered and described in very vivid terms.

PFC Effects on Other Neurochemical Systems

As PFC activity increases, it produces increasing levels of glutamate in the brain. Increased glutamate can stimulate the arcuate nucleus of the hypothalamus to release beta-endorphin (Kiss et al., 1997). Beta-endorphin (BE) is an endogenous opioid produced and is distributed to the brain's subcortical areas (Yadid et al., 2000). BE is known to depress respiration, reduce fear, reduce pain, and produce sensations of joy and euphoria (Janal et al., 1984). That such effects have been described during spiritual practices and experiences may implicate some degree of BE release related to the increased PFC activity. Further, the joy and euphoric feelings associated with spiritual experience might similarly implicate the endogenous opioid system. Meditation has been found to disrupt diurnal rhythms of BE and ACTH, while not affecting diurnal cortisol rhythms (Infante et al., 1998). Thus, the relationship between opioid receptors and various spiritual experiences is not clear, especially in light of one very limited study demonstrating that blocking the opiate receptors with naloxone did not affect the experience or EEG associated with meditation (Sim & Tsoi, 1992).

Glutamate itself activates N-methyl d-Aspartate (NMDA) receptors, but excess glutamate can kill the neurons expressing the NMDA receptors through excitotoxic processes (Albin & Greenamyre, 1992). If glutamate levels approach excitotoxic concentrations during intense spiritual experiences, the brain might limit its production of

N-acetylated-alpha-linked-acidic dipeptidase, which converts the endogenous NMDA antagonist N-acetylaspartylglutamate (NAAG) into glutamate (Thomas et al., 2000). The resultant increase in NAAG would protect cells from excitotoxic damage. However, there is an important side effect since the NMDA receptor inhibitor, NAAG, is functionally analogous to the disassociative hallucinogens ketamine, phencyclidine, and nitrous oxide (Jevtovic-Todorovic et al., 2001). These NMDA receptor antagonists produce a variety of states that may be characterized as either schizophrenomimetic or mystical, such as out-of-body and near-death experiences (Vollenweider et al., 1997). Whether such substances are elaborated within the brain during the short interval associated with a spiritual experience is not yet clear.

Autonomic-Cortical Activity

In the early 1970s, Gellhorn and Kiely developed a model of the physiological processes involved in meditation based almost exclusively on autonomic nervous system (ANS) activity, which while somewhat limited, indicated the importance of the ANS during such experiences (Gellhorn & Kiely, 1972). These authors suggested that intense stimulation of either the sympathetic or parasympathetic system, if continued, could ultimately result in simultaneous discharge of both systems (what might be considered a “breakthrough” of the other system). If such a breakthrough was associated with the most intense, and potentially most spiritual, types of spiritual experiences (d’Aquili & Newberg, 1993), it might help explain some of the conflicting subjective descriptions of these experiences—namely, that they involve feelings of both high energy and intense bliss. Several studies have demonstrated predominant parasympathetic activity during meditation practices associated with decreased heart rate and blood pressure, decreased respiratory rate, and decreased oxygen metabolism (Travis, 2001). However, studies of different meditative techniques suggested a mutual activation of parasympathetic and sympathetic systems by demonstrating an increase in the variability of heart rate during these practices (Peng et al., 1999; Tyagi & Cohen, 2016). The increased variation in heart rate was hypothesized to reflect activation of both the parasympathetic and sympathetic arms of the ANS. This notion also fits the characteristic description of meditative states in which there is a sense of overwhelming calmness as well as significant alertness. Also, the notion of mutual activation of both arms of the ANS is consistent with the overall understanding of complex autonomic interactions (Hugdahl, 1996).

Serotonergic Activity

Activation of the ANS can result in intense stimulation of structures in the lateral hypothalamus and median forebrain bundle that are known to produce both ecstatic and blissful feelings when directly stimulated (Olds & Forbes, 1981). Stimulation of the lateral hypothalamus can also result in changes in serotonergic activity. In fact, several studies have shown that after meditation, the breakdown products of serotonin in urine are

significantly increased, suggesting an overall elevation in serotonin levels during meditation (Albin & Greenamyre, 1992; Yu et al., 2011). Serotonin is a neuromodulator that densely supplies the visual centers of the temporal lobe, where it strongly influences the flow of visual associations generated by this area (Janal et al., 1984). The cells of the dorsal raphe near the brain stem produce and distribute ST when innervated by the lateral hypothalamus (Aghajanian et al., 1987) and also when activated by the prefrontal cortex (Juckel et al., 1999). Moderately increased levels of serotonin appear to correlate with positive affect, while low serotonin often signifies depression (Van Praag & De Haan, 1980). This relationship has clearly been demonstrated with regard to the effects of the selective serotonin reuptake inhibitor medications which are widely used for the treatment of depression. When cortical serotonin receptors (especially in the temporal lobes) are activated, however, the stimulation can result in a hallucinogenic effect. Tryptamine-based psychedelic drugs such as psilocybin and LSD seem to take advantage of this mechanism to produce their extraordinary visual associations (Aghajanian & Marek, 1999). The mechanism by which this appears to occur is that serotonin inhibits the lateral geniculate nucleus, greatly reducing the amount of visual information that can pass through (Funke & Eysel, 1995; Yoshida et al., 1984). If combined with reticular nucleus inhibition of the lateral geniculate, serotonin may increase the fluidity of temporal visual associations in the absence of sensory input, possibly resulting in the internally generated imagery that has been described during certain spiritual states. Another potential mechanism by which spiritual practices might affect serotonergic function is by affecting the serotonin transporter that regulates synaptic levels of serotonin. As described above with the dopaminergic system, a recent study of a spiritual retreat program also showed a downregulation of the serotonin transporter again suggesting that there may be a potentiation of the effects of serotonin release during such practices (Newberg et al., 2018). The result suggests that meditation and other spiritual practices predispose the brain to have intense spiritual experiences perhaps in a manner similar to the effects of psychedelic substances.

Increased serotonin levels can affect several other neurochemical systems. An increase in serotonin has a modulatory effect on dopamine suggesting a link between the serotonergic and dopaminergic system that may enhance feelings of euphoria (Vollenweider et al., 1999), frequently described during spiritual states. Serotonin, in conjunction with the increased glutamate, has been shown to stimulate another structure called the nucleus basalis to release acetylcholine which has important modulatory influences throughout the cortex (Manfridi et al., 1999; Zhelyazkova-Savova et al., 1997). Increased acetylcholine in the frontal lobes has been shown to augment the attentional system and in the parietal lobes to enhance orienting without altering sensory input (Walton et al., 1995). Increased serotonin combined with lateral hypothalamic innervation of the pineal gland may lead the latter to increase production of the neurohormone melatonin (MT) from the conversion of serotonin (Moller, 1992). Melatonin has been shown to depress the central nervous system and reduce pain sensitivity (Shaji & Kularni, 1998). During meditation,

blood plasma MT has been found to increase sharply (Tooley et al., 2000) which may contribute to the feelings of calmness and decreased awareness of pain (Dollins et al., 1993). Under circumstances of heightened activation, pineal enzymes can also endogenously synthesize the powerful hallucinogen 5-methoxy-dimethyltryptamine (DMT) (Monti & Christian, 1981). Several studies have linked DMT to a variety of mystical states, including out-of-body experiences, distortion of time and space, and interaction with supernatural entities (Strassman et al., 1996). Hyperstimulation of the pineal at this step, then, could also lead to DMT production that can be associated with the wide variety of mystical-type experiences associated with that hallucinogen.

Conclusion

Although there continues to be a growing body of research on the physiological effects of spiritual practices, much work still needs to be done to better elucidate the intricate neurobiological processes associated with such practices and their associated spiritual experiences. Most available studies have explored specific spiritual practices such as meditation or prayer upon which much of the model presented in this chapter is based. The neurophysiological effects that have been observed during spiritual practices and experiences seem to outline a consistent pattern of changes involving certain key brain structures in conjunction with autonomic nervous system and hormonal changes. These changes are also reflected in neurochemical changes involving the endogenous opioid, GABA, norepinephrine, serotonergic, and dopaminergic receptor systems. The model presented here, based on current literature about the interaction of these systems as well as brain imaging studies of spiritual practices, is an integrated hypothesis that may help elucidate the mechanism underlying the physical and psychological effects of such practices and experiences. It should also be mentioned in concluding that whatever neurophysiological bases of spiritual experience are eventually discovered, they do not necessarily reduce such experiences to mere biology. The subjective state and the phenomenology of such experiences cannot be ignored or dismissed, especially considering that such experiences carry with them not only spiritual properties but a very strong sense that they represent a more fundamental sense of reality compared to that observed by science. Furthermore, the physiological means of entering into a spiritual state may simply reflect the brain's response to that experience rather than establish a true causal relationship. Regardless of the ultimate basis of such experiences, elucidating their physiological and psychological basis can only help in our overall understanding of how spiritual experience comes about.

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Neuroimaging and Spiritual Practice

Mario Beauregard

Abstract

This chapter defines religious, spiritual, and mystical experiences (RSMs) and then reviews clinical data suggesting a role for the temporal lobe in RSMs. It may be possible to induce such experiences experimentally by stimulating the temporal lobe with weak electromagnetic currents. The limbic-marker hypothesis is another possibility. The chapter examines the findings of neuroimaging studies of RSMs conducted to date. Since meditation is often associated with spiritual practice, the chapter reviews neuroimaging studies of diverse meditative states. The phenomenology of RSMs with respect to the mind–brain problem is an area of discussion, with a special emphasis on near-death experiences. Finally, the chapter provides a few concluding remarks and proposes new opportunities for expanding the neuroscience of spirituality.

Key Words: neuroimaging, brain, temporal lobe, RSMs, meditation, mind–brain problem, near-death experiences

Introduction

The last few decades have been marked by the emergence of the neuroscience of spirituality. The central objective of this domain of research is to use neuroscience methods (e.g., brain imaging, stimulation, psychopharmacological, and electrophysiological recordings) to explore the neural mechanisms mediating religious, spiritual, and mystical experiences (RSMs). These experiences relate to a fundamental dimension of human existence and are frequently reported across all cultures (Hardy, 1975; Hay, 1990). One of the basic assumptions of this emergent field is that RSMs are brain-mediated; that is, they have neurophysiological correlates, as do all other aspects of human experience. Regarding this issue, it is important to fully appreciate that elucidating the neural substrates of RSMs does not diminish or depreciate their meaning and value.

Religious experiences arise from following a religious tradition and involve contact with the divine or a religious figure. Spiritual experiences are subjective experiences that do not arise from following a religious tradition. These experiences, however, can also bring the experiencer into contact with the divine or a transcendent reality. Mysticism

refers to the pursuit of an altered state of consciousness that enables the mystic to commune with, or identify with, a divinity or ultimate reality through an immediate, direct, intuitive knowledge and experience. James (1902) proposed that ineffability, noetic quality, transiency, and passivity are the most important features of mystical experiences. Other characteristics attributed to mystical experiences include feelings of unity, peace and bliss, numinosity, sense of incommunicability of the experience, loss of ego, an altered perception of space and time, and profound transformative changes (i.e., changes in one's worldview, belief system, relationships, and sense of self) (Stace, 1960; Waldron, 1998).

The second section of this chapter reviews data suggesting a role for the temporal lobe and the limbic system in RSMEs. The following section examines the findings of brain imaging studies of RSMEs conducted to date. Since meditation is often associated with spiritual practice, the fourth section reviews neuroimaging studies of various meditative states. The next section discusses neuroimaging data and phenomenology of RSMEs with respect to the mind–brain problem. A special emphasis is placed on near-death experiences (NDEs). The last section provides a few concluding remarks and proposes new opportunities for expanding the neuroscience of spirituality.

Role of the Temporal Lobe and the Limbic System in RSMEs

This section focuses on the role of the temporal lobes and the limbic system in RSMEs.

Temporal Lobe Epilepsy

Clinical observations suggest an association between temporal lobe epilepsy (TLE) and RSMEs during (ictal), after (postictal), and in between (interictal) seizures (Devinsky & Lai, 2008). Howden (1872–1873) first observed a man who had a religious conversion after a generalized seizure in which he experienced being transported to “Heaven.” Afterward, Mabilie (1899) described a patient who, following a seizure, reported that God had given him a mission to bring law to the world. A few years later, Spratling (1904) reported a religious aura or a premonitory period of hours or several days associated with religiosity in 52 of 1,325 patients with epilepsy (4%). Furthermore, Boven (1919) reported the case of a 14-year-old boy who, after a seizure, saw the good God and the angels and heard a celestial fanfare of music.

More recently, Dewhurst and Beard (1970) reported six patients with TLE who underwent sudden and often lasting religious conversions in the postictal period. Some of these patients had prior or active psychiatric disorders. There was an obvious temporal relationship between conversion and first seizure or increased seizure frequency in five patients.

Studies have shown that between 0.4% and 3.1% of TLE patients had ictal RSMEs, while postictal RSMEs occurred in 2.2% of patients with TLE. Ictal RSMEs occur most often in patients with right TLE, whereas there is a predominance of postictal and interictal

RSMEs in TLE patients with bilateral seizure foci. Of note, many of the epilepsy-related religious conversion experiences occur postictally (Devinsky & Lai, 2008).

From an experiential perspective, ictal religious experiences during seizures can be accompanied by intense emotions of God's presence, the sense of being connected to the infinite (Alajouanine, 1963), hallucinations of God's voice (Hansen & Brodtkorb, 2003), the visual hallucination of a religious figure (Karagulla & Robertson, 1955), or repetition of a religious phrase (Ozkara et al., 2004). It has been suggested that some of the greatest religious figures in history (e.g., Saint Paul, Muhammad, Joan of Arc, and Joseph Smith) were probably suffering from TLE (Saver & Rabin, 1997).

Naito and Matsui (1988) described an elderly woman whose seizures were characterized by joyful visions of God. Interictal electroencephalography (EEG) revealed spike discharges in the left anterior and middle temporal areas during sleep. Morgan (1990) described a patient whose seizures were associated with feelings of ineffable contentment and fulfillment; visualizing a bright light recognized as the source of knowledge; and sometimes visualizing a bearded young man resembling Jesus Christ. A computed axial tomography (CAT) scan displayed a right anterior temporal astrocytoma. Following anterior temporal lobectomy, ecstatic seizures vanished. Along the same lines, Picard and Craig (2009) described the case of a 64-year-old right-handed woman who has had epileptic seizures with an ecstatic aura. During her ecstatic epileptic seizures, she reported experiencing immense joy above physical sensations as well as unimaginable harmony with life, the world and the "All." Cerebral magnetic resonance imaging (MRI) showed a meningioma in the left temporal pole region. An interictal EEG revealed left anterior temporo-frontal epileptiform activity.

Ogata and Miyakawa (1998) examined 234 Japanese epileptic patients for ictus-related religious experiences. Three (1.3%) patients were found to have had such experiences. All three cases had TLE with postictal psychosis, and interictal experiences with hyperreligiosity. Patients who had ictus-related or interictal religious experiences did not believe only in Buddhism (a traditional religion in Japan) but rather in a combination of Buddhism and Shintoism, new Christian sects, contemporary Japanese religions, and/or other folk beliefs. This suggests that these experiences were related not only to the personality characteristic of TLE but also to the social circumstances and conditions under which such experiences occur in contemporary Japan. These findings indicate that manifestations of religious experience in postictal psychosis were influenced by some psychosocial factors.

Interictal Personality Syndrome of Temporal Lobe Epilepsy

Waxman and Geschwind (1975) suggested that hyperreligiosity is a core feature of a distinctive interictal personality syndrome of TLE (also called the Geschwind syndrome). A heightened state of religious conviction, an increased sense of personal destiny, intense philosophical and cosmological concerns, and strong moral beliefs usually characterize

interictal religiosity. The putative temporal lobe personality type is also characterized by hypermoralism, deepened affects, humorlessness, aggressive irritability, and hypergraphia.

Support for this hypothetical syndrome was provided by Bear and Fedio (1977) who found that religiosity trait scores were significantly higher in TLE patients than in healthy control participants. In keeping with this, Roberts and Guberman (1989) found that 60% of 57 consecutive patients with epilepsy had excessive interests in religion. Subsequent studies using religion questionnaires, however, failed to find any differences regarding interictal religiosity between patients with TLE versus idiopathic generalized epilepsy, or between patients with epilepsy and normal control participants (Tucker et al., 1987; Willmor et al., 1980). It has been proposed that differences in religiosity measures and in control group selection account for some of the discrepancy among studies (Saver & Rabin, 1997).

Interestingly, Wuerfel et al. (2004) used MRI to investigate mesial temporal structures in 33 patients with refractory partial epilepsy, comparing 22 patients without and 11 patients with hyperreligiosity. High ratings on the religiosity scale were correlated with a significantly smaller hippocampus in the right hemisphere. The hippocampal atrophy may reflect the duration and severity of hyperreligiosity. This does not mean, however, that the right hippocampus is the critical cerebral structure for religious experience (Devinsky & Lai, 2008).

The Limbic-Marker Hypothesis

Saver and Rabin (1997) have theorized that temporolimbic discharges underlie each of the core features of RSMEs (e.g., the noetic and the ineffable; the sense of having touched the ultimate ground of reality; the sense of incommunicability of the experience; the experience of unity, timelessness, and spacelessness; and feelings of positive affect, peace, and joy). The limbic system integrates external stimuli with internal drives and is part of a distributed neural circuit that marks the valence (positive or negative) of stimuli and experiences (Damasio et al., 1991). Saver and Rabin (1997) posited that temporolimbic discharges may mark experiences as (a) depersonalized or derealized; (b) crucially important and self-referent; (c) harmonious, indicative of a connection or unity between disparate elements; and (d) ecstatic, profoundly joyous.

According to the limbic-marker hypothesis, the perceptual and cognitive contents of an RSME are comparable to those of ordinary experience, except that they are tagged by the limbic system as of deep importance, as united into a whole, and/or as joyous. Therefore, descriptions of the contents of the RSME resemble descriptions of the contents of ordinary experience, and the feelings associated with them cannot be captured fully in words. As in the case of strong emotions, these limbic markers can be named but cannot be communicated in their full visceral intensity, resulting in a report of ineffability.

The temporal lobe and the limbic system may not be the only cerebral structures involved in RSMEs. About this question, Devinsky and Lai (2008) hypothesized that

alterations in frontal functions in the right hemisphere may contribute to increased religious interests and beliefs as a personality trait. This hypothesis is based on the finding that dramatic changes in self—defined as a change in political, social, or religious views—can be seen in patients with a dysfunction affecting selectively the right frontal lobe (Miller et al., 2001).

Stimulation of the Temporal Lobe

Persinger (1983) speculated that RSMEs are evoked by transient, electrical microseizures within deep structures of the temporal lobe, and that it is possible to experimentally induce RSMEs by stimulating the temporal lobe with weak electromagnetic currents. Persinger and Healey (2002) tested this hypothesis by exposing 48 university students to weak (100 nanoTesla to 1 microTesla) complex, pulsed electromagnetic fields. These fields were applied in one of three ways: over the right temporoparietal region, over the left temporoparietal region, or equally across the temporoparietal area of both hemispheres of the brain (one treatment per group). Fields were applied for 20 minutes while participants were wearing opaque goggles in a very quiet room. A fourth group was exposed to a sham field condition; that is, participants were not exposed to an electromagnetic field, although all participants were told that they might be. Beforehand, the Hypnosis Induction Profile (Spiegel et al., 1976) was administered to participants (psychology students) to test for suggestibility.

Two-thirds of the participants reported a sensed presence under the influence of the electromagnetic fields. But 33% of the control (sham-field) group reported a sensed presence, too. In other words, Persinger and Healey (2002) found that twice as many participants reported a sensed presence under the influence of the electromagnetic field as those who reported one without an electromagnetic field. About half of these participants stated that they felt “someone else” in the chamber. Another approximate half of the group described a sentient being who moved when they tried to “focus attention” upon the presence. About one-third of participants attributed the presence to a deceased member of the family or to some cultural equivalent of a “spirit guide.” In the study, those who had received stimulation over the right hemisphere or both hemispheres reported more unusual phenomena than those who had received stimulation over the left hemisphere.

Persinger and Healey (2002) concluded two things: that the experience of a sensed presence can be manipulated by experiment, and that such an experience may be the source for phenomena attributed to visitations by spiritual entities.

A research team at Uppsala University in Sweden, headed by Pehr Granqvist (Granqvist et al., 2005), mirrored Persinger’s experiment by testing 89 undergraduate students, some of whom were exposed to the electromagnetic fields and some of whom were not. Using Persinger’s equipment, the Swedish researchers could not reproduce his key results. They attributed their findings to the fact that they ensured that neither the participants nor the experimenters interacting with them had any idea who was being exposed to the electromagnetic fields.

Granqvist and colleagues made sure that their experiment was double blind by using two experimenters for each trial. The first experimenter, who was not told about the purpose of the study, interacted with the participants. The second experimenter switched electromagnetic fields off or on without advising either the first experimenter or the subject. So if the subject had not already been advised that an RSME was likely at Granqvist's laboratory, the study experimenters were not in a position to provide that clue.

Study participants included undergraduate theology students as well as psychology students. Neither group was asked for prior information on spiritual or paranormal experiences, nor was any participant told that there was a sham-field (control) condition. Rather, participants were told only that the study investigated the influence of weak electromagnetic fields on experiences and feeling states. Personality characteristics that might predispose a person to report an unusual experience were used as predictors for which participants would report one. These characteristics included absorption (the ability to become completely absorbed in an experience), signs of abnormal temporal lobe activity, and a "New Age" lifestyle orientation.

No evidence was found for a "sensed presence" effect of weak electromagnetic fields. The characteristic that significantly predicted the outcomes was personality. Of the three participants who reported strong spiritual experiences, two were members of the control group. Of the 22 who reported "subtle" experiences, 11 were members of the control group. Those participants who were rated as highly suggestible on the basis of a questionnaire filled out after they completed the study reported paranormal experiences whether the electromagnetic field was on or off while they were wearing the stimulation helmet. Granqvist and colleagues also noted that they had found it difficult to evaluate the reliability of Persinger's findings, because no information on experimental randomization or blindness was provided, which left his results open to the possibility that psychological suggestion was the best explanation.

Taken together, the clinical studies of epileptic patients suggest that the temporal lobe and the limbic system can be involved in the experiential aspect of RSMEs. However, the relationship between these brain regions and RSMEs is still poorly understood since (1) most people who have these experiences are not epileptics, and (2) very few epileptics report RSMEs during seizures. In addition, the experimental induction of such experiences by stimulating the temporal lobes with weak electromagnetic currents does not appear easily achievable when psychological suggestibility is controlled using a randomized, double-blind placebo approach.

Brain Imaging Studies of RSMEs

The first brain imaging study of a religious experience was conducted by Azari et al. (2001). These researchers studied a group of six self-identified religious participants, who attributed their religious experience to biblical Psalm 23. These participants, who were members of a "Free Evangelical Fundamentalist Community" in Germany, all reported

having had a conversion experience (related to the first verse of biblical Psalm 23, which states “The LORD is my shepherd; I shall not be in want”), and interpreted biblical text literally as the word of God. Religious participants were compared to six nonreligious individuals. The texts used for the different tasks were “religious” (first verse of biblical Psalm 23), “happy” (a well-known German children’s nursery rhyme), and “neutral” (instructions on using a phone card from the Düsseldorf telephone book).

Participants were scanned with positron emission tomography (PET) during various conditions: reading silently or reciting biblical Psalm 23; reading silently or reciting the children’s nursery rhyme; reading silently the set of instructions; and while lying quietly. The PET images revealed a significant activation of the right dorsolateral prefrontal cortex in the religious participants during the religious state (relative to other readings) as compared with nonreligious participants. During the religious state, the religious participants showed additional loci of activation, including the dorsomedial frontal cortex and the right precuneus. Limbic areas did not show regional cerebral blood flow (rCBF) changes.

According to Azari et al. (2001), these results strongly support the view that religious experience is a cognitive attributional phenomenon, mediated by a preestablished neural circuit, involving dorsolateral prefrontal, dorsomedial frontal, and medial parietal cortex. Religious attributions are based on religious schemata, which consist of organized knowledge about religion and religious issues and include reinforced structures for inferring religiously related causality of experienced events (Spilka & McIntosh, 1995). Azari et al. (2001) proposed that the dorsolateral prefrontal and medial parietal cortices were probably involved in the subject’s own religious schemata, whereas the dorsomedial frontal cortex was implicated in the felt immediacy of religious experience.

The central limitation in this study is that, phenomenologically, there was no measure of a religious state. Therefore, it is conceivable that the regional brain activations were not related to a genuine religious experience.

Newberg et al. (2003) used single photon emission computed tomography (SPECT) to scan three Franciscan nuns while they performed a “centering prayer” to open themselves to the presence of God. This prayer involved the internal repetition of a particular phrase. Compared to baseline, the prayer condition scan showed increased rCBF in the prefrontal cortex, inferior parietal lobes, and inferior frontal lobes. There was a strong inverse correlation between the rCBF changes in the prefrontal cortex and in the ipsilateral superior parietal lobule. Newberg et al. (2003) hypothesized that increased frontal rCBF reflected focused concentration, whereas changed rCBF in the superior parietal lobule was related to an altered sense of space experienced by the nuns during prayer. In this pilot study, there was no attempt to analyze and quantify in a rigorous and systematic manner the nuns’ subjective experiences during their “centering prayer.” In other words, Newberg and colleagues could not determine whether focusing attention on a phrase from a prayer over a period of time really led the nuns to feel the presence of God.

Newberg et al. (2006) also used SPECT to investigate changes in cerebral activity during glossolalia (“speaking in tongues”). This unusual mental state is associated with specific religious traditions. Glossolalia is one of the “gifts of the Spirit” according to Saint Paul, and, hence, some fundamentalist religious traditions see it as a sign of being visited by the Spirit. This is due to the Pentecost experience, where, according to the Acts of the Apostles, the Apostles “spoke in the tongues” of all those present, that is, made themselves understood to everybody, whereby later on just babbling something became synonymous with glossolalia. In this state, the individual seems to be speaking in an incomprehensible language over which they claim to have no voluntary control. Yet the individual perceives glossolalia to have great personal and religious meaning. In their study, Newberg and colleagues examined five practitioners (women) of glossolalia. Participants described themselves as Christians in a Charismatic or Pentecostal tradition who had practiced glossolalia for more than five years. Structured clinical interviews excluded current psychiatric conditions. Glossolalia was compared to a religious singing state since the latter is similar except that it involves actual language (English). Earphones were used to play music to sing and to perform glossolalia (the same music was used for both conditions). Several significant rCBF differences were noted between the glossolalia and singing state. During glossolalia (compared to the religious singing state), significant decreases were found in the prefrontal cortices, left caudate, and left temporal pole. Decreased activity in the prefrontal lobe is consistent with the participants’ description of a lack of volitional control over the performance of glossolalia. As for the decrease in the left caudate, Newberg et al. (2006) proposed that it was related to the altered emotional activity during glossolalia.

Some time ago we sought to identify the neural correlates of a mystical experience (as understood in the Christian sense) in a group of contemplative nuns using functional magnetic resonance imaging (fMRI) (Beauregard & Paquette, 2006). Fifteen Carmelite nuns took part in the study. Blood oxygen-level dependent (BOLD) signal changes were measured during a mystical condition, a control condition, and a baseline condition. In the mystical condition, participants were asked to remember and relive the most intense mystical experience ever felt in their lives as a member of the Carmelite Order. This strategy was adopted given that the nuns told us before the onset of the study that “God can’t be summoned at will.” In the control condition, participants were instructed to remember and relive the most intense state of union with another human ever felt in their lives while being affiliated with the Carmelite Order. The week preceding the experiment, participants were requested to practice these two tasks. The baseline condition was a normal restful state. Immediately at the end of the scan, the intensity of the subjective experience during the control and mystical conditions was measured using numerical rating scales ranging from 0 (no experience of union) to 5 (most intense experience of union ever felt); self-report data referred solely to the experiences lived during these two conditions, not to the original experiences recalled to self-induce the control and mystical states. The phenomenology of the mystical experience during the mystical condition was assessed with

15 items of the Mysticism Scale (Hood, 1975). This scale, which comprises 32 items, aims at measuring reported mystical experiences (for each participant, scores of 15 or above were considered significant for a given item). In addition, qualitative interviews were conducted after the experiment to obtain additional information regarding the nature of the subjective experiences during the control and mystical conditions.

As regards the phenomenology of the subjective experience during the mystical condition, summed scores of 15 or above were noted for three items of the Mysticism Scale: (1) “I have had an experience in which something greater than my self seemed to absorb me” (average score: 15); (2) “I have experienced profound joy” (average score: 22); and (3) “I have had an experience which I knew to be sacred” (average score: 20). During the qualitative interviews conducted at the end of the experiment, several participants mentioned that, during the mystical condition, they felt the presence of God, His unconditional and infinite love, as well as plenitude and peace. All participants reported that from a first-person perspective, the experiences lived during the mystical condition were different than those used to self-induce a mystical state. Participants also reported the presence of visual and motor imagery during both the mystical and control conditions. In addition, the participants experienced a feeling of unconditional love during the control condition.

The mystical versus baseline contrast produced significant loci of BOLD activation in the right medial orbitofrontal cortex (Brodmann’s area [BA] 11), right middle temporal cortex (BA 21), right inferior parietal lobule (BA 40) and superior parietal lobule (BA7), right caudate, left medial prefrontal cortex (BA 10), left dorsal anterior cingulate cortex (BA 32), left inferior parietal lobule (BA 7), left insula (BA 13), left caudate, and left brainstem. A few loci of activation were also seen in the extrastriate visual cortex.

Based on the studies indicating a relationship between RSMEs and the temporal lobe, we posited that the right middle temporal activation noted during the mystical condition was related with the subjective impression of contacting a spiritual reality. We also proposed that the caudate activations reflected feelings of joy and unconditional love since the caudate nucleus has been systematically activated in previous functional brain imaging studies implicating positive emotions such as happiness (Damasio et al., 2000), romantic love (Bartels & Zeki, 2000), and maternal love (Bartels & Zeki, 2004). Concerning the brainstem, there is some empirical support for the view that certain brainstem nuclei map the organism’s internal state during emotion (Damasio, 1999). Given this, it is conceivable that the activation in the left brainstem was linked to the somatovisceral changes associated with the feelings of joy and unconditional love. As for the insula, this cerebral structure is richly interconnected with regions involved in autonomic regulation (Cechetto, 1994). It contains a topographical representation of inputs from visceral, olfactory, gustatory, visual, auditory, and somatosensory areas and is proposed to integrate representations of external sensory experience and internal somatic state (Augustine, 1996). The insula has been seen activated in several studies of emotional processing and appears to support a representation of somatic and visceral responses accessible to consciousness (Critchley et

al., 2004; Damasio, 1999). It is plausible that the left insular activation (BA 13) noted in our study was related to the representation of the somatovisceral reactions associated with the feelings of joy and unconditional love.

In addition, we suggested that the left medial prefrontal cortical activation (BA 10) was linked with conscious awareness of those feelings. Indeed, the results of functional neuroimaging studies indicate that the medial prefrontal cortex is involved in the meta-cognitive representation of one's own emotional state (Lane & Nadel, 2000). This prefrontal area receives sensory information from the body and the external environment via the orbitofrontal cortex and is heavily interconnected with limbic structures such as the amygdala, ventral striatum, hypothalamus, midbrain periaqueductal gray region, and brainstem nuclei (Barbas, 1993; Carmichael & Price, 1995). In other respects, brain imaging findings (Lane et al., 1997; Lane et al., 1998) support the view that the activation of the left dorsal anterior cingulate cortex (BA 32) reflected that aspect of emotional awareness associated with the interoceptive detection of emotional signals during the mystical condition. This cortical region projects strongly to the visceral regulation areas in the hypothalamus and midbrain periaqueductal gray (Ongur et al., 2003). Regarding the medial orbitofrontal cortex, there is mounting evidence that this prefrontal cortical region codes for subjective pleasantness (Kringelbach et al., 2003). The medial orbitofrontal cortex has been found activated with regard to the pleasantness of the taste or smell of stimuli (de Araujo et al., 2003; Rolls et al., 2003) or music (Blood & Zatorre, 2001). It has reciprocal connections with the cingulate and insular cortices (Carmichael & Price, 1995; Cavada et al., 2000). The right medial orbitofrontal cortical activation (BA 11) noted in the mystical condition was perhaps related to the fact that the experiences lived during the mystical state were considered emotionally pleasant by the participants.

Given that the right superior parietal lobule is involved in the spatial perception of self (Neggers et al., 2006), it is conceivable that the activation of this parietal region (BA 7) reflected a modification of the body schema associated with the impression that something greater than the participants seemed to absorb them. Moreover, there is evidence that the left inferior parietal lobule is part of a neural system implicated in the processing of visuospatial representation of bodies (Felician et al., 2003). Therefore, the left inferior parietal lobule activation in the mystical condition was perhaps related to an alteration of the body schema. In keeping with this, there is some evidence indicating that the right inferior parietal lobule is crucial in bodily consciousness and the process of self/other distinction (Ruby & Decety, 2003).

On the other hand, Miller et al. (2019) recently proposed that this cortical area may contribute to perceptual processing and self–other representations during spiritual experiences. Miller et al. (2014) also found that cortical thickness in parietal regions is associated with a self-reported sustained high importance of personal spirituality. In addition, it has been reported that selective damage to the posterior parietal regions can induce a specific increase of self-transcendence (Urgesi et al., 2010). Alternatively, other findings indicate

that the inferior parietal lobule plays an important role in motor imagery (Decety, 1996). It is thus plausible that the activations in the right (BA 40) and left (BA 7) inferior parietal lobules seen in our study were related to the motor imagery experienced during the mystical condition.

Last, regarding the loci of activation found in the extra-striate visual cortex during this condition, it has been previously shown (Ganis et al., 2004) that this region of the brain is implicated in visual mental imagery. It is likely that the BOLD activation in visual cortical areas was related to the visual mental imagery reported by the nuns.

The main limitation of this study is that the participants were asked to remember and relive a mystical experience rather than actually try to achieve one. Such a strategy was used because the participants told us *a priori* that they were not capable of reaching a mystical state at will. In our view, this does not represent a major problem since the phenomenological data indicate that the participants actually experienced genuine mystical experiences during the mystical condition. These mystical experiences felt subjectively different than those used to self-induce a mystical state.

Brain Imaging Studies of Meditative States

The word “meditation” refers to practices that self-regulate the body and mind, thereby affecting mental processes by engaging a specific attentional set. Since the control of attention is the common denominator across the various methods of meditation (Davidson & Goleman, 1977), meditative techniques are generally classified into two types—mindfulness and concentrative—depending on how the attentional processes are regulated (Andresen 2000; Shapiro & Walsh, 1984; Wallace, 1999). Mindfulness practices involve allowing any sensations, thoughts, or feelings to arise while maintaining awareness of the phenomenal field as an attentive and nonattached observer without judgment or analysis. Examples include Zen and Vipassana. Concentrative meditational techniques involve focusing on selective sensory or mental activity: specific body sensations such as the breath, a repeated sound, or an imagined image. Examples include forms of yogic meditation and the Buddhist Samatha meditation focus on the sensation of breath. These two types of meditative techniques elicit a deep sense of calm peacefulness, a slowing of the mind’s internal dialogue, and a metacognitive shift toward expanded experience of self not centered on the individual’s body representations and mental contents (Wallace, 1999).

PET and SPECT Studies

Using positron emission tomography, Herzog et al. (1990) measured the regional cerebral metabolic rate of glucose (rCMRGlc) in eight members of a yoga meditation group during a meditation state and a normal control state (participants were instructed to think of daily affairs). The ratios of frontal versus occipital rCMRGlc were significantly elevated during the meditation condition. These altered ratios were caused by a small increase of frontal rCMRGlc and a more pronounced decrease in primary and secondary visual areas.

Herzog et al. (1990) suggested that the decrease in the occipital cortical areas might reflect an inhibition of visual processing during yogic meditation, whereas the increase in the frontal cortex could reflect the sustained attention requested for meditation.

Another PET study was performed in nine highly experienced yoga teachers during Yoga Nidra meditation (which is characterized by a diminished level of desire for action), and during the resting state of normal consciousness (Lou et al., 1999). Regional cerebral blood flow was measured with the [^{15}O] H_2O technique. The meditation condition consisted of diverse exercises focusing on body sensation, abstract joy, visual imagery, and symbolic representation of self. Each of the guided meditation phases was correlated with different regional activations relative to the control condition: body sensation was accompanied by increased parietal and superior frontal activation; abstract joy was associated with left parietal and superior temporal activation; visual imagery induced robust occipital lobe activation (excluding V1); and symbolic representation of self was correlated with bilateral activation of parietal lobes. In the resting state of normal consciousness (compared with meditation as a baseline), differential activity was found in dorsolateral and orbital frontal cortex, anterior cingulate gyri, left temporal gyri, left inferior parietal lobule, striatal and thalamic regions, pons, and cerebellar vermis and hemispheres. Interestingly, the control condition was characterized by increased activity for executive—attentional systems and the cerebellum.

The same research team used ^{11}C -raclopride PET to investigate dopaminergic changes during Yoga Nidra meditation (^{11}C -raclopride selectively and competitively binds to D2 receptors, such that the amount of binding inversely correlates with endogenous dopamine levels) (Kjaer et al., 2002). Eight healthy meditation teachers underwent two ^{11}C -raclopride PET scans, one while attending to speech with eyes closed, and one during active meditation. Results revealed a 7.9% decrease in ^{11}C -raclopride binding in the ventral striatum during meditation (interestingly, activation of this cerebral structure has been reported during Mormon religious practices inducing spiritual feelings; Ferguson et al., 2016). This reduction corresponds to an approximate 65% increase in dopamine release. In addition, increased striatal dopamine release was associated with the experience of reduced readiness for action. Since in the striatum, dopamine modulates excitatory glutamatergic synapses of the projections from the frontal cortex to striatal neurons, which in turn project back to the frontal cortex via the pallidum and ventral thalamus, these results suggest that being in the Yoga Nidra meditative state produces a suppression of corticostriatal glutamatergic transmission.

A SPECT study was conducted on eight experienced Tibetan Buddhist meditators (Newberg, Alavi, et al., 2001) and nine control individuals. Participants were injected at baseline with HMPAO and scanned 20 minutes later for 45 minutes. The Buddhist meditators then meditated for 1 hour at which time they were injected again with HMPAO and scanned 20 minutes later for 30 minutes. Experientially, the meditators reported “becoming one with” the visualized image during the meditative state. The baseline

activation patterns revealed a difference in the thalamic laterality index in which meditators displayed a greater rightward dominance of thalamic rCBF compared to controls. Increased rCBF was measured in the cingulate gyrus, inferior and orbital frontal cortex, dorsolateral prefrontal cortex, midbrain, and thalamus during meditation relative to baseline. Newberg, Alavi, et al. (2001) suggested that the increased frontal rCBF may reflect focused concentration while thalamic increases may be correlated with increased cortical activity during meditation. These researchers also proposed that midbrain activation may be related to alterations in autonomic activity during meditation. Decreased rCBF activity in the left posterior superior parietal lobe was negatively correlated with the activity increase noted in left dorsolateral prefrontal cortex. Newberg, Alavi, et al. (2001) postulated that this negative correlation may reflect an altered sense of space experienced during meditation.

Functional Magnetic Resonance Imaging

Lazar et al. (2000) used fMRI to identify the brain regions that are active during a form of Kundalini yoga consisting of a mantra combined with heightened breath awareness. The control task was the mental construction of animal names. The five participants had practiced Kundalini yoga for at least four years. Significant BOLD signal increases were detected in the dorsolateral prefrontal and parietal cortices, hippocampus/parahippocampus, temporal lobe, pregenual anterior cingulate cortex, striatum, and pre- and postcentral gyri during meditation (compared with the control condition). The results suggest that the practice of meditation activates brain regions implicated in attention (frontal and parietal cortex) and arousal/control of the autonomic nervous system (pregenual anterior cingulate, amygdala, midbrain, and hypothalamus). Additionally, marked activity increases in these areas as well as a greater number of activation foci and larger signal changes were found during the late meditation states. These findings indicate that neural activity during meditation is slowly evolving throughout the duration of meditation practice.

Individuals with considerable training in this form of Kundalini yoga (mantra-based) or Vipassana (mindfulness-based) meditation were compared with fMRI during meditation and control tasks (e.g., resting state, production of a random list of numbers, and paced breathing) (Lazar et al., 2003). Nonoverlapping frontal and parietal cortices as well as subcortical structures were activated in the two meditator groups during the meditation condition. The main locus of common activation was the dorsal anterior cingulate cortex. Lazar et al. (2003) concluded that distinct forms of meditation seem to engage different cerebral structures.

A group of 11 experienced Zen meditation practitioners were scanned with fMRI using an on-off design of 45-second blocks in which meditators focused on counting their breath as in normal daily practice (experimental condition) and engaged in random thoughts (control condition). Comparing meditation with the control condition revealed increased activity in the right medial prefrontal cortex and basal ganglia, bilaterally.

Decreased activity was noted in the superior occipital gyrus and anterior cingulate cortex (Ritskes et al., 2003). Activity decrease in this prefrontal cortical area was attributed to a reduced experience of will in the meditative state.

Furthermore, Shimomura et al. (2008) utilized fMRI to identify the brain regions activated during praying of the Namo Amida Butsu (Nembutsu), and the reciting of Buddhist scriptures (Sutra) in eight highly trained Japanese monks. Relative to a resting condition, the task of repeating the Nembutsu activated the medial frontal gyrus, whereas the task of reciting the Sutra activated the left lateral middle frontal gyrus and right parietal cortices (angular gyrus, supramarginal gyrus).

In recent years, meta-analyses have sought to evaluate the short-term and long-term brain changes from meditation. When comparing meditators during meditation versus nonmeditation, functional changes are noted in brain regions involved in reorienting attention, interoception, monitoring body states, self-regulation, and processing self-relevant information (Boccia et al., 2015). Similar functional changes over the long term are found in brain areas implicated in meta-awareness (frontopolar cortex/BA 10), exteroceptive and interoceptive body awareness (sensory cortices and insula), memory consolidation and reconsolidation (hippocampus), and emotional self-regulation (anterior and mid cingulate; orbitofrontal cortex) (Boccia et al., 2015; Fox et al., 2014).

In one meta-analysis (Fox et al., 2016), results of neuroimaging studies were separated by meditation tradition. This meta-analysis revealed that mindfulness activates cerebral structures involved in cognitive control and voluntary regulation of thought and action, and deactivates other structures implicated in sensory gating. Concentrative meditative techniques also activate brain regions associated with cognitive control and voluntary regulation of attention and behavior, as well as with sustained attention (Fox et al., 2016).

Additionally, structural neuroimaging studies have shown that the regular practice of meditation is associated with increased cortical thickness in brain regions implicated in attention, interoception, and sensory processing (Fox et al., 2016; Fox et al., 2014; Hölzel et al., 2011; Lazar et al., 2005).

Neuroscience, RSMEs, and the Mind–Brain Problem

Physicalism is the mainstream metaphysical view of modern neuroscience with respect to the mind–body problem, that is, the explanation of the relationship that exists between mental processes and bodily processes. According to this view, consciousness and mental events (e.g., thoughts, emotions, and desires) can be reduced to their neural correlates, that is, the brain electrical and chemical processes whose presence necessarily and regularly correlates with these mental events. Physicalist philosophers and neuroscientists believe that mental events are equivalent to brain processes. About this issue, it is important to bear in mind that neural correlates do not yield a causal explanation of mental events; that is, they cannot explain how neural processes become mental events. Indeed, correlation

does not entail causation. And the external reality of “God” or ultimate reality can neither be confirmed nor disconfirmed by neural correlates.

Newberg, d’Aquila, and Rause (2001) submitted that the most important criterion for judging what is real is the subjective vivid sense of reality. They argued that individuals usually refer to dreams as less real than waking (baseline) reality when they are recalled within baseline reality. In contrast, RSMEs (e.g., “cosmic consciousness” states, religious visions, and NDEs) appear more real to the experiencers than waking (baseline) reality when they are recalled from baseline reality.

A major problem with this criterion is its subjectivity. This problem is well illustrated by the fact that individuals suffering from psychosis are unable to distinguish personal subjective experience from the reality of the external world. They experience hallucinations and/or delusions as being very real. From a neuroscientific perspective, a more satisfactory approach to evaluate the “objective” ontological reality of RSMEs is to determine whether it is possible for a human being to have a spiritual experience during a state of clinical death, that is, when their brain is not functioning.

The central issue of whether spiritual experiences are possible during a state of clinical death is addressed by researchers in the field of near-death studies. Near-death experiences are vivid, realistic, and often deeply life-changing experiences occurring to individuals who have been psychologically or physiologically close to death (Holden et al., 2009). A clear memory of the experience, enhanced mental activity, and a conviction that the experience is more real than ordinary waking consciousness are core features of NDEs (Greyson, 2011). Other typical features include an out-of-body experience (OBE)—that is, a sense of having left one’s body and watching events going on around one’s body and, occasionally, at some distant physical location; feelings of joy and peace; passage through a dark tunnel or a region of darkness; seeing an otherworldly realm of great beauty; encountering deceased relatives and friends; seeing an unusually bright light, sometimes experienced as a “Being of Light” that radiates complete acceptance and unconditional love, and may communicate telepathically with the near-death experiencer (NDER); seeing and reliving events of one’s life, sometimes from the perspective of the other individuals involved; and returning to the physical body (often unwillingly).

The thought-provoking case of a patient who apparently underwent a profound spiritual experience while her brain was not functioning has been reported by cardiologist Michael Sabom (1998). In 1991, 35-year-old Atlanta-based singer and songwriter Pam Reynolds began to suffer dizziness, loss of speech, and difficulty moving. A CAT scan revealed that she had a giant basilar artery aneurysm (a grossly swollen blood vessel in the brain stem). If it burst, it would kill her. But attempting to drain and repair it might kill her too. Her doctor offered no chance of survival using conventional procedures. Reynolds heard about neurosurgeon Robert Spetzler, at the Barrow Neurological Institute in Phoenix, Arizona. He was a specialist and pioneer in a rare and dangerous technique called hypothermic cardiac arrest, or “Operation Standstill.” He would take her body

down to a temperature so low that she was clinically dead but then bring her back to a normal temperature before irreversible damage set in. At a low temperature, the swollen vessels that burst at the high temperatures needed to sustain human life become soft. Then they can be operated upon with less risk. Also, the cooled brain can survive longer without oxygen, though it obviously cannot function in that state. So for all practical purposes, Reynolds would actually be clinically dead during the surgery. But if she didn't agree to it, she would soon be dead anyway with no hope of return. So she consented.

As the surgery began, her heart and breathing ceased, the blood was completely drained from her head and her EEG brain waves flattened into total silence (indicating no cerebral activity). Her brain stem became unresponsive (her eyes had been taped shut and her ears had been blocked by molded ear speakers), and her temperature fell to 15°C. When all of Reynolds's vital signs were stopped, the surgeon began to cut through her skull with a surgical saw. She reported later that at that point, she felt herself "pop" outside her body and hover above the operating table. From her out-of-body position, she could see the doctors working on her lifeless body. She described, with considerable accuracy for a person who knew nothing of surgical practice, the Midas Rex bone saw used to open skulls. Reynolds also heard and reported later what was happening during the operation and what the nurses in the operating room had said. At a certain point, she became conscious of floating out of the operating room and traveling down a tunnel with a light. Deceased relatives and friends were waiting at the end of this tunnel, including her long-dead grandmother. She entered the presence of a brilliant, wonderfully warm and loving Light and sensed that her soul was part of God and that everything in existence was created from the Light (the breathing of God) (Sabom, 1998).

The case of Pam Reynolds is far from being unique. Indeed, NDEs are quite often evoked by cardiac arrest. When the heart stops, breathing stops as well, and blood flow and oxygen uptake in the brain are rapidly interrupted; the EEG becomes isoelectric (flat-line) within 10 to 20 seconds, and brain stem reflexes vanish (Clute & Levy, 1990); the individual having the cardiac arrest is then considered to be clinically dead. Because the brain structures supporting conscious experience and higher mental functions (e.g., perception, memory, and awareness) are dramatically impaired, cardiac arrest survivors are not expected to have clear and lucid mental experiences during the cardiac arrest period that will be remembered. Nonetheless, studies carried out in the United Kingdom (Parnia et al., 2001), the Netherlands (van Lommel et al., 2001), Belgium (Lallier et al., 2015), and the United States (Greyson, 2003; Schwaninger et al., 2002) have revealed that about 15% of cardiac arrest survivors do report some recollection from the time when they were clinically dead. In these studies, more than 100 cases of full-blown NDEs were reported. It is noteworthy that while they are clinically dead, NDErs sometimes report perceptions that coincide with reality.

These cases (including the one of Pam Reynolds) strongly challenge the physicalist doctrine in regard to the mind-brain problem. They suggest that mental processes and

events (e.g., consciousness, perception, cognition, and emotion) can be experienced at the moment that the brain seemingly no longer functions (as evidenced by a flat EEG) during a period of clinical death. These cases also suggest that RSMEs can occur when the brain is not functioning; that is, these experiences are not necessarily delusions created by a defective brain. In other words, it is possible for humans to experience a transcendent reality during an expanded state of consciousness in which perception, cognition, identity, and emotion function independently from the brain. This raises the possibility that when a spiritual experience happens while the brain is fully functional, the neural correlates of this experience indicate that the brain is *de facto* connecting with a transcendent level of reality.

Advocates of materialist theories of the mind object that even if the EEG is isoelectric, there may be some residual brain activity that goes undetected because of the limitations of scalp-EEG technology. This is possible, given that scalp-EEG technology measures mostly the activity of large populations of cortical neurons. However, the brain activity agreed upon by contemporary neuroscientists as the necessary condition of conscious experience is well detected via current EEG technology, and it is clearly abolished by cardiac arrest (Greyson, 2011).

Proponents of materialist theories of the mind also argue that NDEs do not occur during the actual episodes of brain insult, but just before or just after the insult, when the brain is more or less functional (Blackmore, 1993; Saavedra-Aguilar & Gómez-Jeria, 1989; Woerlee, 2003). The problem with this interpretation is that unconsciousness generated by cardiac arrest leaves patients amnesic and confused for events occurring immediately before and after such episodes (Aminoff et al., 1988; Parnia & Fenwick, 2002; van Lommel et al., 2001).

More than a century ago, William James (1898/1960) proposed that the brain may serve a permissive/transmissive/expressive function rather than a productive one, in terms of the mental events and experiences it allows (just as a prism—which is not the source of the light—changes incoming white light to form the colored spectrum). Following James, Henri Bergson (1914) and Aldous Huxley (1954) posited that the brain acts as a filter or reducing valve by blocking out much of, and allowing registration and expression of only a narrow band of, perceivable reality. Bergson and Huxley believed that over the course of evolution, the brain has been trained to eliminate most of those perceptions that do not directly aid our everyday survival. This outlook implies that the brain normally limits the human capacity to have a RSME. A significant alteration of the electrochemical activity of the brain would be necessary for the occurrence of a RSME (Beauregard & O’Leary, 2007).

Conclusion and Future Directions

Contrary to the assertion that neural discharges in the temporal lobe and limbic system underlie each of the main features of RSMEs (Saver & Rabin, 1997), brain imaging

studies conducted during the last decade indicate that several brain regions and networks mediate the diverse aspects of these experiences (perception, cognition, emotion, etc.). This conclusion should not come as a surprise given that these experiences are complex and multidimensional; that is, they implicate changes in perception, self-awareness, cognition, and emotion. Along the same lines, the results of the neuroimaging studies of meditation suggest that different patterns of brain activation and deactivation support the different types of meditative states.

One of the principal limitations of the studies reviewed in this chapter being the relatively small sample size, future neuroimaging investigations of RSMEs and meditation should involve larger numbers of participants.

Correlating subjective (first-person, phenomenological) data and objective (third-person, neurophysiological) data represents a crucial issue in the neuroscience of spirituality (Newberg & Lee, 2005). The employment of “first-person methods,” which are disciplined practices individuals can use to increase their sensitivity to their own mental experiences at various timescales and produce more refined descriptive reports, intensify self-awareness (Lutz & Thompson, 2003). Given this, the collection of first-person data from phenomenologically trained individuals of different religious/spiritual traditions should be used to interpret the neurophysiological processes pertaining to various types of RSMEs and meditative states.

While the segregation principle states that some functional processes specifically engage well localized and specialized brain regions, it is now widely believed that higher mental functions emerge through integration of information flows across distributed cerebral structures (Frackowiak et al., 2004; Varela et al., 2001). According to this view, it is not only a collection of brain areas that is hypothesized to process functional tasks, but rather large-scale networks, that is, sets of brain regions dynamically interacting with one another. Accordingly, future neuroimaging studies of RSMEs and meditation should entail the measurement of functional connectivity within dynamic, large-scale brain networks. Such measurement may significantly improve our knowledge and understanding of the brain mechanisms underlying spiritual experiences.

EEG and fMRI provide complementary advantages with regard to spatial and temporal resolution in studying brain activity. Indeed, EEG has a weak spatial resolution but a very high temporal resolution, whereas fMRI has an excellent spatial resolution but a relatively poor temporal resolution. As a consequence, these two techniques could be combined to shed more light on the neural correlates of RSMEs and meditative states.

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Near-Death Experiences and Spirituality

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Abstract

Near-death experiences (NDEs) occur in 10–20% of people who come close to death, and they are similar to mystical experiences occurring in other settings. Their incidence and features are not influenced by prior religious beliefs, although cultural background may affect the interpretation of some of those features. However, NDEs profoundly influence one's subsequent sense of spirituality, leading to increased compassion, altruism, and sense of purpose in life, and to decreased fear of death, competitiveness, and materialistic interests. They do not necessarily lead to an increased involvement in organized religion but rather tend to foster an internal sense of connection to the divine and to something greater than the self. The mechanism by which NDEs bring about these changes is unclear, but it may be related to their inescapable challenge to the materialistic model of mind–brain identity and the implication that there is a spiritual component to humans that appears, under extreme circumstances, to function independent of the physical body.

Key Words: near-death experience, spirituality, mystical experience, consciousness, mind–body problem

Introduction

Some individuals when they come close to death report having unusual experiences that they interpret as spiritual or religious. These profound experiences, which have come to be called near-death experiences (NDEs), often include a sense of separation from the physical body, cosmic unity, divine revelation, ineffability, a sense that the experience transcends personal ego, and encounters with religious figures and a mystical or divine presence. Moody, who popularized the term in 1975, defined NDEs as “profound spiritual events that happen, uninvited, to some individuals at the point of death” (Moody & Perry, 1988, p. 11).

This phenomenon was first described as a discrete syndrome by Heim in 1892 (translated into English by Noyes & Kletti, 1972), and cross-cultural research has suggested that it occurs in 10–20% of people who are clinically dead (Greyson, 1998; Zingrone & Alvarado, 2009). Although the term “near-death experience” and its acronym NDE were

not introduced into the English literature until 1975, accounts of similar events can be found in the folklore and writings of European, Middle Eastern, African, Indian, East Asian, Pacific, and Native American cultures.

NDEs are reported by individuals who were pronounced clinically dead but then resuscitated; by individuals who actually died but were able to describe their experiences in their final moments (often called deathbed visions); and by individuals who, in the course of accidents or illnesses, simply feared that they were near death. Although all elements of the NDE can be reported by individuals who merely perceive themselves to be near death, certain features, such as enhanced cognitive function, an encounter with a brilliant light, and positive emotions are more common among individuals whose closeness to death is documented by medical records (Owens et al., 1990). Closeness to death may be an even more significant factor among children: in one study, although NDEs were recounted by up to half of those children who survived critical illnesses, they were not recounted by children who suffered serious illnesses that were not potentially fatal (Morse et al., 1986).

Phenomenology of Near-Death Experiences

In introducing the term “near-death experience” into the English literature, Moody (1975) identified 15 elements that seemed to recur in NDE reports: ineffability, hearing oneself pronounced dead, feelings of peace, hearing unusual noises, seeing a dark tunnel, being out of the body, meeting spiritual beings, encountering a bright light or “being of light,” panoramic life review, a realm where all knowledge exists, cities of light, a realm of bewildered spirits, supernatural rescue, border or limit, and coming back into the body. He later added four recurrent aftereffects: frustration upon relating the experience to others, broadened or deepened appreciation of life, elimination of fear of death, and corroboration of out-of-body visions (Moody, 1977).

Moody noted that no two NDE accounts were precisely the same, that no experience in his collection included more than 12 of these original 15 elements, that no one element appeared in every narrative, and that the order in which elements appeared varied from one experience to another (Moody, 1975), and he warned that his list was intended as a rough theoretical model rather than a fixed definition (Moody, 1977). Children’s NDEs are similar to those of adults, except that they tend not to include a life review or meetings with deceased friends and relatives, two differences that might be expected, in light of children’s brief experience with life (Bush, 1983; Morse et al., 1986).

The most common features of NDEs can be grouped into four components. Most NDEs include features from all four components, although many experiences are dominated by one or more component (Greyson, 1985). The first component, cognitive features reflecting changes in thought processes, includes distortions in the sense of time, acceleration of thought processes, a life review or panoramic memory, and a sense of revelation or sudden understanding. The second component, affective features reflecting

changes in emotional state, includes a sense of peace and well-being, feelings of joy, a sense of cosmic unity, and an encounter with a brilliant light that seems to radiate unconditional love. The third component, paranormal features reflecting apparent psychic phenomena, includes extraordinarily vivid physical sensations, apparent extrasensory perception, precognitive visions, and a sense of being out of the physical body. The final component, transcendental features reflecting apparent otherworldly phenomena, includes apparent travel to a mystical or unearthly realm or dimension, an encounter with a mystical being or presence, visible spirits of deceased or religious figures, and a border beyond which one cannot return to earthly life.

Explanatory Models for Near-Death Experiences

How can these phenomena best be understood? No variables that have yet been studied, such as age, gender, race, religion, religiosity, or history of mental illness, predict either the occurrence or the type of NDE. There has been ample speculation about the cause of NDEs but very few data bearing on the question.

A plausible physiological model has attributed NDEs to decreased oxygen (hypoxia) or to complete lack of oxygen (anoxia), since that appears to be the final common pathway to death (Whinnery, 1997). However, decreased oxygen is a highly distressing experience, particularly for those who report perceptual distortions and hallucinations (Breitbart et al., 2002). The fear, agitation, and belligerence typical of decreased oxygen contrast markedly with NDEs, which are usually recalled as peaceful and positive experiences (Zingrone & Alvarado, 2009). Furthermore, contrary to the hypoxia hypothesis, empirical research on altered oxygen levels has shown that NDEs are associated with increased oxygen levels (Parnia et al., 2001; Sabom, 1982), or levels equivalent to those of nonexperiencers (Morse et al., 1985; van Lommel et al., 2001), but no study has shown *decreased* levels of oxygen during NDEs.

A related model posits that increased carbon dioxide (hypercapnia) is associated with NDEs in cardiac arrest survivors (Klemenc-Ketis et al., 2010). However, this correlation, if it exists, may simply reflect the known association between hypercapnia and increased cardiac output, which would reduce the amnesia usually seen following cardiac arrest, so that patients would be more likely to remember what happened during the arrest (Kolar et al., 2008). That is, an association between NDEs and increased carbon dioxide may reflect simply that patients who are able to recall more of their cardiac arrest also report more NDEs (Greyson, 2010a). However, prior studies with larger samples reported decreased (Sabom, 1982) or normal levels of carbon dioxide (Parnia et al., 2001) in cardiac arrest survivors who reported NDEs. The meaning of a correlation of NDEs with blood levels of carbon dioxide is further complicated by the fact that levels of carbon dioxide in the blood do not necessarily reflect levels in the brain (Gliksman & Kellehear, 1990).

Another frequently cited physiological model has attributed NDEs to medications given to dying persons. However, although some drugs may on occasion induce

experiences that bear superficial similarities to NDE, comparative studies have shown that patients who receive medications in fact report fewer NDEs than do patients who receive no medication (Greyson, 1982; Osis & Haraldsson, 1977; Sabom, 1982). This model derives its plausibility from comparisons between NDEs and spiritual experiences associated with psychedelic drug use. Researchers have found some overlap between reports of NDEs and reports of hallucinogenic trips, most often those associated with ketamine (Jansen, 1997a; Corazza & Schifano, 2010) and dimethyltryptamine (Strassman, 2001; Timmermann et al., 2018).

A recent comparison using latent semantic analysis of 625 accounts of NDEs and around 15,000 accounts of psychedelic experiences with 165 different psychoactive drugs found that the drug states most similar to NDEs were those associated with ketamine (Martial et al., 2019). However, the authors were careful to note that these similarities did not establish a neurochemical cause of NDEs and that drug-induced states “may be a mere ‘reflection’ of ‘authentic’ NDEs” (Martial et al., 2019, p. 65). They moreover noted that other effects of ketamine do not appear in NDEs, “arguing against the reductionist explanation of NDEs as a consequence of NMDA receptor blockade” (Martial et al., 2019, p. 65). Indeed, Jansen, the most ardent promoter of the ketamine model for NDEs, concluded after 12 years of research that ketamine was best viewed “as just another door to a space, and not as actually producing that space” (Jansen, 1997b, p. 94).

NDEs have also been speculatively linked to a number of endogenous neurotransmitters in the brain, most frequently endorphins (Carr, 1982), although other models have implicated serotonin, adrenaline, vasopressin, and glutamate (Jansen, 1997a; Morse et al., 1989; Saavedra-Aguilar & Gómez-Jeria, 1989). NDEs have also been speculatively associated with a number of anatomic locations in the brain, most often the right temporal lobe (Blanke et al., 2002) or the left temporal lobe (Britton & Bootzin, 2004). Other neuroscientists have argued for involvement of the frontal lobe attention area, the parietal lobe orientation area, the thalamus, the hypothalamus, the amygdala, and the hippocampus (Azari et al., 2001; Fenwick, 2001; Newberg & d’Aquili, 1994). Recent research has contradicted those speculations, however. A study of 100 patients with neurological disorders found that neither mystical experiences nor out-of-body experiences were associated with any particular lobe of the brain, nor were they lateralized to either the right or left side (Greyson et al., 2014, 2015). These putative neurological mechanisms, for which there is little empirical evidence, may suggest brain pathways through which NDEs are expressed or interpreted, but they do not necessarily imply causal mechanisms.

An association has also been suggested between NDEs and “REM intrusion,” the intrusion into waking consciousness of thought processes typical of rapid eye movement sleep (Nelson et al., 2006). NDEs and REM intrusion share common elements of extraordinary light and a sense of being immobilized yet alert to the surroundings and a sense of being dead, and it has been suggested that other aspects of NDEs, including autoscapy,

light, visual experience, pleasant feelings, and transcendent qualities, can also occur in other conditions associated with REM intrusion.

However, the survey on which this correlation with REM intrusion was based drew its NDE sample from people who shared their experiences on the internet, suggesting an unusual willingness to acknowledge anomalous experiences, albeit anonymously; whereas the comparison sample was “recruited from medical center personnel or their contacts” and queried in face-to-face interviews, possibly inhibiting their endorsement of symptoms they would likely identify as pathological (Greyson & Long, 2006). In fact, only 7% of the comparison group acknowledged hypnagogic hallucinations, about one-fourth of that in the general population (Ohayon et al., 2002).

Data arguing against the contribution of REM intrusion to NDEs include features like fear, typical in sleep paralysis but rare in NDEs, and the common occurrence of NDEs under general anesthesia and other drugs that inhibit REM (Cronin et al., 2001). Finally, a correlation between REM intrusion, if it were to be corroborated by additional research, might suggest either that REM intrusion contributes to NDE phenomenology or that NDEs enhance subsequent REM intrusion. The latter interpretation is supported by the increased REM intrusion in posttraumatic stress disorder (Husain et al., 2001) and the increased posttraumatic stress symptoms following NDEs (Greyson, 2001).

In the past decade, reports have documented very brief but unexpected increases in brain electrical activity at the point of death (Chawla et al., 2009), or even after cardiac death (Auyong et al., 2010). However, no subjective experiences have been associated with this electrical activity, so it is not clear whether this brief surge of electricity has any relevance to NDEs. Moreover, the findings of increased electrical activity were not based on standard measures of brain activity but rather on a proprietary formula that has been shown to misinterpret a variety of physiological and environmental signals as brain activity (Dahaba, 2005; Myles & Cairo, 2004). This statistical measure, based on electrical recordings from two electrodes on the patient’s forehead (compared to 256 electrodes on the scalp for a standard electroencephalogram), is particularly vulnerable to false readings coming from electrical activity of the underlying forehead muscle, which even at rest can produce signals that resemble brain waves (Goncharova et al., 2003; Yilmaz et al., 2014).

It was further reported that for 30 seconds after cardiac arrest, rat brains can generate electrical activity that was thought might be related to NDEs (Borjigin et al., 2013). However, this electrical surge was only a tiny fraction of the rat brain’s electrical power prior to cardiac arrest and was completely eliminated by anesthesia, which does not eliminate NDEs (Greyson, et al., 2013). Furthermore, this surge in brain electrical activity has not been seen in humans, in whom brain activity decreases and stops within six to seven seconds of cardiac arrest without any surge (van Lommel, 2011). A recent analysis of electroencephalographic measures in humans after withdrawal of life-sustaining therapy showed that cerebral electrical activity actually ceased before the cessation of cardiac

rhythm or arterial blood pressure, and that after cardiac death there was no well-defined electroencephalographic activity (Norton et al., 2017).

Psychological models have also been proposed, attributing NDEs to defense mechanisms, depersonalization, wishful thinking, retroactive confabulation, and expectation (Greyson, 1983b). While plausible, none of these psychological models are supported by empirical evidence. Expectations likely influence an experiencer's interpretation of certain features of the NDE, but they do not appear to influence the experience itself: Children who are too young to have internalized expectations of death or of an afterlife describe the same NDE features as do adults (Bush, 1983; Herzog & Herrin, 1985; Morse et al., 1986); cross-cultural studies show few differences in NDE content from differing societies (Holck, 1978–1979; Kellehear, 2009; McClenon, 1994); and NDE descriptions are not affected by the experiencer's prior knowledge of NDEs or expectations of the dying process or of an afterlife (Athappilly et al., 2006; Greyson, 1991; Greyson & Stevenson, 1980).

Although NDEs and abnormal mental conditions both commonly involve unusual experiences that differ radically from our normal perceptions, there are marked differences that permit clear distinctions between the two. These pervasive differences include the context in which mental illnesses and NDEs occur, the content of the experiences themselves, how the experiences are remembered, and how the experiences affect the individual (Greyson, 2014b). NDEs, unlike most aberrant mental conditions, generally enhance serenity and sense of purpose and expand the experiencer's perception and appreciation of the world.

Similarity of Near-Death and Mystical Experiences

Four years before Moody popularized the term “near-death experience,” Noyes (1971, 1972) noted that altered states of consciousness in people as they approached death often have mystical, transcendental, cosmic, or religious features. He included in those features ineffability, transcendence of time and space, sense of truth, loss of control, intensified emotion, and disordered perception.

Many of the experiential features of mystical experiences in general are similar to those of NDEs. The feelings of peace and joy, the ineffability of the experience, the sense of being in the presence of something greater than oneself, and the experience of a bright light or “being of light” are all features common to both NDEs and mystical experiences. Cressy (1994) compared typical NDE phenomenology and aftereffects to the ongoing mystical experiences of medieval Catholic mystics St. Teresa of Ávila and St. John of the Cross and concluded that they shared ecstatic out-of-body travel, visions of God, clairvoyance, loss of fear of death, and healing transformations. She noted that nearness to death has always played a role in the spiritual path, and that for St. Teresa and St. John, mysticism was viewed as a preparation for death. She pointed out, however, that unlike mystics, those who have NDEs are thrust suddenly into spiritual consciousness without any preparation and then returned to a community in which such experiences are not valued.

Just as with NDEs, the onset of a mystical experience is often signaled by overwhelming feelings of joy, happiness, and peace (James, 1902). People sometimes describe a feeling of sudden release in a mystical experience, and although they may sometimes use the term “release” metaphorically, some reports describe literal out-of-body experiences. Many people also report enhanced mental functioning or heightened perception in mystical experiences, just as in NDEs. A sensory phenomenon that is particularly common to both NDEs and mystical experiences is the sense of seeing a bright light of unusual quality. As with “release,” some people seem to use the phrase “seeing the light” in a figurative sense, but others are clearly referring to what was to them a real and vivid sensory phenomenon.

Pahnke and Richards (1966) delineated nine aspects of mystical experience, based on the previous work of James (1902) and Stace (1960): a sense of cosmic unity or oneness, transcendence of time and space, deeply felt positive mood, sense of sacredness, noetic quality or intuitive illumination, paradoxicality, ineffability, transiency, and persistent positive aftereffects. All nine of these features are commonly reported as part of the NDE (Pennachio, 1986). However, whereas all these features can be seen in NDEs, typical NDEs differ from classical mystical experiences in three respects: the persistence of individual identity, such as in the life review and encounters with deceased relatives; the clarity of perceived events; and the lower frequency of union with the divine, which is a defining characteristic of mystical experience (Wulff, 2000).

An analysis of Mysticism Scale scores among people who had come close to death with and without NDEs revealed that mystical experiences were reported by two-thirds of those who described near-death experiences, but by none of the comparison survivors who did not have NDEs (Greyson, 2014a). Near-death experiencers endorsed most often the mystical experience features of noetic quality, positive affect, and unity, and least often ego loss, timelessness/spacelessness, and ineffability. The depth of the NDE was highly correlated with scores on the Mysticism Scale, but factor analysis of all subjective features during the brush with death yielded two distinct factors representing respectively mystical and near-death elements, suggesting that near-death experiences have commonalities with, but can be differentiated from, mystical experience.

Perhaps the most important feature common to both mystical experiences and NDEs, however, is the transformative impact of the experience. NDEs generally have a profound and lasting impact on people who experience them. They often precipitate a significant change in values and attitude toward death, and a new sense of purpose or meaning in life. Similarly, mystical experiences have been recognized for more than a century as leading to sudden and lasting changes in character and values (James, 1902), including changes in the person’s relationship with God, perception and appreciation of nature, attitude toward self, and, perhaps most significantly, attitude toward other people (Starbuck, 1906).

This transformative aspect of NDEs has not been reported in connection with the various fragmentary experiences that are sometimes mistaken for NDEs, such as the

“dreamlets” induced by hypoxia or other abnormalities of blood-gas concentrations (Whinnery, 1997) or experiences reported by patients receiving temporal lobe stimulation (Blanke et al., 2002). Moreover, the transformative features associated with NDEs differ from those associated with coming close to death but not having an NDE (Greyson, 1983a; Ring, 1984; van Lommel et al., 2001).

Near-Death Experiences and Prior Religiosity or Spirituality

Inasmuch as religion addresses fundamental human concerns like death and dying, it is plausible that religious orientation might influence NDEs (McLaughlin & Maloney, 1984). One interpretation of the NDE is that it represents essentially a religiously inspired illusion: The crisis of impending death triggers a series of hallucinations in keeping with an individual’s religious belief system and expectations concerning an afterlife.

Several studies have searched for associations between religion or religiosity and subsequent NDEs. In a cross-cultural study in the United States and India, Osiris and Haraldsson (1977) did not find any straightforward relationship between religiousness and deathbed visions, although they did find that an individual’s belief system influenced the interpretation of the experience. Sabom and Kreutziger (1978), in a study of 107 survivors of cardiac arrest, also found no relationship between NDEs and extent of prior religious involvement. In a study of people who had come close to death from a suicide attempt, I found that NDEs were associated neither with religious preference or religiosity nor with prior expectations of death, dying, or postmortem survival (Greyson, 1991).

Ring (1980b) interviewed 102 survivors of near-death crises, asking a number of questions that collectively provided an overall index of religiousness, including degree of religiosity, strength of belief in God, conviction about life after death, and belief in heaven and hell. He too concluded that “neither the likelihood nor the depth of a near-death experience was systematically related to individual religiousness [or] religious affiliation” (1980b, p. 4). However, Ring found, as did Osiris and Haraldsson (1977), “that the interpretation that was placed on the experience by the individual was markedly influenced by his religious belief system. . . . Also, one’s emotional reaction to the experience may be affected by one’s prior belief system, as one would expect” (Ring, 1980b, p. 4).

McLaughlin and Maloney (1984) speculated that intrinsically oriented religious persons, who tend to have more positive views of death and hope in an afterlife of reward, might be more likely to have deeper NDEs, and that people who have a vital relationship with God might be more receptive to an NDE. They interviewed 40 people who had NDEs, including Protestants, Roman Catholics, Jews, followers of the Baha’i faith, and people with no religious affiliation. They administered to their participants a standardized measure of religious orientation that included three basic religious attitudes: compliance to religion for personal gain (extrinsic religious orientation), identification with religion for support (consensual religious orientation), and internalization of religion for its own intrinsic value (intrinsic religious orientation). They found no significant relationship

between depth of NDE and various measures of religious orientation or other religious measures.

Near-Death Experiences and Subsequent Religiosity or Spirituality

Even though NDEs are not influenced by prior religious belief or religiosity, they do seem to affect subsequent religious preference, religiosity, and spirituality. Several studies have documented that NDEs can permanently and dramatically alter the individual experiencer's attitudes, beliefs, and values, often leading to profound and lasting personal transformations. Those who have NDEs tend to see themselves as integral parts of a benevolent and purposeful universe in which personal gain, particularly at others' expense, is no longer relevant. Aftereffects most often reported include increases in spirituality, concern for others, and appreciation of life; a heightened sense of purpose; and decreases in fear of death, in materialistic attitudes, and in competitiveness (Bauer, 1985; Flynn, 1982, 1986; Grey, 1985; Greyson, 1983a, 1992; McLaughlin & Maloney, 1984; Noyes, 1980; Ring, 1980b, 1984; Ring & Valarino, 1998; Sabom, 1982, 1998). These changes that follow NDEs meet the definition of spiritual transformation as "a dramatic change in religious belief, attitude, and behavior that occurs over a relatively short period of time" (A. Schwartz, 2000, p. 4).

In studies comparing the attitudes of those who have had NDEs before and after their experiences, Noyes (1980) found that they reported a reduced fear of death, a sense of relative invulnerability, a feeling of special importance or destiny, and a strengthened belief in postmortem existence. Ring (1980a, 1984) found that those who have had NDEs reported a greater appreciation for life, a renewed sense of purpose, greater confidence and flexibility in coping with life's vicissitudes, increased value of love and service, greater compassion for others, a heightened sense of spiritual purpose, decreased concern with personal status and material possessions, and a greatly reduced fear of death.

Ring (1980b) collected information on religious aftereffects among 102 survivors of near-death crises. He found that those who had NDEs described themselves as more religious than they were before, whereas survivors who reported no NDE did not report any change in their religiousness. However, although those who had NDEs said they felt more religious, they did not attend church more often than they had prior to their experiences, nor did they participate in other modes of formal religious worship:

Rather, there is a heightened inward religious feeling that is often indicated which does not seem to require a conventional religious format for it to be manifested. Instead, near-death survivors will describe themselves as feeling closer to God, as more inwardly prayerful, or as having a greater awareness of God's presence. This personal sense of God is sometime so strong that conventional religious observances seem irrelevant or unnecessary.

(Ring, 1980b, p. 4)

Furthermore, even though those who had NDEs expressed indifference toward organized religion, they also described “an overall tolerance for all ways or religious worship. From this point of view, there is no one religion or religious denomination which is superior or ‘true’; rather, all religions are expression of a single truth” (Ring, 1980b, p. 4). In summarizing these changes, Ring concluded that those who had NDEs emphasized the importance of love, caring, and compassion for others: “if there was a single value which seemed to epitomize the comments of near-death survivors . . . it was their increased emphasis on the need for unconditional love or acceptance for others” (Ring, 1980b, p. 4).

Ring focused his second book on NDEs (1984) on the radical reorientation in spiritual values and life directions that often follow NDEs. Unlike many authors who based their conclusions on subjective testimonies of experiencers, Ring included a number of objective measures of psychospiritual changes to bolster his arguments. In a more recent book, Ring focused on the spiritual meaning and “soul-making” significance of NDEs (Ring & Valarino, 1998).

Flynn (1982) found that those who had NDEs reported a greatly increased concern for others, increased belief in an afterlife, increased religious interest and feeling, decreased fear of death, and lessened desire for material success and approval of others. Subsequently, Flynn (1986) described the life-transforming nature of NDEs, changing experiencers’ values, decreasing their fear of death, and giving their lives new meaning. He argued that NDEs produce the same aftereffects as religious conversion experiences: Those who faced death returned with a love of the divine light that transformed their own lives and with a mission to bring that love to others. He concluded that NDEs lead to (a) a shift from ego-centered to other-centered consciousness, (b) disposition to love unconditionally, (c) heightened empathy, (d) decreased interest in status symbols and material possessions, (e) reduced fear of death, and (f) deepened spiritual consciousness.

McLaughlin and Maloney (1984) measured religious orientation and religious change as a result of the NDE in 40 experiencers who were interviewed in depth and completed a series of questionnaires. They found strong associations between depth of NDE and various measures of religious change after the experience. Those who had NDEs placed greater importance on religion after the NDE and became more active in their religion, and the strength of those changes was positively associated with the depth of their NDE. For many experiencers, the NDE was an experiential reaffirmation of the reality of the spiritual realm they had believed in previously, and it served to intensify their relationship with God. This increase in religious activity contradicted Ring’s finding that NDEs led to inward spiritual change but no change in religious activity. McLaughlin and Maloney concluded that NDEs represent a spiritual intervention in the lives of people, regardless of their religious orientations or beliefs beforehand. They found that the NDE reaffirmed religious faith for some experiencers, had no effect on beliefs of others, and led still others to abandon their prior belief systems.

Lorimer (1990) reported that NDEs, and particularly the moral assessment in the life review, provided an experiential basis for moral order based on “empathic resonance” with other people, meaning the direct perception of an intrinsic interconnectedness and interdependence of all living beings. He argued that in the life review one experiences firsthand, with compassionate and empathic understanding, how one’s thoughts, feelings, and actions affect others. This experience, he reported, leads to a new appreciation of the Golden Rule—“whatsoever you wish that men would do unto you, do so to them” (Matthew 7:12)—as not just a prescription for moral conduct but also an accurate description of the interconnectedness of the universe. Lorimer concluded that the ego-shattering effect of NDEs reveals the illusion of separate individual egos by inducing direct experience of cosmic unity.

Sutherland (1990) interviewed 50 people who have had NDEs and specifically asked them to differentiate changes in their spirituality from changes in their religiosity. Her subjects largely rejected describing themselves as “religious,” often vehemently, but did describe themselves as “spiritual.” They reported “dramatic change in religious affiliation, especially from organized religion, of whatever denomination, to no religion” (1990, p. 24). Following their NDEs, 76% of her interviewees described themselves as “spiritual,” an increase from 16% prior to their NDEs, whereas 6% described themselves as “religious,” a decrease from 24% prior to their NDEs. None of her subjects described the NDE as a religious experience, but 70% described it as a spiritual experience. Asked an open-ended question about the most significant change resulting from the NDE, the single most common response (31% of respondents) was “spirituality” or “spiritual growth.”

In studies comparing the attitudes of those who had NDEs with those of other groups, including persons who had come close to death but not had NDEs, I found that experiencers placed significantly lower value on social status, professional and material success, and fame (Greyson, 1983a) and found death less threatening (Greyson, 1992). Although decreased fear of death may be associated with increased suicidal risk (Shneidman, 1971), those who had NDEs paradoxically expressed stronger objections to suicide than did comparison samples, primarily on the basis of increased transpersonal or transcendental beliefs (Greyson, 1992–1993). These profound changes in attitudes and behavior have been corroborated in long-term studies of those who had NDEs and in interviews with their significant others (Ring, 1984). More specifically (and seemingly paradoxically, given the positive nature of most experiences and the reluctance of many experiencers to return to the body), those who experience an NDE as the result of a suicide attempt rarely attempt suicide again, in contrast to most other suicide attempters. This effect may be the result of an increased sense of purpose and appreciation for life (Greyson, 1981, 1992–1993).

Musgrave (1997) surveyed 51 people who had NDEs about changes in their attitudes, beliefs, and behavior. She found that the majority of her respondents claimed

that since the NDE they were more helpful toward others (82%), more compassionate or understanding (82%), more open-minded in general (82%), more spiritually or religiously open (80%), more intuitive (78%), more aware of guidance by a higher power (75%), more appreciative of life (73%), emotionally stronger (69%), more purposeful (65%), and less fearful of life (51%). Absolute belief in God increased from 24% before the NDE to 82% after the experience; definite belief in an afterlife increased from 22% to 92%; 89% reported a decreased fear of death; and 88% reported a positive change in spirituality. In general, a sense of spirituality or inner connection to God gained in the NDE took precedence over subscribing to religious doctrine. Those believing that there was more than one path to God increased from 28% before the NDE to 65% after the experience; 77% claimed that their lives had changed dramatically as a result of the NDE; and 73% reported that the NDE led them to discover their life purpose.

Sabom (1998), after completing a study of 116 NDEs and then observing NDEs and their aftereffects in his own patients over 20 years as a cardiologist, found that NDEs produced a stronger faith and a higher level of commitment to traditional religious practice. Although he had originally approached the study of NDEs as a skeptical medical scientist, expecting to find that these experiences were misfirings of a dying brain, he eventually concluded that they were instead powerful spiritual experiences, whose underlying message was consistent with divine revelation from more traditional sources.

Bauer (1985), using an instrument based on Frankl's (1969) logotherapy, found that NDEs led to significant positive changes in the purpose and meaning of life and in death acceptance. A large study of survivors of cardiac arrest showed that, after both a two-year and an eight-year follow-up interval, people who had NDEs had a significant decrease in their fear of death and a significant increase in their belief in survival after death, whereas those who had not had an NDE tended not to believe in postmortem survival (van Lommel et al., 2001).

A comparison of people who had come close to death with and without near-death experiences showed that survivors who had NDEs reported greater spiritual growth than did survivors without NDEs, whereas spiritual decline was comparable in the two groups (Greyson & Khanna, 2014). Additionally, survivors who had NDEs reported greater spiritual well-being than those survivors who did not (Khanna & Greyson, 2014a). Likewise, following a close brush with death, survivors who reported NDEs described more daily spiritual experiences than did those who did not report NDEs, even though the frequency of daily spiritual experiences of the two groups had been comparable prior to their close brush with death (Khanna & Greyson, 2014b). Furthermore, near-death experiencers reported greater posttraumatic growth than did survivors of a brush with death who did not have NDEs, suggesting that existential reevaluation and challenges to one's assumptive worldview, which are typical in NDEs and other spiritual experiences, are a major stimulus to posttraumatic growth (Khanna & Greyson, 2015).

Theological Implications of Near-Death Experiences

Mainstream theologians have tended to greet NDEs with what Fox (2003) called “deafening silence.” Perhaps some theologians regard NDEs as so expected at the point of death that they do not merit discussion, whereas others ignore the phenomenon out of general academic distrust of any purportedly paranormal phenomena. Zaleski (1987) suggested that many theologians felt more comfortable regarding NDEs as metaphors or literary motifs rather than as actual encounters with the divine, and Couliano (1991) placed NDEs within the cross-cultural tradition of fantastic accounts of otherworld journeys. Kellehear (1990) viewed NDEs as an example of the cultural phenomenon of the “status passage,” a context-dependent psychological reaction to a social change in role or identity. Indeed, the Buddhist perspective on visions of the dying, as described in *The Tibetan Book of the Dead* (Evans-Wentz, 1957), is that they occur in the mind of the experiencer; and Küng’s response to NDEs was that they are psychological experiences of dying that have no bearing on what happens after death (Küng, 1984).

Whatever the reason for the disinterest in NDEs among theologians, the result is that most of what has been written about the theological implications of NDEs has come from psychologists. Ring, for example, wrote:

When an individual knows with a sense of unshakable certitude that he can exist outside of his own body, he intuitively understands that physical death is not an end. . . . Such a view does not logically require a *religious* interpretation of the afterlife, but, in practice, it is usually put that way.

(Ring, 1980a, p. 110)

He further noted that those people who see visions of deceased loved ones in their NDEs become convinced that life beyond death is more than “a vague emotional yearning” (Ring, 1980a, p. 110). Fox has opined that

many of the claims that near-death experiencers (NDErs) have made in the last quarter-century are such that they may well be said to *demand* a response which goes to the very heart of the West’s understanding of what it is to be human, and what it is for human beings to die. (Fox, 2003, p. 5)

Adherents to various religions have claimed NDEs as empirical support of their particular doctrines. It has been argued that NDEs provide striking parallels to the teachings of the Hindu *Upanishads* and to early Babylonian, Egyptian, and Zoroastrian texts (Holck, 1978–1979), to shamanism (Green, 2001), to Taoism (Hermann, 1990), to Sino-Japanese Pure Land Buddhism (Becker, 1981), to Tibetan Buddhism (Becker, 1985; Holck, 1978–1979), to Gnostic Christianity of the 2nd through 4th centuries (Bain, 1999), to medieval Christian religious treatises (Zaleski, 1987), to Mormon doctrine (Lundahl, 1983), to

Christian Universalism (Vincent, 2003), to Spong's New Christianity (Gibbs, 2005), and to New Age spirituality (Lee, 2003). Regarding these "religious wars" over NDEs, Ring has expressed regret that "the body of the NDE, like some sort of sacred relic or corrupted corpse, is fought over by warring parties either for rights of possession or unceremonious burial" (Ring, 2000, p. 240). As Fox concluded, "NDEs cannot unambiguously be used as apologetic tools for the propagation of any one particular religious or spiritual tradition or be somehow fitted into any one tradition to the exclusion of all others" (2003, p. 339).

Ring (1980a) found beliefs common among those who have had NDEs that seemed consistent with a Judeo-Christian worldview. More than half of his sample of those who have had NDEs reached a point where a decision was made either by or for them as to whether they would return to physical life, and 40% of those described an encounter with a presence (not always seen) that included an auditory or telepathic conversation. Sometimes the presence would describe specific consequences of the decision whether to return, including information about what would occur if the experiencer chose to return to life. This was often accompanied by a life review and sometimes a preview of events to come, in which the experiencer evaluated his or her life.

Most experiencers interpreted this sequence of events as a direct encounter with God and with His unconditional love. Ring himself interpreted this sequence of events not as an encounter with an external deity but rather with the experiencer's "higher self," of which the individual personality is only a fragment. This higher self seems to have divine aspects and is clearly omniscient with respect to the personality; Ring speculated that experiences of this encounter may give rise to the Christian concept of the "guardian angel" (1980a).

Ring later documented further changes in attitude and belief of near-death experiencers consistent with the dominant Western Judeo-Christian heritage (Ring & Valarino, 1998). He argued that NDEs lead directly to the Golden Rule and to Jesus's admonition that "as you did it to one of the least of these my brethren, you did it unto me" (Matthew 25:40). In fact, Ring argued, in concert with Lorimer (1990), that for those who had NDEs, the Golden Rule is no longer just a commandment one is taught to obey but is experienced as an indisputable law of nature, as inevitable as gravity. They know it is the way the universe works because they have experienced it firsthand in suffering directly the effects of their actions upon others. Though they do not feel punished or judged for their misdeeds, they do receive back as part of their life review everything they have ever given out, measure for measure.

Some Christian theologians have corroborated this view of NDEs as consistent with their teachings. Hampe conducted a study of dying people's experiences before Moody popularized the term "near-death experience." Working independently of Moody, he reported a similar phenomenon, concluding that the expansion of consciousness at death implied separation of the soul from the body and that the continued fellowship with God reported by many people who had NDEs reinforced New Testament teachings (Hampe, 1979). That conclusion was shared by other theological scholars: "What appears

to happen is that the soul leaves the body and begins to move on to another mode of existence” (Badham & Badham, 1982, p. 89).

However, whereas some religious scholars view NDEs as proof of spiritual capacities in humans and of divine grace, others see them as satanic deceptions that contradict Christian teachings. The conflicting and often negative views of psychic phenomena held by many religious people extend to their interpretations of NDEs (McLaughlin & Maloney, 1984).

Fox (2003) pointed out ways that NDEs appear to contradict traditional Christian beliefs in the afterlife. First, NDEs suggest a separation of a disembodied soul from the physical body at the point of death, which seems to contradict the Christian belief in resurrection of an embodied soul. Second, NDEs imply that survival of death is a universal human birthright, rather than a gift of grace. Third, a judgment at the time of death appears to contradict the belief in a far-off judgment day when Christ returns. (However, Fox did note that there is a belief going back at least to the 3rd century in two judgments: first a “friendly warning” at death and later the earth-shattering finality of the judgment day.) Fourth, the divine being of light is often encountered by non-Christians, who do not identify it as Christ. Finally, people who have had NDEs of varying religious backgrounds seem equally likely to describe a blissful or “heavenly” experience, regardless of whether they were saved, born again, or baptized.

Fox reconciled these discrepancies by invoking the traditional Christian belief that death ushers in a type of sleep that lasts until the judgment day, but that that sleep is accompanied by a dream, which we have come to call an NDE. Others suggested that apparent insights from NDEs cannot challenge traditional concepts of death because

near-death experiences may be too brief an experience of the dying process to reveal much knowledge about the ultimate nature of death. The person may not have entered deeply enough into the dying process to experience the ultimate nature of death. (McLaughlin & Maloney, 1984, p. 157)

Some Christians have claimed that NDEs not only contradict biblical religion but furthermore foster an anti-Christian “New Age” moral code. Although the interpretation of NDEs as deceptions perpetrated by “fallen spirits” has been espoused by at least one Eastern Orthodox theologian (Rose, 1980), this perspective has been put forward primarily by Fundamentalist Protestant authors. They have argued that NDEs must have a Satanic rather than divine source, because they present death as a benign event in which the Grim Reaper is replaced by a nonjudgmental Being of Light who extends unconditional love to all souls, regardless of whether they are born-again Christians:

Paul warns us that Satan’s emissaries regularly disguise themselves, and that Satan himself appears as an “angel of light” (II Corinthians 11:14). . . . [Death] was the result of sinful

disobedience. Death is pre-eminently the sign of that fall, and the symbol of God's rejection of sin . . . not regarded biblically as a normal and benign complement to the process of life, but as something alien and abnormal. . . .

For those who accept the values of [near-death experiencers] . . . the atoning death . . . of Jesus Christ is not only unnecessary, it is meaningless and altogether irrelevant. (Albrecht & Alexander, 1977, pp. 10–11)

Fox (2003) argued that this view implies that Satan's deception is more powerful than God's grace. He asked, if the loving being of light in NDEs is actually Satan pulling an appalling deception, then where is the Christian God of grace and truth, the real light? Vincent likewise argued, "Satan may be a neon sign, but God is the Light of the Universe" (Vincent, 2003, p. 64). Ring countered the argument that the being of light that seems to love everyone unconditionally must be Satanic by appealing to Jesus's dictum that "you will know them by their fruits" (Matthew 7:20). By that criterion, Ring argued, NDEs should be judged by their fruits of increased compassion, humility, honesty, and altruism (Ring & Valarino, 1998).

Regarding the question of whether unconditional love renders the atoning death of Christ irrelevant, Vincent (2003) argued that NDEs are compatible theologically with Christian Universalism, the Doctrine of Universal Salvation, a classical Christian position that was declared heretical at one point but has been espoused by a large number of theologians from Origen in the 3rd century to Barth in the 20th. This belief postulates that God, despite his wrathfulness and judgment, wills the eventual redemption of all people rather than condemnation to eternal hell, which would be inconsistent with the nature of God as loving. Vincent noted that virtually all the major religions include some kind of belief in universal salvation, but that Christian Universalism allows for a temporary hellish state to "shape up" if necessary before the ultimate reward. He argued that there is more biblical support for the doctrine of universal salvation than for the belief in salvation for only those born again, and he cited biblical passages favoring the doctrines that Jesus saves everyone, that humanity can be saved by good works, and that hell is not permanent.

Other religious writers have decried NDEs for holding out the false promise of "cheap grace," which they define as the unconditional forgiveness of sins without any required contrition (Tracy, 1993; Zaleski, 1987). The promise of "cheap grace" so defined may well be part of the popular image of NDEs, but it does not seem to play a role in the actual experience.

In fact, Ring argued, the unconditional love that those who have experienced NDEs report does not gloss over their sins or excuse their future behavior (Ring & Valarino, 1998). Quite to the contrary, those who have had NDEs experience firsthand in their NDEs the painful consequences of their sinful behavior, and they return to earthly life as confirmed disciples, who understand from their own experience that their behavior does indeed matter far more than they could have imagined. Those who had NDEs do

not come back with a sense that they are perfect beings as they are now, but rather they return committed to work toward perfection and to carry out the work of a higher power, often at great emotional as well as material sacrifice. Far from encouraging indiscriminate behavior, the unconditional love they experienced confers on them the self-esteem, courage, and self-knowledge to bring about the kind of life changes demanded of disciples. Values and beliefs are changed, but those who have had NDEs still struggle to change their behaviors.

Cressy (1994) pointed out that NDEs differ from many other mystical experiences in that they do not occur in the context of a conscious search for meaning or resolution of spiritual crisis; a single encounter with mystical consciousness may start one on a spiritual path, but the NDE by itself does not confer sainthood: "One mystical experience does not make a mystic" (1994, p. 64). The empirical data support her view that all NDEs do not lead to immediate transformation, but whereas all NDEs do not lead to radical changes, those NDEs that do transform do so through a process that is characteristic of other spiritual encounters, sometimes evolving over a period of many years (van Lommel, et al., 2001).

Expanding on this theme of the NDE as a mere taste of mystical consciousness, Ring (1984) described NDEs as "spiritual catalysts" fostering spiritual awakening and development. He argued that this spiritual catalysis is linked particularly to the later stages of NDEs in which one transcends space and time, communes with a divine light, and is overcome with peace and joy.

Conclusion

Near-death experiences are common events, occurring in 10–20% of people who come close to death, and bear many similarities to mystical experiences occurring in other settings. Their incidence and phenomenological features are not influenced by the experiencer's prior religious beliefs, although cultural background may affect the experiencer's interpretation of some of those features. However, NDEs profoundly influence the experiencer's subsequent sense of spirituality, leading to increased compassion, altruism, and sense of purpose in life, and to decreased fear of death, competitiveness, and materialistic interests. They do not necessarily lead to an increased involvement in organized religion, but rather they tend to foster an internal sense of connection to the divine and to something greater than the self. Furthermore, NDEs may have significant moral impact on people who do not experience them but only encounter them indirectly. Flynn (1986) described a project in which his college students practiced unconditional love, after having studied the message of NDEs, and were themselves transformed by the exercise. Like Flynn, Ring reported that his students, having studied NDEs, also became more empathic and spiritually oriented through applying the lessons of NDEs: that death is not fearsome, that life continues beyond, that love is more important than material possessions, and that everything happens for a reason (Ring & Valarino, 1998).

There are also suggestions that NDEs may have more widespread spiritual implications. Twentieth-century intellectuals as diverse as Toynbee, Jung, and Schweitzer have written that “nothing short of a worldwide spiritual revolution will suffice” to save human civilization (Lorimer, 1990, p. 259). Ring suggested “that the NDE can be viewed as an evolutionary device to bring about this transformation” (1984, p. 7) and that NDEs and similar mystical experiences may point the way toward unlocking humankind’s dormant spiritual potential.

Ring (1984) speculated that, with increasing resuscitation technology enabling more and more individuals to return from the brink of death, the cumulative impact of their uplifting testimonies may foster the spiritual evolution of the collective consciousness of humanity. The title of his book on NDE aftereffects, *Heading Toward Omega*, comes from Teilhard de Chardin’s notion of the “Omega point,” a hypothetical end point in human history representing an evolutionary culmination in the highest strivings of human culture. Likewise, Badham (1997) argued that NDEs revitalize society’s belief in God and hope for an afterlife.

Future Directions

In the past two decades, the number of longitudinal and cross-sectional studies of near-death experiences has greatly increased, there has been a diversification in the countries in which that research has been done, and there have been increasingly more articles published that discuss the implications of NDEs for the mind–brain relationship (Sleutjes et al., 2014). Despite the extensive research into the religious and spiritual aftereffects of NDEs, there have been few studies of this topic among non-Christian populations (Kellehear, 2009). The differential impact of NDEs on people from different faith backgrounds remains to be elaborated.

Likewise, questions remain about the trajectory of spiritual growth following NDEs. Most studies of NDE effects have been cross-sectional, leaving open the question of longitudinal changes in degree and quality of religiosity and spirituality over the course of a lifetime, and how NDE effects may interact with other influences on religious or spiritual development.

There is ample evidence that NDEs foster spiritual growth; what is not clear is how they do so. For example, it remains to be explored whether religious or spiritual growth is more closely associated with particular features of NDEs than with others, such as a sense of leaving the body, an apparent encounter with the divine, or an experience of unconditional love. It is plausible that NDEs alter experiencers’ beliefs about their relationship to the divine and about their place in the universe by raising questions about basic assumptions about the relationship between the spiritual and the physical in general, and about the relationship between mind and brain in particular. How the mind–brain relationship may be altered at the approach of death may be the most fruitful direction for future investigation of the psychology of NDEs and spirituality.

Until the early 20th century, classical mechanics was the foundation for all sciences, on the assumption that observations of all sciences might someday be reduced to the laws of mechanics. At the heart of the classical worldview was materialist reductionism, the idea that any complex phenomenon could be understood by reducing it to its individual components, and eventually down to elementary material particles. This materialist worldview permeated psychology as it did other sciences, even though this reductionism required psychologists to focus exclusively on phenomena that could be described objectively by independent observers and ignore consciousness. Materialist psychology was epitomized by Watson, who asserted: "Psychology, as the behaviorist views it, is a purely objective, experimental branch of natural science which needs consciousness as little as do the sciences of chemistry and physics" (1914, p. 27). It is ironic that although Watson was aligning behaviorist psychology with classical mechanics, physicists were already moving beyond that model with a quantum physics that could not be formulated without reference to consciousness (Morowitz, 1980).

Classical physics, anchored in materialist reductionism, offered adequate descriptions of everyday mechanics but ultimately proved insufficient for describing the mechanics of extremely high speeds or small sizes, and it was supplemented nearly a century ago by quantum physics, which by necessity includes consciousness in its formulation. Materialist psychology, modeled on the reductionism of classical physics, likewise offered adequate descriptions of everyday mental functioning but ultimately proved insufficient for describing cognition under extreme conditions. The exploration of mental function in such extraordinary circumstances reveals the limitations of the current model of mind-brain identity and the need for a more comprehensive explanatory model. For example, there have been rigorous studies of individuals with normal to high cognitive function despite having both cerebral hemispheres reduced by severe hydrocephalus to as little as 5% of the normal volume (Lorber, 1983). Additionally, there have been more than 80 documented cases of the unexpected return of mental clarity and memory shortly before death in patients suffering from irreversible brain deterioration as in Alzheimer's disease (Nahm & Greyson, 2009). A National Institute on Aging workshop recently reviewed the evidence for this paradoxical lucidity in patients with end-stage, irreversible dementia, concluding that current paradigms of dementia need to be reconsidered (Mashour et al., in press).

NDEs include phenomena that challenge materialist reductionism (Greyson, 2003; Parnia et al., 2001; J. M. Schwartz et al., 2005; van Lommel, et al., 2001). Most prominent among these features are enhanced cognition and memory during cerebral impairment (Kelly et al., 2007), accurate perceptions from a perspective outside the body (Holden, 2009), and reported visions of deceased persons, including surprising visions of those not previously known to be deceased (Greyson, 2010b). Complex consciousness, including cognition, perception, and memory, under conditions such as cardiac arrest and general anesthesia, when it cannot be associated with normal brain function, require

a revised psychology anchored not in 19th-century classical physics but rather in 21st-century quantum physics that includes consciousness in its conceptual formulation.

For example, in five published studies alone, more than 100 NDEs have been reported occurring under conditions of cardiac arrest (Greyson, 2003; Parnia et al., 2001; Sabom, 1982; Schwaninger et al., 2002; van Lommel et al., 2001). In cardiac arrest, blood flow and oxygen uptake in the brain plunge swiftly, with electroencephalographic (EEG) signs of cerebral ischemia detectable within 6 to 10 seconds, progressing to flat-line EEGs within 10 to 20 seconds (Parnia & Fenwick, 2002; van Lommel et al., 2001).

As noted above, the reports over the past decade of brief increases in brain electrical activity at the point of death were based on measures of brain electrical activity that are vulnerable to artifact pollution and have been contradicted by comparable studies using standard electroencephalographic recordings. Furthermore, brain imaging studies of psychedelic drug experiences have consistently suggested that spiritual experiences analogous to NDEs are associated with *decreased* brain electrical activity, suggesting that such experiences are not caused by brain activity but are accessible only when brain activity is diminished (Carhart-Harris et al., 2012; Muthukumarswamy et al., 2013; Vollenweider & Kometer, 2010).

In sum, the primary challenge in the study of NDEs and spirituality lies in asking how complex cognition, sensory perception, and memory can occur under conditions such as cardiac arrest in which current physiological models of mind deem it impossible. Data from research into NDEs and related spiritual experiences suggest that access to transcendent states is facilitated by desynchronization and decrease of brain electrical activity. This conflict between a materialist model that attributes consciousness to brain activity and the occurrence of NDEs under conditions of general anesthesia and/or cardiac arrest is profound and inescapable. Expanding our model of the mind–brain relationship to accommodate extraordinary experiences such as NDEs may lead to a greater understanding of consciousness and its relation to brain, and of the relationship of spirituality to its physical correlates.

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Nonlocal Consciousness and the Anthropology of Religions and Spiritual Practices

Stephan A. Schwartz

Abstract

This chapter presents an anthropological assessment of religions and spiritual practices stripped of their sectarian dogmas. It discusses them not on the basis of faith but as systems of empirical observational science developed over generations for the purpose of allowing followers the opportunity to open to nonlocal consciousness. The chapter describes how religions begin as the result of a single individual having a nonlocal, or a series of nonlocal, consciousness experiences, laying out the steps by which that single personal experience becomes a religion, and then examines and explains why the spiritual rituals and practices common to religions across time, geography, and culture grow from the experiences of the founder. It describes all this using scientific experimental research from many different disciplines to show how the empirical sciences of religions, and the spiritual practices they engender are, in fact, supported by a myriad of studies, showing in the process why water and wine are so often a part of religious rituals; why healing is so common across religions; why sacred spaces are significant, and how they are created; and why scriptures, and even the manner in which they are written, matter in these empirical systems.

Key Words: anthropology, religion, spiritual practices, nonlocal consciousness, sacred spaces, sacred scriptures, healing, meditation

Most discussions of religion and spiritual practices center on dogmas and beliefs, either of a particular religion or a comparison across faiths. I would like to look at religions and the spiritual practices that are an integral part of every religion from the perspective of a consciousness experimentalist, setting aside the dogmas and beliefs.

When I look at religion, any religion, as an experimentalist, what I see is a cohort of people consensually holding a worldview. The process by which that worldview emerges seems to me very much like Thomas Kuhn's description of the paradigm process (Kuhn, 1962). The paradigm in a religion is defined by scripture and dogma, not research and theory, and unlike science there is not one religious paradigm but superficially several. The paradigms differ in many ways, but they all have one thing in common. All are centered on the aspect of consciousness that in science we call nonlocal, and that is now being

explicitly researched in several disciplines using a variety of protocols such as near-death studies, therapeutic intention work, and remote viewing.

In religion, the individual experience of nonlocal awareness is called spirit. The eternal aspect of the self, religion's soul. It is a concept amenable to objective verification. We see one aspect in the near-death studies. Thanks to the research at the Division of Perceptual Studies at the University of Virginia School of Medicine, we also know something about the continuity of consciousness. This extraordinary decades-long project led by two generations of physicians, first Ian Stevenson and then, when he retired in 2002, taken over by Jim Tucker, has studied reincarnation in the most methodical and rigorous manner (Stevenson, 1997). The data from this research, like that on NDEs, present a compelling objectively measured case for the continuity of consciousness.

And while I am on the subject, it is notable that although consciousness is often conceived of in physics terms, some of our most important insights about consciousness have come from medicine—the research on NDEs, therapeutic intention, and reincarnation being examples.

As a researcher, enduring religions seem to me examples of empirical science. I use the term “enduring religions” to distinguish from transitory cults. All the enduring faiths over generations and millennia developed a kind of empirical neurobiology involving opening to nonlocal consciousness.

There is an innate recognition of the reality of nonlocal consciousness in all religions. A small group of materialist scientists, another small cohort of atheists, and a few other small factions may think otherwise, but for the bulk of humanity across time, geography, and culture, within the religious spiritual context the reality of nonlocal consciousness has been foundational.

Across all religions, rituals are designed to the same end: to train a person to attain and sustain intentioned focused awareness. The mechanism to do this is grounded in the rituals, the religious equivalent of a scientific protocol. That is why the cultures of martial art dojos, Buddhist temples, and Christian monasteries are all based on a lifestyle of attaining and sustaining intentioned focused awareness, though it is expressed in many different ways.

In consciousness research we confirm the wisdom of that religious anthropology. We know from the experimental data that meditators routinely do better at nonlocal tasks than nonmeditators, whether it is remote viewing, expressing therapeutic intention, or any other nonlocal task (Schwartz, 2015; Schwartz & Dossey, 2016). Why? Because meditators can attain and sustain intentioned focused awareness better than random people who lack this training, and intentioned focused awareness is how one opens to the nonlocal, whether it is in a religious or scientific context. What differs is not the process of the experience but the assessment we make of the experience through the culture of our worldview. In science, we assess nonlocal consciousness not through faith but in objectively verifiable

ways. We have protocols and measurement, and the shared worldview that facts matter. In religion, the measurement is orthodoxy and adherence to dogmas and beliefs. Facts hardly enter into it. But whether it is science or religion, experiencing nonlocal consciousness is the fundamental experience.

Nonlocal consciousness experiences are faith's birth cradle. Regardless of denomination, dogma, or belief, all religions begin with a single individual who experiences a nonlocal consciousness event. Siddhartha Gautama, the Buddha, whose birth is dated between 578 and 447 BCE, awakens in the hermitage of Arada Kalama, a teacher of meditation who shows him how, through meditation, he can attain the "state of nonexistence," and he does experience this state of intentioned focused awareness. There are several versions of his awakening. I will use the description of the scholar monk Thanissaro Bhikkhu (Geoffrey DeGraff), an American Buddhist monk of the Thai forest *kammatthana* tradition whose books and videos have had a major impact on the modern understanding of Buddhism.

He writes:

The Buddha described the Awakening experience in one of his discourses, first there is the knowledge of the regularity of the Dhamma—which in this context means dependent co-arising—then there is the knowledge of nibbana. In other passages, he describes the three stages that led to insight into dependent co-arising: knowledge of his own previous lifetimes, knowledge of the passing away and rebirth of all living beings, and finally insight into the four Noble Truths. The first two forms of knowledge were not new with the Buddha. They have been reported by other seers throughout history, although the Buddha's insight into the second knowledge had a special twist: He saw that beings are reborn according to the ethical quality of their thoughts, words, and deeds, and that this quality is essentially a factor of the mind. The quality of one's views and intentions determines the experienced result of one's actions. (Bhikkhu, 1997)

Jesus, at the beginning of the Common Era, at the age of 30, experiences his opening of consciousness when he is baptized and goes to meditate in the wilderness (Matt. 3:13–17). In 610 CE, at 40, Muhammad experiences a revelation in a cave called Hira where he had gone to meditate. The archangel Gabriel appeared to him and told him he would be a messenger of God.¹ It should be noted, I think, that in all these accounts, so different in their details, that the one constant is meditation, the practice of attaining and sustaining intentioned focused awareness, exactly what is required in the scientific exploration of nonlocal consciousness.

Those individual revelations only become the basis of a religion, however, if they are recognized by others. Revelation is an individual experience, but religion is a group consensus; that is what separates cranks from prophets. The latter must have personalities charismatic enough to attract people to come and listen to them.

Everything after that is the product of human thought and action. From the accounts of the teachings arise scriptures and the institutions that grow up around those teachings, manned by individuals who commit themselves to maintaining the dogma and their perception of its orthodoxy. But it all begins with one person's nonlocal consciousness experience or experiences. And that person's experiences of the nonlocal becomes the path.

With that foundation it isn't really surprising that the rituals of religions all seek to give practitioners a measure of focused control over mind and body, holding out the promise that they, too, may be able to open to the nonlocal aspect of consciousness. Inevitably the paths incorporate some model of nonlocal unity promising it as the path or the way, and the rituals to attain this state of consciousness develop by empirical observation across millennia.

In Christianity the spirit of the Lord is the creative power of life (Psalm 33:6). It is an incorporeal feeling of connecting with a greater conscious unity. In the New Testament, spirit is described as that aspect of consciousness wherein a direct relationship with God is possible (Mark 2:8; Acts 7:59; Rom. 1:9; 8:16; 1 Cor. 5:3–5). It is the spiritual aspect that enables continuing conversation with the divine Spirit (Rom. 8:9–1). Totems like prayer beads, religious statues, and structured prayers help the follower to develop intentioned focused awareness, which research has shown is the key to opening to nonlocal awareness.

The 16th century Christian saint and Carmelite mystic, St. Teresa of Avila (1976), counseled: "This magnificent refuge is inside you. Enter. Shatter the darkness that shrouds the doorway. Be bold. Be humble. Put away the incense and forget the incantations they taught you. Ask no permission from the authorities. Close your eyes and follow your breath to the still place that leads to the invisible path that leads you home. Follow your breath." It is a statement from a medieval Roman Catholic that a 2nd-century BCE Buddhist could have comfortably made, and did.

The Buddhist Patanjali Yoga Sutras, which date at least to the 2nd century BCE, illustrate this. They speak at length about moving into nonlocal awareness through meditation. Psychologist William Braud, who made a particular study of this, noted: "The sixth, seventh, and eight 'limbs' of ashtanga Yoga are dharana (concentration), dhyana (meditation), and samadhi (profound absorption), respectively" (Braud, 2008, p. 217243).

The Patanjali source refines this further, Braud explains. "The repeated continuation, or uninterrupted stream of that one point of focus is called absorption in meditation (dhyana), and is the seventh of the eight steps" (*tatra pratyaya ekatanata dhyanam*) (2008, p. 217243). When these three are practiced together, the composite process is called *samyama*. *Samyama* might be translated as constraint; thorough, complete, or perfect restraint; or full control; it might also be translated as communion or mind-poise. *Samyama* conveys a sense of knowing through being or awareness through becoming what is to be known. Through mastery of *samyama* comes insight (*prajna*), and through its progressive application, in stages, come knowledge of the Self and of the various principles of reality (*tattvas*). With increasing yogic practice comes a variety of mystical, unitive

experiences, states, conditions, or fulfillments—the various samadhis—along with the attainments or powers (siddhis)” (Schwartz & Dossey, 2010).

The linkage with the nonlocal and the creation of sacred space is another manifestation of consciousness threaded throughout religions across time, geography, and culture. There is always a dedicated place to meet, whether it is a temple, a cathedral, a synagogue, or an Etruscan oak grove. Why does this place issue seem to matter so much? Is there something objectively verifiable about “sacred” space beyond the obvious psychological emotional importance? The nonlocal consciousness research suggests there is. It is more numinous.

Carl Jung described numinosity thus, “We should not be in the least surprised if the empirical manifestations of unconscious contents bear all the marks of something illimitable, something not determined by space time. This quality is numinous . . . numina are psychic entia”—Jung says “numina are psychic entia” (Jung, 1974, p. 183). I think the research confirms that. Numina, I believe, should be thought of as nonlocal information. Numinosity is a kind of nonlocal informational architecture that can be detected by consciousness, and to some degree manipulated through intentioned focused awareness.

The more frequently attention is focused on anything, the more it develops numinous qualities, which may be of positive or negative valence. The more numinous the object, the easier it becomes for others to unconsciously sense this quality. Numinous constructs excite a stronger psychophysical response than mundane objects, and as such they can be unconsciously discriminated from less numinous objects.

In remote viewing research, we know that targets of greater numinosity are easier to perceive than targets that may have similar physical characteristics but are less numinous. Functionally, that means that Chartres cathedral is easier to see than a warehouse of the same size. Why? Because Chartres, from the moment of its conception and for all the centuries since that moment, has been the focus of unnumbered acts of intentioned awareness experienced in a heightened state of emotion. In contrast nobody pays much attention to warehouses, nor do they evoke much emotion even when they are noticed.

This nonlocal intention effect also extends to the substances we associate with religious rituals: water and wine. This linkage of water, wine, and the sacred is so ancient its origins are lost in deep time. Why should such a linkage exist? The obvious answer in the case of water is that human life is not possible without it. Perhaps that is the reason it is the primordial element in most creation myths.

Examples of this: The Assyro-Babylonian gods that arose from the melding of salt, Tiamat, and sweet potable water, Apsu. The Egyptian sun-god Aum arose from the world ocean, Nun. The Judeo-Christian Bible begins with God dividing the waters (Gen. 1:1–6). The story of humanity is dotted with sacred rivers, springs, and lakes. It has been a fundamental belief in many religions that praying, focusing therapeutic intentioned awareness on water, transforms it in some way, making it “sacred.” It is an idea that dates back into deep time and yet continues down to the present day. The Christian faiths of

Roman Catholicism, Eastern Orthodoxy, Coptic and Oriental Orthodoxy hold to this as dogma, as does Anglicanism. It is a cultural aspect of water that is well recognized and widely discussed in anthropology, history, and theology, but almost never from the perspective that something objectively measurable is actually happening.

But is this only a belief, an article of faith, or is it another example of an insight concerning nonlocal consciousness gained through close empirical observation evolving across generations? Does anything actually change in water that is the focus of intentioned awareness, something that can be measured? Is this change physical, or subjective and aesthetic; or both? It is this second aspect to sacred water that I wish to focus on here.

There are a number of studies directly addressing the first question: Is there a physical change that can be objectively measured? The answer through replicated spectroscopy studies, using well-established protocols employed in laboratories around the world, appears to be: Yes (Dean, 1983a, 1983b; Fenwick & Hopkins, 1986; Grad & Dean, 1984).

Here is an example:

Through standard techniques of infrared (IR) spectrophotometry, sterile water samples in randomly selected sealed vials evidence alteration of infrared (IR) spectra after being proximate to the palms of the hands of both Practicing and Non-practicing Therapy Practitioners, each of whom employed a personal variation of the Laying-on-of-Hands/Therapeutic Touch rituals. This pilot study presents 14 cases, involving 14 Practitioners and 14 Recipients. The first hypothesis, that a variation in the spectra of all (84) Treated spectra compared with all (57) control spectra would be observed in the 2.53.0 mm range, was confirmed ($p = 0.02$). Ten per cent (15) of the spectra were done using a germanium Internal Reflection Element (IRE). Ninety per cent of the spectra (126) were done with a zinc selenide IRE, and the difference in refractive index between the two IREs skews the data. The zinc selenide IRE spectra alone yield $p = .005$. The authors believe the most representative evidence for the effect appeared in the sample group of Treated vs. Calibration Controls using the zinc selenide IRE ($p = 0.0004$). The second hypothesis, that there existed a direct relationship between intensity of effect and time of exposure was not confirmed. This study replicates earlier findings under conditions of blindness, randomness, and several levels of controls. Environmental factors are considered as explanations for the observed IR spectrum alteration, including temperature, barometric pressure, and variations dependent on sampling order. They do not appear to explain the effect. (Schwartz et al., 2015, p. 144–155)

Similarly, the second question: Is there an objectively measurable subjective aesthetic effect that can be objectively measured, can also be answered in the affirmative.

Beginning in 1994 an independent Japanese researcher, Masaru Emoto, had the idea to freeze double-distilled water, freeze snow crystals from the water, and observe through a microscope the snow crystals that formed (Emoto, n.d.).

Emoto's general idea was to see if various stimuli to which the water was exposed would change people's aesthetic experience of snow crystals made from the water. He showed alphabet letters to water. He presented pictures. He played music to water. He then froze the water and had people look at the snow crystals, comparing their aesthetic experience of the treated water with identical water that was not the focus of such intentioned awareness. And he saw differences (Emoto, n.d.). The pictures of the snow crystals make it obvious.

Emoto also directly addressed the question as to whether intentioned focused awareness using the ritual of prayer caused a change, and once again found that it did. The water upon which intention had been focused produced crystals that were judged to be more aesthetically appealing when compared to control snow crystals (Emoto, n.d.).

These experiments, although they produced fascinating results, were very controversial, and many critiques of the protocols were advanced. It was not even clear who was the agent of action, whether the effect observed was the result of the intention of the influence used or the researchers' intentions.

Dean Radin, Senior Scientist at the Institute for Noetic Sciences, took up the question and created a variation of Emoto's protocol that in my view dealt with all the issues advanced about the earlier forms. In 2006, Radin's team reported their results:

The hypothesis that water "treated" with intention can affect ice crystals formed from that water was pilot tested under double-blind conditions. A group of approximately 2000 people in Tokyo focused positive intentions toward water samples located inside an electromagnetically shielded room in California. That group was unaware of similar water samples set aside in a different location as controls. Ice crystals formed from both sets of water samples were blindly identified and photographed by an analyst, and the resulting images were blindly assessed for aesthetic appeal by 100 independent judges. Results indicated that crystals from the treated water were given higher scores for aesthetic appeal than those from the control water ($p = .001$, one-tailed), lending support to the hypothesis. (Radin et al., 2006, p. 408–411)

The oldest archaeological evidence of wine dates to ca. 7000–6600 BCE, and involves a fermented beverage comprised of rice, honey, hawthorn fruit, and grape. A joint American Chinese research team led by archaeologist Patrick McGovern from the Pennsylvania Museum, recovered residue in pottery vessels found in Jiahu, China, in the Yellow River Valley during the excavation of a Neolithic village. This find predates by more than 500 years the earliest prior evidence of wine found in the Middle East.

In their paper, McGovern's team reported, "Based on the oracle inscriptions from the late Shang Dynasty" (ca. 1200–1046 BCE) "the earliest tests from China. . . three beverages were distinguished: chang (an herbal wine), li (probably a sweet, low-alcoholic rice or millet beverage), and jiu (a fully fermented and filtered rice or millet beverage or

‘wine,’) with an alcoholic content of probably 1015% by weight” (McGovern et al., 2004, p. 17593–17598).

Perhaps because from the beginning of its history, alcohol has been recognized for its psychoactive properties; across all of human history, there has always been an association of wine and consciousness, but there are differences from the linkage of consciousness and water. The drinking of water made holy through intentioned awareness is not common. For millennia, people have known that drinking what today we are calling “Raw Water” could be dangerous. Wine, however, did not suffer that limitation. From earliest times there has been the cultural recognition that there are two distinct ways in which wine is used. One is secular, what might be thought of as entertainment drinking and cooking, while the other is spiritual or religious.

It is this second aspect that is of concern here, because as with “holy” water, sacramental wine has always been perceived as having been created through some kind of alteration achieved by an individual or group trained in some technique for attaining and sustaining intentioned focused awareness. There are many variations of this belief, from the religious convictions of the followers of Dionysus, son of Zeus and Semelle, who was seen as the god of fertility and wine, to the Christian belief in transubstantiation, a matter of dogma still maintained today by whole branches of that faith (U.S. Conference of Catholic Bishops, n.d.).

As with water, when one puts aside the particulars of the various faith-beliefs one is left with the realization that for much of humanity something happens to substances like water and wine when they are the focus of intentioned awareness. With water, as described, there is a physical objectively measurable effect. Whether there is a similar change in the spectra of wine is unknown; there is no equivalent infrared spectrum analysis. The experiment has yet to be done.

But in the experiment that follows we do see a commensurate aesthetic effect, different from the snow crystal experiments of Emoto and Radin, but similarly a subjective aesthetic experience.

The protocol was a series of 12 experiments to assess whether there was some aesthetic difference between wine treated by intentioned awareness and control wine, physically identical but unexposed to intentioned awareness (Schwartz, 2019). Three party giver hosts, blind to the existence of the others and blind to the experiment’s purpose and protocol, independently, once a year for four years, gave the parties where the tasting was done. Eighty-four unpaid volunteer participants, seven at a time, of both genders, acted as the tasters, at each party, participating only once.

The intender group was comprised of 93 individuals all belonging to various metaphysical study groups who shared an interest in nonlocal consciousness and a belief that intentioned consciousness could produce nonlocal perturbation. All the intenders were regular meditators with long established daily meditation practices and a history of meditating together as a group at their meetings, which took place anywhere from once a week

to once a month. As groups they tended to be made up of a mix of married couples and single people. Ages ranged from late 20s to early 70s. They met in each other's homes under some mutually agreeable arrangement.

The researcher purchased a single 750 ml bottle of wine for each session. The wines were all mid-price range California Cabernet Sauvignons of the quality one might serve at a dinner party among good friends, pleasantly palatable but not lastingly memorable. The day of the intention meditation session the bottle was decanted into two identical sealable carafes, 375 ml in each carafe. A pair of dice was thrown to assign the carafes as either A or B. An even number throw was an "A" and odd number throw as a "B." This first throw determined the first carafe's label.

The carafes were each put into separate Styrofoam wine carriers, and a second throw of the dice was carried out. An odd throw determined the B carafe would be the treated carafe for the evening's meditation session. An even throw would make the "A" bottle the treated carafe.

The two carafes in their Styrofoam carriers were both driven to the site of the evening's meditation group. Except for the intention session, each carafe had the same timeline history.

Upon arrival at the meditation site, the group had their discussion period. When it came time for the group mediation with which they closed their meeting, the researcher would go out to the car and bring back the carafe designated as "treated" for the subsequent taster session. The carafe was taken out of its Styrofoam sleeve and put on a table or chair placed in the middle of the room where the group was gathered. They were asked by the researcher, "Please dedicate your meditation to holding the intention that this bottle of wine is improved during the course of the meditation." The meditations lasted between 20 and 30 minutes.

The meditation sessions typically took place on a Wednesday or Thursday, and the tasting sessions on a Friday or Saturday. The two carafes were taken into the house and put in different rooms. The morning of the tasting session the carafes and 14 identical red wine glasses were taken to the location for the tasting session, usually the home of the party host, and given to them. The party host was not told about the meditation sessions and was blind as to which the "treated" carafe was and which the "control" was. In his mind it was a question of tasting two different bottles of wine to determine which to buy.

The party host arranged for seven people to come in to ostensibly taste two wines and then have a party. The story the tasters were told was that a friend was considering buying several cases of wine and had winnowed it down to two candidates. Before spending several hundred dollars he wanted to see which the preferred one was. It was explained that he was not present, and all labels and other quality hints had been removed to avoid any possible cueing, so the tasting would be unbiased and just a matter of taste.

The party host measured out seven equal portions of wine from each carafe into the identical glasses. Each glass was numbered A1 and B1, A2 and B2 and so on. The tasters

tasted each wine and then marked on a card they were given which glass of wine they preferred. They also noted their gender and handed the card back to the party host, were told the group's assessment, and had a social evening.

The scientific question being tested was: which wine was preferred? Given that the tasters were all in the same room, it could not be assumed that their responses were independent of one another. Therefore, the analysis was based on the consensus of the majority at each party. The parameter p was the probability that the treated wine would be preferred by a majority in a group of seven tasters, and $1p$ was the probability that the untreated wine would be preferred. A tie could happen if one (or three or five) tasters had no preference. In the case of a tie, the data from that party would not be used in the analysis because neither wine was preferred by a majority of the tasters.

A one-sided hypothesis test was appropriate, because the research hypothesis was that the treated wine would be preferred. Therefore, the hypotheses to be tested are:

$$H_0: p = 0.5$$

$$H_a: p > 0.5$$

For the 12 parties, 11 resulted in a majority preferring the treated wine and one resulted in a tie. Using an exact binomial test, the p -value is $(0.5)^{11} = 0.00049$. This result is similar to the probability of flipping a fair coin 11 times and getting heads each time. Therefore, the null hypothesis could be rejected for any reasonable significance level, and it could be concluded that the probability that a majority would prefer the treated wine was greater than 0.5. With 95% confidence it could be said that the probability that a majority would prefer the treated wine is at least 0.76 (Schwartz, 2019).²⁶

This experiment of itself, of course, does not prove that focused intention can alter the subjective aesthetic perception of a substance. However, this experiment is not “of itself.” As with the water spectroscopy experiments, the issue of intentioned awareness affecting the aesthetic experience of individuals partaking of a substance, compared to controls, has been addressed from a number of angles.

In 2007, Dean Radin led a team that did something similar to the wine study in which chocolate was the focus of the intention. As they describe their protocol, it is easy to see the parallels.

Individuals were assigned to one of four groups and asked to record their mood each day for a week by using the Profile of Mood States. For days three, four and five, each person consumed a half ounce of dark chocolate twice a day at prescribed times. Three groups blindly received chocolate that had been intentionally treated by three different techniques. The intention in each case was that people who ate the chocolate would experience an enhanced sense of energy, vigor, and wellbeing. The fourth group blindly received untreated chocolate as a placebo control. The hypothesis was that mood reported during the three days

of eating chocolate would improve more in the intentional groups than in the control group. (Radin & Walsh, 2007, p. 487–492)

The results they reported closely align with what was found in the wine study.

On the third day of eating chocolate, mood had improved significantly more in the intention conditions than in the control condition ($p = .04$). Analysis of a planned subset of individuals who habitually consumed less than the grand mean of 3.2 ounces of chocolate per week showed a stronger improvement in mood ($p = .0001$). Primary contributors to the mood changes were the factors of declining fatigue ($p = .01$) and increasing vigor ($p = .002$). All three intentional techniques contributed to the observed results. (Radin & Walsh, 2007, p. 487–492)

Six years later, in 2013, Yung-Jong Shiah at National Kaohsiung Normal University in Taiwan and Radin carried out another study paralleling the wine study. As they reported, “Each evening, for seven days in a row, volunteers recorded their mood using the Profile of Mood States (POMS) questionnaire.

On days three, four, and five of the test, each participant drank 600ml of oolong tea in the morning and again in the afternoon. One randomly assigned group blindly received tea that had been intentionally treated by three Buddhist monks; the other group blindly received untreated tea from the same source. On the last day of the test, each person indicated what type of tea he/she believed he/she had been drinking” (Shiah & Radin, 2013, p. 355–360).

Once again, the change was a subjective aesthetic judgment. How did it come out? As with the wine study there were significant subjective differences.

“Those who drank treated tea showed a greater increase in mood than those who drank untreated tea (Cohen’s $d = 0.65$, $p = .02$, two-tailed). Change in mood in those who believed that they were drinking treated tea was much better than those who did not believe (Cohen’s $d = 1.45$, $p = .00002$, two-tailed)” (Shiah & Walsh, 2013, p. 355–360).

We now have two related bodies of research. One is described here: the ability of intentioned focused awareness to produce a nonlocal perturbation effect on what are thought of as inanimate systems, specifically water and wine, so often associated with religious ritual and practice, augmented by the results of similar research involving chocolate, and tea.

There is a far larger corpus of research on another category of studies reporting on the effects of intentioned focused awareness on living organisms, what religions call healing prayer or curses, and science calls therapeutic intention (TI).

Before going any further, though, I want to bring attention to this observation: As with the inanimate systems previously described, from the beginning therapeutic intention research produced significant and successful results. It is not a large effect, but it is remarkably consistent. If we restrict ourselves to studies with no issues concerning

placebo effects, researcher cuing effect, or any of the other critiques of human therapeutic intention research, and focus only on the nonlocal consciousness essence of the effect, it becomes easy to see. We can do this by considering nonhuman studies involving laboratory conditions and simple organisms, specifically fungus and bacteria studies (Haraldsson & Thorsteinsson, 1973; Nash, 1982a, 1984; Tedder & Monty, 1980/1981).

In this category, perhaps the earliest therapeutic intention study, done to standards that would be accepted today, is this one. In 1968, research physician Jean Barry of l'Institut Metapsychique carried out an experiment using Violet Tooth fungus cultures which had been cultivated under optimal conditions: 10 petri dishes with the culture for each participant, in all a total of 195 dishes. Of that total, 151 of the cultures in the dishes showed inhibited growth. There were 10 participants, each of whom carried out nine sessions expressing TI. Their task was to inhibit the growth of fungus cultures. To do this they concentrated for 15 minutes from a distance of about four feet (1.2 M) away, never touching the cultures. Of 194 dishes, 151 showed retarded growth (Barry, 1968).

But what makes this study particularly interesting is that although most TI studies are focused on improving the health of the organism that is the target of the therapeutic intention, this early Barry study already recognized a very important distinction, one that is also a factor in spiritual practices: therapeutic intention works both ways. Perhaps because it is something you could never formally test in humans, although it has a strong religious history involving curses, hexes, and “evil eyes,” it is not widely considered, or often discussed today, but a number of these simple organism studies have confirmed this two-way effect (Schwartz, 2017). I picked the Barry study for that reason and because of its primacy.

In 2010, Larry Dossey, Bravewell Fellow, physician, and author, and I explored this in detail, and found a study done by biologist Carroll Nash of St. Joseph's College, Philadelphia, particularly compelling because it was so explicit in this regard.

As we reported, Nash carried out a therapeutic intention study involving bacterial colonies, cultured in common, and then split into three independent subpopulations (Nash, 1982b). His purpose was to replicate earlier studies by nun and biochemist Sister Justa Smith (1973) and nursing pioneer Dolores Krieger who along with Dora Kunz would later develop the nonsectarian approach to therapeutic intent known as Therapeutic Touch (Krieger, 1974). Smith's studies had shown significant differences between treated and controls measuring changes in hemoglobin and enzyme activity, which were the focus of the expressed intention. But Nash had a second question. He asked, “Could intention alone not merely affect the cell colonies, but could it do so both positively and negatively, when compared to controls?” The results showed that it could, although positive intention produced a more significant result than negative intention (Schwartz & Dossey, 2010, p. 301).

What is the conclusion here? On the basis of the evidence I think we have to say that when at least some individuals attain and sustain intentioned focused awareness, whether

in a religious or scientific context, they open to a part of themselves that is essentially nonlocal, that is, it is not physiologically based or limited by space-time. In this altered state of consciousness they can both acquire information, formally nonlocal perception, as well as produce small measurable effects on space-time, nonlocal perturbation.

It is I think a notable distinction that both inanimate substances and living organisms can be affected in ways that can be objectively measured. Changes that are both physical, and that produce subjective aesthetic reactions in individuals who have a sensorial interaction with such substances.

Anthropologically, the wine study I report here, along with the other studies I have cited, should also be understood as examples of empirical science. I see this process echoed in acupuncture, which developed more than 6,000 years ago, although where is unclear (Otzi the Iceman, n.d.; White & Ernst, 2004), and ayurvedic medicine, which began with the Indus Valley Civilization (3300–1300 BCE) in India and “is based on the belief that health and wellness depend on a delicate balance between the mind, body, and spirit.”²

All these arose from close observation passed down generation to generation. The answer to the question, does intentioned focused awareness, whatever ritual is used to employ it or dogma is attached to it, actually produce a measurable effect? Is it belief or is there evidence? The answer is: there is evidence. The dynamics of numinosity even extend into the letters of the languages in which scriptures are written. Can that be possible? It is such a radical idea that I want to present eight experiments carried out in different places, at different times, by different researchers. Five of them involved a prediction of improved memory, one involved improved confidence, and one involved a greater sense of “spirit” for real versus fake words. They all focused on a model of consciousness reported by British biologist Rupert Sheldrake (1981), which he called morphic resonance, a model that is closely resonant with the idea of numinosity.

The first test involved memorization of a nursery rhyme in Japanese by non-Japanese speakers, one a real nursery rhyme and two that were meaningless. Then participants in the UK and the United States were asked which they could remember better, predicting that the real nursery rhyme would be easier to remember because of morphic resonance. Rupert Sheldrake, who formulated the idea upon which the study was based, reports “that this was indeed the result, to a statistically significant degree” (Sheldrake, 1995).

A second test was reported by Gary Schwartz, then a Yale professor of psychology, currently Director of the Laboratory for Advances in Consciousness and Health at the University of Arizona. Schwartz used 48 three-letter Hebrew words from the Old Testament, of which 24 were common and 24 were rare words. From each of those words he produced a meaningless anagram by scrambling the letters, thus producing a total of 96 “words.” Participants who did not know Hebrew were shown these words one by one and asked to guess their meaning by writing down the first English word that came to mind. They were also asked to estimate their confidence in their guess. He found on average that the group of 90 participants were significantly more confident about their guesses when

viewing real words than scrambled words, even though they did not know some of the words were real and others false (Sheldrake, 1995, p. 192).

The third test was reported by Alan Pickering a psychologist specializing in cognitive psychology. At the time he was a lecturer at The Hatfield Polytechnic (now the University of Hertfordshire) in England. Like Gary Schwartz, Pickering used real and scrambled words. In this study they were drawn in Persian script. Participants were shown a word for 10 seconds then asked to draw it. Independent judges evaluated the reproductions without knowing which words were real or scrambled. The judges assessed that the real words were reproduced significantly more accurately than the false words. This finding was later successfully repeated in student projects using Persian and Arabic words (Sheldrake, 1995, pp. 192–193).

A fourth study was carried out by Arden Mahlberg, an American psychologist at the Integral Psychology Center. Mahlberg took a slightly different tack; instead of language as that term is usually understood, he used a code. In 1836, Samuel Morse, inventor of the telegraph, assisted by Joseph Henry and Alfred Vail, created a code that permitted messages to be sent as a series of electric signals. The code consisted of a sequence of dits, a short signal, in written form represented by a dot, and dahs, a long signal, represented by a dash.

Mahlberg created a series of real Morse code messages and a similar-looking but fake code. His participants were all people who did not know Morse code, a rather specialized skill. The protocol was a comparison of the ability to learn the fake and genuine Morse code. On average, participants learned real Morse code significantly more accurately than the new code (Mahlberg, 1987).

The fifth and sixth studies were carried out by German psychology professor Suitbert Ertel, at the University of Gottingen. Ertel tested recognition of hiragana, a phonetic form Japanese writing, and predicted that these characters would be recognized better when they were the right side up than when upside down, since right side up would correspond to the “morphic form” known by Japanese writers. This is what he found (Ertel, 1994). In another experiment, he compared memory for fake versus real hiragana characters, and found that real characters were remembered better than fakes (Ertel, 1994). Ertel then ran additional, more complex tests, which resulted in ambiguous outcomes.

Robert Schorn, professor of psychology at the Department of Psychology and Medical Sciences, University for Health Sciences, Medical Informatics and Technology (UMIT), Gottfried Tappeiner, professor in the Department of Economic Theory, Economic Policy and Economic History at the University of Innsbruck in Austria, and statistician Janette Walde, Department of Statistics also at the University of Innsbruck, conducted a seventh study relevant to the anthropology of religion. They used symbols such as flags, emblems, or trademarks that were once well known but were now forgotten, or symbols that are very familiar to some people but not others, such as the Chinese Coca-Cola symbol or Far Eastern religious symbols.

For each real symbol, a fake symbol was created using similar patterns and complexity. Participants were then shown pairs of symbols, one real and the false, in a random order and they asked to judge which of each pair had more “spirit.” They selected real symbols significantly more often than the fake ones. In a follow-up test, this group compared real Russian words written in Cyrillic along with meaningless anagrams. Again, real and false words were presented in pairs, and participants judged which word had more “spirit.” As before, real words were selected significantly more than the anagrams (Schorn et al., 2006).

Kimberly Robbins and Chris Roe, both part of the Psychology Division at the University of Northampton, Park Campus, in Northampton England, designed an experiment similar to the one used by Ertel, this time using real and fake Chinese characters. Sixty participants, who knew nothing of the Chinese language or the characters used to write it, were shown five real and five fake Chinese characters in a random sequence. Then on a sheet with 20 characters they were asked to circle the 10 they had just seen. They recognized the real characters significantly better than the false ones (Robbins & Roe, 2010).

What are all these data telling us? The forms of the rituals of religion, the places where these rituals are conducted, even down to the letters in which the scriptures cited are written, are founded in consciousness.

Finally, let me turn to the elements of the rituals themselves because they, too, I think, were all designed through empirical observation across generations with nonlocal consciousness in mind. Although the dogmas and culture of each religion are very different, the rituals are remarkably similar and constitute protocols for opening to nonlocal consciousness in the same way that a research protocol supports individuals opening to nonlocal consciousness in a remote viewing experiment. The only real difference is context and intent. In religion the context is a religious service or practice, and the intent is to have a sense of spiritual connection. In science the context is a laboratory experiment, and the intent is to describe a target the viewer will be shown in, say, an hour.

When the faith-believers gather in their “sacred” space, their collective intent expressed through the recitation of the words in the language similarly make the rituals numinous, and it begins with a statement of intention. In Christianity it is often the Nicene Creed, in Judaism it is the Shema, Buddhists don’t pray to a deity conceived as the Creator, as is the case in the Abrahamic religions. Buddhists use mantras, recognizing them in much the same way that science does. As the Buddha Dharma Education Association explains it, “Tibetans pray in a special way. They believe that when certain sounds and words, called mantras, are said many times, they arouse good vibrations within the person. If a mantra is repeated often enough it can open up the mind to a consciousness which is beyond words and thoughts” (Buddhist Dharma Education Association, 2018).

Through all the rituals there are prayers, sermons, and homilies, all oriented toward creating common intention, and this is accompanied by singing, chanting, dancing, and drumming to further augment this linkage. Brain entraining ensues in which the congregation's brains become synched. Gabe Turow at Stanford University describes this: "ritual technologies like chanting, drumming, mantra recitation, and prayer, all utilize repetitive sounds to help induce a wide variety of states of consciousness that correspond to the tempo or rate of the repetition" (Turow, 1954, p. xx).

Studying this has been a significant research effort of radiologist Andrew Newberg at the University of Pennsylvania. He has used standard imaging technologies focused on monitoring the brain activity of spiritual practitioners as they exercise their practice, scanning the brains of nuns, Sikhs, and Buddhists. His research has detected changes in their brains, and reported, "Meditation involves attentional regulation and may lead to increased activity in brain regions associated with attention such as dorsal lateral prefrontal cortex (DLPFC) and anterior cingulate cortex (ACC)" (Baron Short et al., 2010, p. 121–127). From Newberg's work and that of other researchers has arisen the subdiscipline of neurotheology.

For me what is perhaps most interesting of all in studying both religions and science is that this is one of history's great confluences. The practices of religion and the practices of science, although very different, have found common ground and reached the same conclusions.

Notes

1. <https://web.archive.org/web/20120915231807/http://www.islamibayanaat.com/MQ/English-MaarifulQuran-MuftiShafiUsmaniRA-Vol-1-IntroHistoryAndPage-0-28.pdf>
2. National Ayurvedic Medical Association: <https://www.ayurvedanama.org/history-of-ayurveda/>

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Consciousness, Spirituality, and Postmaterialist Science: An Experimental and Experiential Approach

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Abstract

Consciousness and spirituality are inherently experiential processes. The definition of "spirituality" ranges from (a) personal opinions regarding the meaning of life and being part of something greater, through (b) experiences of transcendental states and oneness, to (c) beliefs regarding the existence of spirit, life after death, reincarnation, angels and guides, and some sort of omnipresent infinite intelligence and power. Academic psychology has typically taken a materialistic view toward consciousness and spirituality; both are interpreted as neurobiological processes shaped by genetics and developmental and cultural factors. However, as reviewed in this chapter, contemporary consciousness research provides emerging proof-of-concept evidence suggesting that (a) mind is separate from brain, (b) spirit and soul are comparable to energy and information that persist in the vacuum of space, (c) people can receive intuitive information that is accurate and useful in their individual and collective lives, (d) physical and psychological health can be fostered by active loving spiritual processes, and (e) contemporary technology can be developed to enable practical communication with spirit. The evidence points toward the emergence of a postmaterialist paradigm in psychology and science in general.

Key Words: consciousness, spirituality, postmaterialism, the mind–brain relationship, survival of consciousness, spirit, soul, intuition, energy healing, God

When Kepler found his long-cherished belief did not agree with the most precise observation, he accepted the uncomfortable fact. He preferred the hard truth to his dearest illusions; that is the heart of science.

—*Carl Sagan*

Do not bite my finger; look where I am pointing.

—*Warren McCulloch*

Introduction

The topic of this chapter was proposed by the editors. It provides a unique opportunity for the author and readers to explore the relationship between experimental research and theory in consciousness and spirituality and to integrate them with real-life experiences.

Consciousness is inherently an experiential process (Tart, 2009); it is only witnessed directly by the person having the experiences. The same applies to spirituality (Walsh, 2000). Whether we define “spirituality” as (a) a set of personal opinions about the meaning of life and/or as being part of something greater, (b) experiences of transcendence and/or feeling a sense of oneness with everything, or (c) beliefs about the actual existence of a greater spiritual reality, including spirits, life after death, reincarnation, angels and guides, and/or some sort of omnipresent and omnipotent intelligence, they all involve conscious processes.

The scope of this chapter invites us to examine contemporary consciousness research as it relates to spirituality and postmaterialist science, from both an experimental and experiential point of view. It turns out that research on the cutting edge of consciousness science points strongly to the possibility that some sort of larger spiritual reality actually exists (Beauregard et al., 2018; Pitstick & Schwartz, 2018; Schwartz, 2011b, 2022; Schwartz & Woollacott, 2019; Tart, 2009). In light of this possibility, the emerging proof-of-concept research has profound potential implications for the field of psychology as a whole. It also has significant potential implications and applications to virtually all aspects of human life. This chapter integrates proof-of-concept research and theory on consciousness and postmaterialist science as it relates to the existence of a greater spiritual reality, with examples of real-life applications.

The chapter focuses on “proof-of-concept” research primarily because much of the research is in its early stages. Given the nature of the topic—that is, the possible existence of a greater spiritual reality and its relationship to consciousness—the research is inherently controversial, at least as viewed by conventional psychology, neuroscience, and mainstream science in general. However, the collection of proof-of-concept research findings, *when considered as a whole*, not only demonstrates the feasibility of conducting large-scale systematic research in this area but illustrates the promise of this research for increasing our understanding of human nature (and nature in general) as well as evolving our behavior as a species.

The chapter begins with the fundamental “mind–brain” problem—is consciousness a by-product of brain function, or is it separate from the brain? It illustrates how mainstream theory in electronics and electrical engineering, combined with state-of-the-art empirical research addressing the survival of consciousness (SOC) after death hypothesis, point to the serious possibility that *consciousness as a process is ultimately separate from the brain*. Included is a discussion of the challenge of determining whether consciousness has intention, and whether evidence of intention is observed in afterlife research. The

theoretical question of the potential existence of “spirit” and “soul” is examined in light of parallels involving energy and information in physics.

The chapter then examines the possibility that people can intuitively receive information from “spirit” that is potentially accurate as well as useful in real-life situations. The chapter reviews research on medical intuition, and provides examples involving the author and his research staff that illustrate how “spirit-assisted” intuition can be practiced in daily life.

The relationship of spirituality to health is examined next from the theoretical possibility of “spirit-assisted” healing. Exemplary proof-of-concept research and observations are reviewed that illustrate how psychology and medicine are being potentially expanded and advanced in this area.

This is followed by visionary proof-of-concept research indicating how contemporary technology can be employed for potential communication with spirit. It is now possible to conduct multicenter, multiblinded, randomized control trials validating spirit communication technology.

Finally, the chapter looks to the future and considers some of the profound implications for psychology and society that stem from the possibility that this emerging vision of consciousness and spirituality is valid. The implications range from experimental designs, through alternative interpretations of psychological and neuroscience data, to new post-materialist applications in technology and education. The concept of “self-science” is explored as an emerging paradigm for integrating contemporary consciousness and spirituality research and fostering “evidence-based spirituality” in daily life.

Materialism and the Mind–Brain Problem

Mainstream psychology, neuroscience, and science in general typically adopt a materialistic view of nature and the universe. Materialism is the belief that (a) what is real is physical matter, that (b) only matter exists, and that (c) everything that happens in nature and the universe can be understood and explained in materialistic terms (Tart, 2009). In psychology, this belief is expressed in terms of the relationship of mind and brain; consciousness is assumed to be a by-product or “epiphenomenon” of brain function (e.g., an emergent property of neural networks). Note that a materialistic interpretation of the mind–brain relationship precludes the possibility that a greater spiritual/nonmaterial reality could, in principle, exist.

There is no question that adopting a materialistic perspective helped science historically break away from the constraints and biases (including censorship) of various religious institutions. Moreover, scientific methods based upon materialistic philosophy have been highly successful in not only increasing our understanding of nature and the universe but also obtaining greater control and freedom through advances in technology. It is understandable how materialism became the cardinal assumption in mainstream science.

Not surprisingly, when the assumption of materialism is questioned today, it typically evokes confusion and criticism, if not consternation, by conventional scientists. The history of materialism is comprehensively reviewed, and seriously challenged, in Tart's (2009) visionary and controversial book *The End of Materialism*. A distinguished researcher at the frontiers of consciousness science, Tart reviews what he calls the "Big Five" areas of "anomalous" consciousness research—often labeled as parapsychology—which together question the foundation of a simple materialistic perspective. The five areas are as follows:

1. Precognition, the ability to predict the future. The information sometimes comes as a vision, a mental flash, or a dream.
2. Telepathy, often called mind reading or mind-to-mind communication. It literally means "distant feeling."
3. Clairvoyance, the ability to perceive remote places, objects, or people. In science it is typically referred to as "remote viewing."
4. Psychokinesis, the ability to move objects with the power of mind only.
5. Healing, spiritual practices (often equated with energy) that may afford gradual relief from pain or sickness and may sometimes bring about a sudden "miraculous" healing.

Space precludes reviewing the substantial body of replicated research in each of these five areas that together strongly justify Tart's sweeping conclusion. Radin (2018) reviews this evidence from the context of what he terms "real magic." What is important to recognize here is that a large body of methodologically sound research exists in these five separate areas and serves as a compelling challenge to the conclusion that consciousness can be explained solely as a by-product of brain processes.

A sixth area of research—on the possibility of SOC after physical death (Braude, 2003; Fontana, 2005; Schwartz, 2002, 2005, 2011b, 2022; van Lommel, 2010)—is emerging that potentially provides "proof" that materialism is in error, and that some sort of a postmaterialist paradigm is called for. The word "proof" is used here intentionally because *if* the findings from this emerging research are valid—the word "if" is important here—then an essential core prediction of the materialistic premise will have been effectively disproved.

The logic is as follows: if the brain is solely responsible for the existence of consciousness, then when the brain dies, consciousness should die. There are no ifs, ands, or buts to the logic; this is an essential, even absolute, prediction of materialism. It follows that if empirical SOC research documented that consciousness continued after physical death, the materialistic interpretation would be resoundingly refuted.

Before we review contemporary SOC research, it is helpful to examine how psychology and neuroscience routinely come to the conclusion that consciousness is created by

the brain, followed by the compelling logic that clearly explains how this assumed-to-be-true conclusion is actually (and ultimately fatally) flawed.

Does Consciousness Require a Brain?

There are three types of experimental evidence that together seem to point to the conclusion that consciousness is created by the brain. The word “seem” is emphasized here because careful examination of the totality of evidence, when viewed from the perspective of electronics and electrical engineering, reveals how the evidence is actually *as consistent with the explanation that the mind is separate from the brain as it is with the explanation that the mind is created by the brain*. Unfortunately, it is not widely appreciated by mainstream scientists that the three experimental approaches used to investigate mind–brain relationships do *not*, by themselves, require a materialistic conclusion—and they are wholly consistent with a nonmaterialistic (postmaterialist) explanation.

The three kinds of evidence are as follows:

1. *Evidence from recordings*—Neuroscientists record brain waves (via electroencephalograms [EEGs]) using sensitive electronic devices. For example, it is well known that occipital alpha waves decrease when people see visual objects or imagine them.
2. *Evidence from stimulation*—Various areas of the brain can be stimulated using electrodes placed inside the head or magnetic coils placed outside the head. For example, stimulation of the occipital cortex is typically associated with people experiencing visual sensations and images.
3. *Evidence from ablation*—Various areas of the brain can be removed with surgical techniques (or areas can be damaged through injury or disease). For example, when areas of the occipital cortex are damaged, people and lower animals lose aspects of vision.

The generally accepted—and seemingly commonsense—neuroscience interpretation of this set of findings is that visual experience is created by the brain.

However, the critical question is whether this *creation-of-consciousness* explanation is the *only* possible interpretation of this set of findings. The answer is actually no. The three kinds of evidence are *also consistent with* the brain as being a *receiver of external consciousness information* (Schwartz, 2002, 2005, 2011b, 2022).

The reasoning is straightforward and is illustrated in electronics and electrical engineering. Though it is rare to discuss an electronics example in the context of a psychology monograph (especially one focused on religion and spirituality), it turns out to be prudent and productive to do so here.

Consider the television (be it analog or digital). It is well known—and generally accepted—that televisions work as *receivers* for processing information carried by *external*

electromagnetic fields oscillating in specific frequency bands. Television receivers do *not* create the visual information (i.e., they are *not the source* of the information)—they *detect* the information, *amplify* it, *process* it, and *display* it.

Apparently, it is not generally appreciated that electrical engineers conduct the same three kinds of experiments as neuroscientists do. The parallel between the brain and the television is essentially perfect.

1. *Evidence from recordings*—Electrical engineers can monitor signals inside the television set using sensitive electronic devices. For example, electrodes can be placed on particular components in circuits that correlate with the visual images seen on the screen.
2. *Evidence from stimulation*—Electrical engineers can stimulate various components of the television using electrodes placed inside the television set or magnetic coils placed outside the set. For example, particular circuits can be stimulated with specific patterns of information, and replicable patterns can be observed on the TV screen.
3. *Evidence from ablation*—Electrical engineers can remove various components from the television (or areas can be damaged or wear out). For example, key components can be removed and the visual images on the screen will disappear.

However, do these three kinds of evidence imply that the *source* or *origin* of the TV signals is *inside* the television—that is, that the television *created* the signals? The answer is obviously no.

It should be clear how this basic logic—as applied to television receivers—can equally be applied to neural network (brain) receivers. The three kinds of evidence (correlation, stimulation, and ablation) only allow us to conclude that television sets—as well as brains—play some sort of *role* in visual experience. The truth is that the three kinds of evidence, by themselves, do *not* tell us whether either television sets or brains:

1. “self-create” the information internally—the materialist assumption; or
2. function as complex receivers of external information—which allows for both survival of consciousness after death and a larger spiritual reality.

In other words, the three kinds of evidence, by themselves, do not speak to (and do not enable us to determine) whether the signals—the information fields—are:

1. coming from *inside* the system (the materialistic interpretation applied to brains), or
2. coming from *outside* the system (the interpretation routinely applied to televisions).

It follows that *additional kinds of experiments* are required to distinguish between the “self-creation” versus “receiver” hypotheses.

Experiments on the SOC hypothesis with skilled research mediums provide an important fourth kind of evidence that can neither be predicted nor explained by the self-creation (i.e., materialism) hypothesis, but it can be predicted and explained by the receiver hypothesis (Schwartz, 2002, 2005, 2011b, 2022).

It should be noted that in physics, external electromagnetic fields are not labeled as being “material” per se. These fields do *not* have mass (e.g., they do not have weight) and are invisible; they are described by a set of equations that characterize an as-yet-unexplained property of the “vacuum” of space (which may be empty of “mass” but is actually full of energy and information).

Contemporary Experiments on Survival of Consciousness

The SOC hypothesis has been investigated for more than 100 years. Gauld’s (1984) book, *Mediumship and Survival: A Century of Investigations*, provides a comprehensive review of this research up to the early 1980s.

Though much of this research was conducted in England, influential research was also conducted in the United States, most notably by William James, the father of experimental psychology. James investigated a number of mediums—individuals who purportedly receive information from deceased individuals—especially Mrs. Piper (see Blum, 2007; Gauld, 1984).

Contemporary research has been conducted in the Laboratory for Advances in Consciousness and Health (formally the Human Energy Systems Laboratory) at the University of Arizona (reviewed in Schwartz, 2002, 2005, 2011b, 2022). The early experimental designs were mostly single blinded; the medium was blind to the identity of the sitters (e.g., Schwartz & Russek, 2001; Schwartz et al., 2001; Schwartz et al., 2002). Some exploratory experiments designs were double-blinded; not only was the medium blind to the identity of the sitters, but the sitters were blind to the identity of their personal readings (Schwartz, 2002). This was accomplished by not allowing the sitter to hear the readings when they occurred. The sitters later received transcripts of their personal readings as well as the readings of others, and they blindly scored all the information.

Also, some experiments were double-blinded in that the medium was blind to the identity of the sitters and the experimenter was blind to information regarding the sitter’s deceased loved ones (Schwartz, 2002, 2005).

The most recent experimental designs were triple-blinded; for example, the research assistant who received the transcripts, and interacted with the sitters, was blind to which readings were associated with which sitters (e.g., Beischel & Schwartz, 2007).

All the experiments (single-, double-, or tripled-blinded) eliminated visual cues. Depending upon the study, the medium and sitter were in the same room, separated by a screen, or the medium and sitters were in separate locations, separated

by hundreds or thousands of miles of distance, and the readings were conducted by phone (and even e-mail).

Some experiments eliminated auditory cues. Depending upon the study, the medium may have spent the first 10 minutes attempting to receive whatever information they could get about the sitter in the room, but the medium was not allowed to ask questions, and the sitter was not allowed to speak (termed the “sitter silent condition”), or the medium conducted the reading in their own home and conveyed the information via the internet, and the sitter, located in a different state, did not know when the reading had taken place.

All information—including initials, names, historical facts, physical descriptions, and personal descriptions—were typically scored, item by item, using a 7-point scale, from - 3 (a complete miss) to + 3 (a complete hit). In some experiments the sitters scored more than 1,000 items.

A growing group of research-oriented mediums ($n = 15$) who (a) claimed high success rates in their private practice of mediumship, (b) were interested in the science of mediumship and typically donated their time, and (c) recognized the risks involved (e.g., they knew that if they were caught cheating, they would be exposed) have participated in as few as one experiment or as many as eight experiments. A larger group of research-oriented sitters (approximate total $n = 50$) who (a) experienced one or more significant deaths of loved ones, (b) were interested in the SOC hypothesis for personal and/or scientific reasons and typically donated their time, and (c) agreed to spend the many hours necessary to score the transcripts, sometimes under sitter-blinded conditions, have participated in as few as one experiment or as many as four experiments.

Space precludes presenting a detailed review of these experiments here (they are reviewed in Schwartz, 2002, 2005, 2011b, 2022). Briefly, the average accuracy (counting only + 3s as hits, a conservative estimate of accuracy per experiment) has ranged from 40% to 80% for actual readings compared to 10% to 40% for control readings. Sitters have varied widely in how readily mediums obtain information about their deceased loved ones; the range for individual sitters’ readings is from 0% (very rare, but observed on a few occasions) to 100% (also rare, but observed on a few occasions).

The totality of the experiments effectively rules out potential conventional psychological explanations of (a) fraud; (b) “cold reading” techniques used by fake mediums (psychic entertainers) to coax information from sitters; (c) visual, auditory, and olfactory cues; (d) sitter rater bias; (e) vague, general information; (f) statistical guessing; and (g) experimenter effects.

The totality of the experiments also essentially rules out one potential anomalous (i.e., paranormal) explanation: the possibility of telepathy (or mind reading) by the medium of the sitter’s mind. For example, in numerous experiments, research mediums obtained information that the sitter did *not* know, which was subsequently confirmed by relatives or friends living hundreds or thousands of miles from the sitter and the medium. And in

triple-blinded experiments, the experimenter (the proxy “sitter”) was blind to information about the sitter; hence, the mediums could not have been reading the mind of the proxy sitter (experimenter) to obtain the accurate information they received about the sitter’s deceased loved ones.

Schwartz has concluded that when the findings are viewed collectively as a whole, the simplest and most parsimonious explanation of the data (Ockham’s razor)—including “dazzle shots” of remarkably specific and unique pieces of information that may be unknown to the sitter—is the SOC hypothesis.

Schwartz et al.’s findings have been independently replicated in Scotland (Roy & Robertson, 2001, 2004) as well as by researchers at the University of Virginia (Kelly & Arcangel, 2011). In addition, a successful quintuple-blind experiment by Dr. Beischel and her colleagues at the Windbridge Institute (Beischel et al., 2015).

Is The Emerging Evidence Proof of Survival of Consciousness?

Though this collection of experiments, taken together, points strongly to some sort of nonconventional mechanism of information reception on the part of the mediums, it does not establish the *source* of the information.

Various authors have written about alternative possible paranormal explanations—sometimes called “super-psi”—that might be imagined to possibly explain these observations (e.g., Braude, 2003). The most speculative is the notion that mediums somehow retrieve information about the deceased that was presumably left, and continues to exist, in the “vacuum” of space—in physics this is termed the “quantum hologram” (also the “zero-point field”). The implication here is that although the information continues to exist, it is “dead information.” In other words, the speculation presumes that the information is not “conscious” and therefore does not indicate the presence of a living, conscious mind.

Schwartz (2002, 2005, 2008, 2011b, 2022) has pointed out that in astrophysics it is assumed that photons of light emitted by distant stars continue to travel in the vacuum of space long after a given star has “died.” The foundation of astrophysics is based on the assumption that photons in the vacuum of space do not significantly lose their information. The patterns of starlight as witnessed in a dark night sky, or as sensitively recorded with contemporary low-light CCD cameras, are presumed to reflect the *accurate history* of starlight traveling for millions or billions of years.

It is well established that the human body as whole, and each of its individual organs and cells, reflect and emit supercomplex patterns of photons that also travel out into space and continue to do so. This fact has been documented by supersensitive spy satellites in space that not only can see humans on Earth but can record other frequencies of photon emission that identify individuals, including infrared and ultraviolet frequencies of light. Like the information from starlight, the photonic information reflected and emitted by biological systems is presumed to be nonliving and nonconscious.

Interestingly, the information received by research mediums does *not* appear to be “dead.” Mediums do not describe the process of receiving the information as if they are watching a movie or reading a book. *They describe the information retrieval process as being dynamic, interactive, often surprising, and even sometimes confrontational. In other words, the information seems like communication with a living person.*

The information appears as if it is “intentional.” Various authors have described instances where the information evidences compelling qualities of intentionality (reviewed in Fontana, 2005; Gauld, 1984); however, no laboratory research to date has examined this observation systematically.

Schwartz and colleagues have begun to examine the apparent intentional nature of SOC communications. Schwartz (2011b) has reviewed a set of compelling case examples, some observed in the context of double-blinded laboratory experiments that provide significant proof-of-concept observations, which individually and collectively support the intentionality hypothesis. The combined evidence points to the experiential as well as empirical nature of this work.

Integrating Experimental and Empirical Approaches to Survival of Consciousness

In one example, Schwartz (2005) explains how immediately after Susy Smith, a famous lay scientist and author of 30 books in parapsychology and SOC had died (e.g., Smith, 2000), information was received by mediums that continued for months. Schwartz came to know Ms. Smith well before she died. Though the information received could not be explained by conventional psychological mechanisms (e.g., fraud, rater bias, and sensory leakage), the information per se did not rule out possible “super-psi” explanations.

A particular research medium participated in a private personal exploratory investigation with Schwartz (reported in Schwartz, 2011b). The medium conducted long-distance readings by e-mail five days a week for more than 10 weeks; the medium lived more than 1,000 miles from Tucson. The medium was kept blind to Schwartz’s activities, including his travel schedule. The medium was requested to contact Ms. Smith in the mornings on Mondays through Fridays and ask her two questions: (a) what had Ms. Smith witnessed Schwartz doing in the previous 24 hours, and (b) what did she see happening within the next 24 hours that might be memorable or meaningful for Schwartz.

The accuracy of the information received (scored by Schwartz using the procedures described previously) averaged around 80%. Though the information appeared to be communication-like in nature, and though this is a necessary condition for inferring intentionality, it is not by itself sufficient to establish intentionality, and Schwartz was well aware of this fact.

Then, something completely unexpected happened that proved to be scientifically propitious as well as productive. Schwartz was on the East Coast, meeting with a woman

whose younger sister, a surgeon, had recently died of brain cancer. The older sister asked Schwartz to meet with her parents who were Holocaust survivors and were grieving the death of their younger daughter.

In the car on the way to the parents' home on a Saturday morning, the sister shared how she wished she could have had a compelling reading with a gifted psychic who could convince her that her younger sister was okay and still with them. Schwartz recounted how in the car he thought about how fortunate he had been for having received more than 50 evidential (i.e., accurate) readings with a medium via e-mail, and he secretly wished this family could have had a similar experience with a medium.

The next morning, Schwartz received an unexpected and surprising e-mail from the medium. She apologized for e-mailing him on a Sunday, but she explained that something strange had happened. She had been driving on Saturday morning when purportedly Ms. Smith showed up unannounced in the car, accompanied by an unknown deceased woman, and Susy insisted that the medium do a reading on the mystery woman ASAP. The medium claimed that she pulled over to the side of the road and, as allegedly requested, did a reading with the unknown woman. The medium carefully wrote down the information; Ms. Smith then supposedly instructed her to e-mail the information to Schwartz, who presumably would know what to do with the information.

Schwartz wondered whether the unknown woman allegedly read by the medium could be the deceased sister. Mustering his courage, he called the older sister. He explained the strange circumstances of the unexpected and surprising e-mail reading and asked her whether she would be willing to score the information. Schwartz read her the information, item by item, over the phone. The scoring took about an hour. The sister's scoring of the accuracy of the e-mail reading was greater than 80%. Both the sister and Schwartz were moved by the spontaneity, timing, and accuracy of this apparent "spirit-initiated" reading.

What actually convinced Schwartz that this might be a genuine reading was a highly specific and novel piece of information regarding eagles. The medium claimed that the deceased sister wanted her family to know that she loved eagles, and that eagles were important to her life. Sobbing on the phone, the older sister explained the following: (a) her deceased sister had indeed loved eagles; (b) she collected statues of eagles, (c) instead of her ashes being present at the memorial service, one of her deceased sister's favorite eagle statues was displayed, and (d) the song "Fly Like an Eagle" was selected to be played at the service. To prove this to Schwartz, the older sister later mailed him a VHS video tape of the service verifying these facts.

At this point Schwartz had witnessed hundreds of research readings, and he knew that at no time had a medium ever spontaneously brought up information about an eagle. Moreover, he realized that what he had just witnessed was extraordinary—the possibility that one deceased person could intentionally bring a second deceased person to a medium. Moreover, in this instance not only was the medium blind to the identity

of the second “mystery” deceased person, but the medium was blind to the possibility that this could happen in the first place. A very unusual and compelling set of circumstances.

This unexpected observation inspired the creation of what Schwartz called the “double-deceased” research paradigm. He further realized that double-blinded experiments could be designed using this “spirit-mediated” double-deceased research paradigm. As described in Schwartz (2011b), collaborating with a second scientist on the East Coast, they conducted a dual-location, double-blinded, double-deceased proof-of-concept personal exploratory experiment, and obtained promising positive results.

Space precludes discussing additional proof-of-concept observations (a) where the deceased appear to have “minds of their own,” as well as (b) various ways in which the spirit intentionality hypothesis can be operationalized and put to experimental test (e.g., see Schwartz, 2011b). What is important to recognize here is that not only can such research be designed and conducted, but that intentional-like spirit behavior can be observed and appreciated in real-life situations (as well as in the laboratory). In fact, Schwartz illustrates how innovative proof-of-concept experimental paradigms are being suggested by sophisticated deceased individuals who seemingly are participating in current SOC research (e.g., Davids & Schwartz, 2016).

On the Scientific Meanings of the Words “Spirit” and “Soul”

When I was a graduate student at Harvard University in the late 1960s, words like “consciousness,” “thoughts,” “feelings,” and “mind” were generally considered to be taboo. This was the era of the emerging shift from behaviorism to cognitive psychology. The “C” words (“cognition” and “consciousness”) were perceived as being controversial (if not illusory) and often denigrated if not dismissed.

However, by the late 1990s, the zeitgeist had radically changed. Cognitive psychology, cognitive neuroscience, and cognitive-behavioral therapy were well established in universities worldwide. Moreover, a growing set of universities, such as the University of Arizona, were creating Centers for Consciousness Studies, and the topic of consciousness was on the road to becoming mainstream.

Meanwhile, during the same time period, “S” words like “spirit” and “soul” were generally considered to be taboo. Even in 2019 (the year this chapter was updated for the second edition), despite increasing research on the psychology of religion and spirituality, words like “spirit” and “soul” are generally frowned upon (and words such as “angels” and “guides” typically evoke even stronger negative reactions).

If (a) materialism is an incomplete description of nature and the universe, and if (b) “nonphysical” concepts like energy (including fields) and information are necessary for a more complete and accurate portrayal of nature and the universe, then (c) it is useful to consider how the spiritual terms “spirit” and “soul” may relate to the scientific concepts of “energy” and “information.”

Schwartz (1997) proposed that the concepts of spirit and soul have a curious and potentially fundamental parallel with the concepts of energy and information. In physics, energy refers to the capacity to do work and overcome resistance. Energy reflects power, force, vibration, and vitality. Interestingly the term “spirit” is often associated with life, vitality, passion, strength, conviction. Note that the existence of energy, by definition, is *inferred* from its effects on matter (e.g., the force of gravity is *inferred* from the observation that objects fall to the earth, or that planets are observed to revolve around stars); the existence of spirit is also *inferred* by its effects. Taken together, the terms “spirit” and “energy” both share an implicit (i.e., inferred) sense of the capacity to act and have effects on things.

In physics, information refers to patterns, form, nonrandom sequences, structure, and complexity. Interestingly, the word “soul” is often associated with person, identity, the essence that describes something about the person, and memory.

Stimulated by the apparent parallels of (a) spirit with energy and (b) soul with information, Schwartz (1997) wrote a science-based spiritual poem, which expresses these parallels. The first few stanzas of this science-based spiritual poem introduce the core parallels; the stanzas are included at the end of this chapter to honor the experiential side of consciousness and spirituality.

Though drawing an energy and information distinction between spirit and soul is useful heuristically and potentially theoretically, scientists and laymen alike typically use the spirit and soul synonymously. In keeping with the overarching theme of consciousness and spirituality in this chapter, the term “spirit” is being used broadly here to refer to (a) potentially living minds of deceased beings, as well as (b) purportedly higher-level beings (e.g., hypothesized angels, guides, and the Source).

I understand that some readers may experience the words “spirit” and “soul” negatively, a response not unlike my reaction to raw oysters. Briefly, I never developed a taste for raw oysters. Oysters appear slimy and gooey to me, and they make me gag. However, just as I find it significantly easier to write about oysters than to physically eat them, I am inviting the reader to merely think about the concepts of spirit and soul—and not necessarily swallow them.

If Spirits Exist, Can They Play a Practical Role in Daily Life?

Let us imagine for the moment that future controlled laboratory research on SOC continues to generate positive evidence consistent with the continuity-of-consciousness hypothesis.

Furthermore, let us imagine that future innovative experimental designs will document the presence of intentionality (including properties of thinking, information processing, memory, decision-making, choice, having preferences, the capacity to withhold information, and even giving false information). Finally, let us imagine that the future research justifies the conclusion that consciousness is in some sense similar to the light from distant stars in that the organized energy and information continues to exist long

after the brain has died—not only consisting of accurate information but of conscious intentionality as well.

If Spirit exists, and if the claims of well-researched and genuine (not fraudulent) mediums are to be considered, then it will be prudent for scientists to keep an open mind about the possibility that numerous so-called paranormal capabilities—including Tart’s (2009) Big Five—may be mediated by spirit assistance to various degrees. This could be called the “spirit partnership” hypothesis (it is sometimes also called the sacred partnership hypothesis; Schwartz, 2011b).

One example of purported spirit assistance is the controversial area of medical intuition. Medical intuition is a form of clairvoyance (third on Tart’s list) as applied to medical diagnosis. There is a long history of claims of medical intuition, including the beliefs and practices of ancient Greek physicians, shamans throughout the world, healers in India, and Edgar Cayce in America. In more recent times, exploratory research has been conducted on medical intuitives, including practitioners of therapeutic touch, Silva Mind Control, and Mind Dynamics in Sweden. However, no double-blinded studies had been conducted to evaluate the purported accuracy of diagnosing illnesses using medical intuition.

To address this gap, Attig and Schwartz (2006) conducted a double-blind experiment using seven practicing medical intuitives. The study involved 20 pairs of congestive heart failure patients (10 males and 10 females) and their respective spouses; the spouses (who did not have congestive heart failure) served as matched controls. As a result of counterbalancing for the sex of the patients, the average age of the patient and control groups was comparable.

A cardiologist collected medical data on the patients with congestive heart failure as well as on their spouses. As anticipated, given the consequences of congestive heart failure, on the average the patients (males and females) were found to have a significantly greater number of other medical conditions (in addition to congestive heart failure) than their respective spouses (females and males).

The medical intuitives (who lived in various states across the country) were asked to provide medical diagnoses for all subjects; hence, the medical diagnoses were made from a distance. The intuitives were given only the subjects’ names, dates of birth, gender, and the city and state in which they lived. They were kept blind to the patient selection criteria (i.e., they were not informed that the patients had been selected for congestive heart failure). Complete data were available on 19 pairs for scoring. Undergraduate students were trained to count the number of diagnoses given to each subject by each intuitive. Two cardiologists rated the likelihood of a diagnosis being congestive heart failure for each diagnosis given by the intuitives. Both groups of raters were blind to which subjects were patients versus controls.

The results for the undergraduate raters revealed that on average, the intuitives gave significantly more medical diagnoses to the subjects who were originally diagnosed by

the cardiologist as having congestive heart failure (the patients) than to the subjects who did not have congestive heart failure (the controls). Moreover, the cardiologists rated the patients as significantly more likely to have the diagnosis of congestive heart failure—based on the symptoms reported by the medical intuitives—compared to the controls.

This proof-of-concept experiment documented that for this relatively small sample ($n = 7$) of skilled medical intuitives, clairvoyant/remote-viewing diagnoses could be made in patients versus controls that were significantly greater than chance. Though the experiment validated the primary claims of the medical intuitives that they could make statistically accurate diagnoses, the study does not address the secondary claims made by a majority of the medical intuitives that they were able to achieve this degree of accuracy because of the active assistance of their “spirit guides.”

Medical intuitives typically believe in spirit assistance, and many claim that the spirits provide most if not all the information. Of the seven intuitives, the one participant who had the greatest accuracy (a high school-educated grandmother) claimed that she received much of her information directly from the deceased Edgar Cayce (whom she affectionately referred to as “Eddie”) as well as other alleged spirits and angels.

Their life histories are revealing and potentially meaningful. One intuitive explained that early in her medical intuitive training, she was diagnosed with breast cancer. She went to numerous oncologists who confirmed the diagnosis and recommended a double mastectomy.

However, her “guides” insisted that she did not have cancer. She ultimately decided to ignore her guides’ persistent advice and chose to undergo the surgery. To her shock and dismay, subsequent laboratory examination of her tissues revealed that her intuitions (allegedly from her guides) were correct; she did not have cancer. Her surgery had indeed been unnecessary. The critical question arises, Was this merely a chance occurrence, a lucky guess, or did it involve spirit assistance as claimed by the intuitive? It is not possible to reach a conclusion based on a single case.

The author has witnessed a number of highly visible medical intuitives practice their art; one was Mary Occhino, who demonstrated live on a daily Sirius XM radio show. Ms. Occhino provided medical diagnoses as well as medical predictions that were often uncannily accurate and later verified to be true. Moreover, listeners regularly called into Ms. Occhino’s radio show recounting instances where their alleged spirit guides have helped them in everyday situations ranging from selecting the right book to read, to avoiding a life-threatening car accident. Ms. Occhino claims that the reason that she was personally able to be so accurate was because of the skilled and dependable assistance of her spirit guides; her show was aptly called “Angels on Call.”

Understandably, mainstream academic psychology has been reluctant to examine such controversial claims closely and put them to experimental test. Speaking metaphorically, the actual process of designing and conducting such research would be for many psychologists like eating oysters would be for me.

However, *if* (a) medical intuition is a genuine phenomenon (the key word here is “if”), and *if* (b) their explanation for the mechanism of how it works involves an active partnership with spirits (again, “if”), then (c) the implications for the science of consciousness and spirituality, psychology, and science in general are sufficiently substantial as to warrant serious consideration. We will return to this challenging issue at the end of the chapter.

Potential Applications of Consciousness and Spirit to Healing

One of the most controversial of all claims in religion and spirituality involves reports of spiritual healing and associated “miracles.” Throughout recorded history, certain individuals—including shamans and medicine men and women, the most notable healer being Jesus of Nazareth—purportedly had extraordinary healing powers that they attributed to their ancestors, angels, or the Great Spirit/God/the Sacred (etc.).

In contemporary complementary and alternative medicine, spiritual healing is typically considered in the context of “energy” healing, a less controversial and more physical/materialistic phrasing (and reframing) of the phenomenon. A growing body of research in complementary and alternative medicine, including double-blinded experiments, documents that energy/spiritual healing sometimes has measurable basic as well as clinical effects (reviewed in Schwartz, 2008; Tart, 2009).

Mainstream psychologists and physicians generally assume (incorrectly so) that if significant healing effects are actually observed, they must be due to expectancy and belief (i.e., placebo effects). There is a large body of research in psychophysiology and mind–body medicine documenting how the mind of the patient can affect their physiology and healing (Schlitz et al., 2004). However, the totality of the research that specifically addresses energy and spiritual healing indicates that expectancy and belief effects, though important, *cannot fully account for the effects observed*.

For example, Baldwin and Schwartz (2006) conducted a controlled animal experiment investigating the effects of a Japanese spiritual energy healing technique (Reiki) on microvascular inflammation and leakage in the capillary beds of the guts of noise-stressed rats. Noise stress has been shown to produce significant increases in (a) the number of leaks and (b) the size (areas) of leaks, measured microscopically in the rat’s capillary beds. In these studies, the microscopic analyses of the tissue samples were conducted blindly by the technicians (i.e., the samples were not identified in terms of experimental conditions).

The Baldwin and Schwartz (2006) study included four groups of animals:

1. No noise controls
2. Noise alone
3. Noise plus Reiki
4. Noise plus Sham Reiki

The duration of the experiment was 21 days per group. For the Noise plus Reiki group, skilled Reiki practitioners visited the laboratory each day and performed Reiki healing. They did not touch the animals or the cages; the healings were done silently.

For the Noise plus Sham Reiki group, research assistants who had no background in healing and no intention to heal were taught to mimic the hand movements of the Reiki practitioners.

Both groups were videotaped; it was not possible by watching the recordings to discern who the true versus sham practitioners were. Using this experimental design, the question of possible belief and expectancy effects (on the part of the rats) was not relevant and therefore could be ruled out.

Though compared to noise alone, the presence of the sham practitioners was associated with a small decrease in both the number and size of the stress-induced leaks; the decreases were not statistically significant. However, the presence of genuine Reiki treatments was associated with substantial and statistically significant decreases in both the number and size of the stress-induced leaks. The findings comparing true versus sham practitioners were replicated three times.

Again, similar to Attig and Schwartz's (2006) experiment on medical intuition discussed previously, the Baldwin and Schwartz (2006) experiment only demonstrates the presence of an effect; it does not address the potential mechanism(s) of the effects. Though the experimental design rules out conventional explanations of the findings (most notably placebo effects), the design does not make it possible to determine whether any portion of the observed effect can be attributed to spirit assistance per se (as opposed to the consciousness and energy of the practitioner per se).

Nonetheless, the practitioners insist that they are being assisted by ancestors, spirit guides, and the "Source" (they use many different terms, from "Universal Intelligent Energy" to "Divine Mind and God"). The question becomes, Can the spirit-assistance claim be addressed experimentally?

The answer in principle is yes. For example, Schwartz (2011b) described a proof-of-concept experiment that tested the claims of a spiritual energy healer that a deceased physician was present in his healing sessions and provided assistance. The healer claimed that when the spirit physician entered the healing, his hands became warm. The healer further claimed that sometimes the deceased physician showed up earlier in the session, and other times late in the session. This precise claim was tested experimentally.

With the aid of a skilled research medium, Schwartz requested that the medium contact the deceased physician, and together they would decide whether the spirit physician would show up (a) early or (b) late for a given healing session. The healer, who was kept blind to this decision, would then conduct an energy healing session and record whether his hands warmed up (a) early or (b) late in the session. Schwartz was also kept blind to the alleged decisions. After 10 sessions—5 purportedly when the deceased physician would enter early, and 5 when he would enter late—the data were unblinded and

analyzed. The results revealed that the match between the medium's alleged decisions with the deceased physician regarding early versus late, and the hand-warming times recorded by the healer concerning early versus late, was 100%.

Presuming that (a) fraud was not involved in this experiment, and that (b) this was not a spurious or chance finding, explanations other than spirit assistance can still be imagined. For example, one could speculate whether it possible that the healer somehow read the mind of the medium (who was located more than 1,000 miles from the healer). In principle, the answer could be yes; however, future research could be conducted to test directly whether the healer could actually read the mind of the distant healer.

Note that even if the spirit-*presence* hypothesis were ultimately established, the question would remain: Did the spirit actually play a *healing role* in the recovery of the patient? Again, this is a question that can be addressed in future research. What is important to recognize here, at this early proof-of-concept stage of research, is that challenging questions such as these can be raised and carefully addressed in future research.

Proof-of-concept observations can sometimes be made in the laboratory of one's personal life. Schwartz (2011b) recounted a personal experience where he was suffering from a severe flu, and on three separate occasions he was unknowingly given distant healing by a person who practiced a divine-focused spiritual healing tradition. He was not told when the healings would be provided; in fact, he did not even request that healings be offered (and he was not aware that they were being provided).

There were three significant moments in his recovery: (a) when his fever broke after five days, (b) when his persistent coughing broke a few days later, and (c) when his severe coughing reappeared, and then broke. To his surprise, each significant moment in his healing happened to have been preceded, within an hour, by an essentially secret distant spiritual healing session. One such pairing (a secret healing preceding symptom relief) could have been a coincidence; two such pairings might have been a coincidence as well. However, the replicated occurrence of three separate and precise pairings suggests that more than coincidence was taking place.

It is one thing to read about an experiment in a publication (or even to conduct such an experiment); it is another thing to experience the phenomenon in real life. The fact that I happened to be thoroughly blind to the occurrences and timings of the healings speaks to the possibility that a genuine spiritual healing effect was occurring. This personal scientific account demonstrates how blinded spiritual healing experiments (with appropriate human subjects consenting) can be carried out in the future.

Emerging Evidence for the “SoulPhone”?

One of the most controversial and far reaching implications of postmaterialist consciousness research that bridges science and spirituality is emerging research on the use of contemporary technology—both hardware and software—to enable communication between people in the physical and “postphysical people.” I refer to this range of technologies as

the “SoulPhone.” As an extension of contemporary smart phones, the primary SoulPhone applications are anticipated to be “SoulTexting,” “SoulAudio” and “SoulVideo” (e.g. see www.soulphone.org).

- A set of three proof-of-concept experiments have been published documenting how hypothesized spirit participants can be detected using a state-of-the-art silicon photomultiplier system that can detect single photons of light in a pitch-black environment (see Schwartz, 2010, for details). The third experiment is particularly relevant because it illustrates how a single hypothesized spirit collaborator (called Harry) could employ patterns of photons as detected by the photomultiplier to signal “yes” or “no” responses.
- Moreover, in a follow-up pair of experiments using a supersensitive Princeton low light CCD camera system cooled to -77 degrees centigrade, it was possible to document the replicated presences of two different hypothesized spirit collaborators (called Susy and Sophia) using a completely computer automated procedure in the middle of the night when no experimenters were physically present (see Schwartz, 2011a, for details). The sophisticated computer program ran the entire experiment, giving instructions via audio files and PowerPoint slides, and collected and saved the CCD image files for subsequent analysis.
- At the time this second edition chapter was written, the hardware and software had been advanced to the point where it became possible to replicate and extend these findings on a global scale. Below is a copy of an abstract announcing this first-ever multicentered, multiblinded, randomized control trial program of research.

Abstract

The gold standard in biomedical research is the multicentered, multiblinded, randomized control trial (MCMBRCT). In pharmacological research, the MCMBRCT is termed a “Phase III clinical trial.” This paper presents the core goals and MCMBRCT methods developed to investigate automated spirit communication. The goals are: (a) to use currently available, reliable, and affordable technology (total hardware cost per system less than \$4,000; these systems will be provided free to collaborating laboratories); (b) to automate data collection and real-time analyses employing specially designed software; (c) to only require a quiet space (used at night) in collaborating laboratories; (d) do not necessitate human subjects committee approvals at collaborating institutions (because the participants are hypothesized spirit participants); and (e) to enable international collaboration regardless of the investigator’s personal beliefs about the hypothesis. The research design and methods meet a phrase popularized by Carl Sagan: “Extraordinary claims require extraordinary evidence.” The final design will be available for public viewing and

discussion (www.soulsci.com). Investigators in established laboratories who regularly publish in peer-reviewed journals, and are interested in collaborating in this MCMBRCT, are invited to contact the author. (Schwartz, 2021).

Can you imagine the profound implications for science and society if positive findings are obtained in these large scale multicenter experiments? It is possible that findings such as these would herald a paradigm shift that was equal, if not greater, than those witnessed in the history of science.

Conclusion

There are special moments in the history of science when major conceptual breakthroughs occur. They are sometimes called paradigm shifts or changes (Kuhn, 1996). Classic examples of paradigm changes include the shift in thinking that (a) the Earth was *flat*, to the Earth being *spherical*; that (b) the Sun revolved around the Earth, to the Earth revolving around the Sun; that (3) matter was *solid and fixed* (how we conventionally experience it), to matter being mostly “*empty space*” and *dynamically probabilistic* (quantum physics); and (d) the vacuum being “*empty*,” to space being *filled with invisible energy and information* (the zero-point field).

Major advances linking quantum physics (and other more innovative and visionary physics) with consciousness and spirituality is capturing the imagination of contemporary researchers (Goswami, 2001; Radin, 2006, 2018), and some of the core underpinnings of the materialistic worldview are being seriously challenged if not disproved. Visionary scientists (as exemplified in this *Handbook*) are beginning to explore what science might look like from a postmaterialist perspective.

As Schwartz (2011a, 2022) illustrates, new advances in technology (including the recording of patterns of cosmic rays as well as individual photons of light) are making it possible to address the presence and effects of a greater spiritual reality. Three experiments document how a supersensitive silicon photomultiplier system can be used to monitor the presence of spirit and potentially serve as a communication device (Schwartz, 2010). Though the idea of technology advancing to the point of creating a reliable spirit-communication device—what Schwartz playfully calls the “SoulPhone”—might sound like science fiction, the history of science reminds us of countless instances where what was once viewed as science fiction became science fact.

If there is a greater spiritual reality, and *if* consciousness is the key to it, then psychology will need to revise and expand its vision of (a) what is mind, (b) how does mind operate, and (c) what are its limitations and potentials. Just as the television set is required to receive and convert the external electromagnetic field signals into viewable information and energy that can be processed by human beings, the brain as a receiver may be needed in a parallel fashion.

Interestingly, the hypothesis that the brain might serve as a receiver (as well as a transmitter) of information and energy for consciousness has an illustrious history. The

brain–receiver hypothesis was seriously entertained by William James, the founding father of American psychology; Wilder Penfield, a distinguished Canadian neurosurgeon who mapped consciousness and the brain; and Sir John Eccles, a British neurophysiologist who won the Nobel Prize in Medicine for discoveries involving the neuron. These luminaries may have had the correct thesis (van Lommel, 2010).

Future Directions

If the mind is not limited to the brain per se, but it extends into space and can operate independently of the brain (Kelly et al., 2009; Schwartz, 2011b, 2022; van Lommel, 2010), then the nature of the scientific method needs be carefully reexamined. It is possible that the beliefs and expectations of the experimenter may sometimes directly influence what they discover, regardless of their specialty (Radin, 2006, 2018).

Researchers may be “participant-observers” in what they are investigating, even at a fundamental quantum level (termed the Heisenberg uncertainty principle). Additional experimental control conditions will need to be designed and employed. For example, in postmaterialist science even physics and chemistry experiments may need to manipulate (or at least monitor) the beliefs and expectations of technicians.

Moreover, if minds other than those of the experimenters can directly influence the physical world—that is, the spirit-assistance hypothesis—then we may need to take spirit-assisted mechanisms into account to better explain and predict certain laboratory findings. Many seemingly anomalous phenomena in physics, chemistry, biology, and psychology may be predictable and explainable by taking into account hypothesized spirit-assisted processes.

Also, improving healing and health may require that processes involving spirit and soul be addressed and included as part of diagnosis, treatment, and prevention. This not only includes the possibility of spirit-assisted healing, but the idea that healing may require a broad collaboration between the physical and the spiritual, including so-called past-life information.

The emerging frontier research in consciousness and spirituality should serve to encourage scientists to *resist the inclination to simply dismiss or denigrate such ideas* (what Tart calls “scientism”); instead, a more “agnostic” and cautiously open-minded approach is indicated if psychology, and science in general, is to advance with responsibility and integrity. This chapter was written following the framework suggested by Warren McCulloch: “Do not bite my finger; look where I am pointing.” The strong version of this open-minded philosophy is expressed in Carl Sagan’s quote that introduces the chapter: “This is the heart of science.” And it is embraced by new organizations whose mission is to advance postmaterialist theory, research, and applications (e.g., see www.AAPSGlobal.com).

Unfortunately, the politics of science promises to make progress difficult. Conventional funding agencies, as well as mainstream scientific journals, are strongly materialistic. They are typically threatened by the serious possibility that their core assumptions will need to be expanded and revised. University politics for promotion and tenure require acceptance by the mainstream.

Meanwhile, the public is increasingly becoming interested in matters of consciousness and spirit. This is evidenced by numerous successful television—documentaries, reality shows, and fictional series—spanning parapsychology, mediumship, “ghost hunting,” angels, and spiritual healing. Support from the private sector appears to be necessary to foster and promote future research in this area.

In closing, it should be remembered that certain discoveries in consciousness and spirituality, by their very nature, can only be made by individuals directly experiencing them. Adding the scientific method to daily life becomes a prudent and effective practice (Walsh, 2000). When the scientific method is integrated with everyday activities, life becomes a living laboratory of personal exploration and evolution.

Schwartz (2011a) illustrates how “self-science” can fruitfully be employed in discovering a wide variety of spiritual phenomena, including developing one’s intuitions and charting complex patterns of events (called synchronicities). Self-science can foster the development of evidence-based spirituality as a practical consequence of a postmaterialist paradigm (Beauregard et al., 2018; Schwartz & Woollacott, 2019). Let us close with the first four stanzas of Schwartz’s (1997) poem “Soul as Information, Spirit as Energy”:

What, pray tell, are Spirit and Soul?
Are they one and the same?
Are Soul and Spirit a functional Whole?
Derived from a common Name?
Or is it the case that Soul and Spirit
Reflect two sides of a coin:
Where Soul reflects the Information that fits?
And Spirit, the Energy that joins?
Is Soul the story, the Plan of Life?
The music we play, our score?
Is Spirit the passion, the Fire of Life?
Our motive to learn, to soar?
Soul directs the paths we take,
The guidance that structures our flow.
Spirit feels very alive, awake,
The force that moves us to grow.

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A Postmaterialist Human Science and Its Implications for Spiritual Activism

Amit Goswami

Abstract

Various models of postmaterialist science are introduced with a brief exposition of the quantum physics and primacy-of-consciousness-based model that integrates all the various approaches. The chapter discusses new neuroscience data that verify the quantum model of two selves.

Key Words: quantum physics, primacy of consciousness

Materialist science is science based on the metaphysics of scientific materialism—everything is made of matter and material interactions. As such, it is an exclusive science; scientific materialism is a dogma that excludes an important part of the human experience—spirituality—except as a causally inefficacious epiphenomenon of matter. If materialist science’s contention is true, then spiritual values and transformation toward upholding these values in one’s life which are the basis for all religions and spiritual traditions, can only be regarded as superfluous. In this way religions and with them spirituality have lost much ground in our societies and cultures worldwide.

Additionally, for justifiable reasons, most countries have adopted the idea of secularism—the separation of state and church. As a consequence, religious ideas and with them spirituality and spiritual values cannot be taught in public schools. In contrast, scientific materialism and its materialist values find unbridled expression in the education offered in public schools. Hence the importance of spiritual activism with the ides of upholding spiritual values and emphasizing the importance of spiritual transformation.

Much of the current movement of spiritual activism has originated in the religions themselves. In the West especially in America, spiritual activism has been politicized in such attempts as to legalize prayer and meditation in public schools or teach creationism as an alternative to evolutionism.

More recently, spiritual activism has found expression outside religions in the movement for better ethics in our society; in the movement for replacing the “shallow” ecology of the environmental movement by a “deep” ecology—a caring for not only our physical

external environment but also our subtle mental and vital internal environments; in the movement for alternative medicine whose goal is to heal not only the gross aspects of our body (that allopathic conventional materialist medicine treats) but also “subtle” aspects of our bodies; and finally, in the movement for a transpersonal psychology whose goal is to address not only our material ego needs but also the spiritual needs of the superconscious transpersonal self beyond the ego.

Unfortunately, the approach of these latter activist movements has been one of a continuous apology. Dazzled by the success of materialist science and technology, spiritual activism under the aegis of these movements has shied away from a direct confrontation with scientific materialism. Instead, they have invoked dubious ideas such as holism or evidence-based science to establish their authenticity. Even when a movement is solidly founded on an inclusive worldview, transpersonal psychology for example, which is based on the philosophy of monistic idealism—consciousness, not matter, is the ground of all being—no attempt is made to bridge the chasm of spirit and matter. Instead a phenomenological approach is pursued (Wilber, 2006) that retains a spirit–matter dichotomy. In the absence of such integration, it is easy for scientific materialists to ignore these efforts of spiritual activism as “unscientific,” however unjustified that may be. Ours is a scientific culture; science works. If ethics and spiritual transformation are not scientifically innate aspects of us but only philosophical imperatives, why bother? Thus a lot of coordinated effort to discredit the idea of God for which a straw God—the God of popular Christianity—is the usual target (Dawkins, 2006; Hawking & Mlodinow, 2010). An advert on London double-deckers some years ago puts the materialist position well: God probably does not exist. So relax and enjoy life.

Fortunately, more recently, the research of many scientists has helped expose the fact that materialist science is showing signs of inadequacy in the form of philosophical paradoxes and anomalous data. As a result of their work and breakthroughs in the understanding of the meaning of quantum physics, a new quantum science based on the primacy of consciousness is aborning replacing the metaphysics of the primacy of matter. H. H. the Dalai Lama approves: “No model of reality is possible without quantum physics,” he has said.

Fundamentally, materialist science treats humans as genetically and environmentally conditioned machines. In contrast, the new science is a human science; it not only includes causal efficacy of the human consciousness, but being based on quantum physics, it enables us to treat all human experiences—both external and internal—on equal footing. In particular, this new science shows unambiguously that spirituality is innate in us. And ethics and spiritual transformation are imperative because of our evolutionary drive!

In this chapter, I introduce this postmaterialist human science and discuss its implications for spiritual activism—an activism directed toward reenchanting humanity with its innate spiritual values.

A Brief History of the Chasm Between Science and Spirit

Although materialist science is rooted in the mechanistic theories of Newton and others, its early years were spent embedded in a worldview truce called modernism. Also called Cartesian dualism, modernism gave value to both matter and mind, to both our external and internal experiences. In modernism, matter is causally deterministic, its movements predictable and controllable, but mind is recognized to have free will. Thus, in this truce was generated the unprecedented creative opportunity for the exploration of the human potential that gave us the industrial revolution, capitalism, democracy, and liberal education. In the West, before modernism, the worldview was exclusive—the religious worldview of Christianity. In that worldview, ordinary people's exploration of meaning was confined to religion that emphasized the afterlife much more than this life. No wonder that given this history, Karl Marx has labeled religion the opium of the people. It was. In contrast, modernism brought a breath of fresh air, nay, a gale of strong wind to blow the barriers away against ordinary people's exercise of free will and creativity.

But the truce did not last. From the beginning, there was a question of great unease: how does matter and mind, dual objects with nothing in common, interact? In the 19th century, science discovered energy and its law of conservation—the energy of the material world alone is always a constant. The unease grew further: it must take energy carrying signals to mediate the interaction of matter and mind. But if that were so, the energy conservation law had to be violated!

Then came Darwin with his theory that purported to explain the fossil data with the idea that humans evolved from animals that were regarded by both physicalists and mentalists as machines. If humans evolved from animals, how could one not see that that humans must also be machines? The final clincher was the discovery of the structure of the DNA molecule that created molecular biology with great promise to explain all facets of life including its origin.

Thus it was in the 1950s (when DNA structure was unraveled) that modern science officially became materialist science—everything is matter; everything including the mind could be reduced to matter and its interactions. A three-prong project was begun: (a) to manufacture life in the laboratory starting with the base molecules (this to keep the proponents of vital energy or life force at bay); (b) to produce computing machines with mind—artificial intelligence (this to keep mentalists on defense); and (c) to discover the elementary particles of matter to prove beyond doubt that reductionism works (this to discourage any attempt at holism). It didn't help the cause of the mentalists that in spite of the valiant work of many philosophers, a monism based on the primacy of the mind could not find even philosophical grounding let alone scientific backing.

Let's now remember, that modern science, before the Cartesian truce, grew up in an environment of open hostility between science and religion (in the form of Christianity). As Darwin's theory found increasing footing in empirical data, hostility broke open once again. In the 1950s, the battle seemed to have been decided in favor of materialist science.

But still people did not become atheists overnight. It took a lot of hard scientific success in the form of actually finding the elementary particles of matter, a lot of successful technology in the form of weaponry and computers mainly, and last but not least, a lot of philosophical sophistry in the form of postmodern deconstructionism before a substantial number of people declared themselves to be atheists—nonbelievers of religion, even spirituality. A major role in this conversion has been played by the concept of secularism, separation of church and state—originally intended to keep the Christian church at bay from the affairs of the government.

Unfortunately, secularism created a different monster. It was not recognized until recently that a science based on the exclusive philosophy of scientific materialism is also a dogma just like Christianity is. The exclusivity of the spirit has been replaced by the exclusivity of matter. The new exclusivity was bought lock stock and barrel by the media and the governments of most countries, but is reality really exclusive? Doubts lingered.

After all, of the three promises of materialist science at its inauguration, only one seems to have materialized. Reductionism works for matter: elementary particles make atoms, atoms make molecules, molecules make larger conglomerates of macromatter. But does this success extend to living matter, including living cells, and conglomerates of cells that make biological organs such as the brain? If we suppose that reductionism holds for living matter as well, then, are all our internal experiences—feeling, thinking, and intuition—and our consciousness itself brain epiphenomena as materialists contend? Recent research is giving an answer, a resounding no.

Material forces work through upward causation—cause rises upward from the base level elementary particles. Is upward causation enough? A challenge has come from the unexpected direction of the newest paradigm of physics itself—quantum physics.

Paradoxes and Anomalies of Materialist Science

Unheralded by the media and unrecognized by the government (in the form of research grants), a few scientists continued in their search of reality not totally convinced that material monism is the final answer to the logically inconsistent Cartesian philosophy of dualism. Soon the efforts of these truth seekers began to reveal unexpected holes in the dogma of matter supremacy:

Item: Quantum physics says objects are waves of possibility and furthermore, material interactions can never change possibility waves into actual events observed in experiments. If everything is matter, how then to explain the observer effect? In the presence of an observer, possibility waves are always found to have collapsed to actual events in the observer's experience. This is called the quantum measurement paradox (von Neumann, 1955).

Item: The movement of quantum objects exhibits nonlocality (signal-less communication) and discontinuity (quantum leaps). But material interactions are always locality and continuity bound.

Item: Objects and their interactions can only produce other objects, never a subject experiencing objects as we do whenever we are aware. Philosopher David Chalmers (1995) has called this the hard question of neurophysiology.

Item: Philosopher John Searle (1994) and physicist Roger Penrose (1989) have established that a computer can process mental content and content alone, not mental meaning. A nonphysical mind is needed for processing mental meaning. And if meaning is not computable, then intuitive values (the archetype of love, for example) that belong to a higher category of logic cannot be computable either.

This is not good news for those materialist philosophers (Dennett, 1995) who claim that our capacities for processing meaning and values emerge from Darwinian evolution, from survival necessity. If matter cannot even process meaning and values, this claim is obviously unjustified.

Item: Cell differentiation that is required for biological form making (morphogenesis) smacks of nonlocality (how does the cell know where it is in the body?). Biologist Rupert Sheldrake (1981) argued that since matter cannot process nonlocality, the fields responsible for morphogenesis (call them morphogenetic fields) must be nonphysical. In other words, a nonphysical world of morphogenetic fields, call it the vital world, is required to explain biological form making.

Item: Where do physical laws come from? If there is only matter and its interactions and the movements these interactions cause, then the laws of movement of matter must originate from material movement itself. But all attempts to derive these laws from the random motion of matter have failed. Hence Plato's theory that physical laws are examples of the archetype of truth and that archetypes belong to a subtle archetypal world of reality still stands.

These are only a few highlights of the theoretical difficulties with scientific materialism and materialist science. There are many more (Goswami, 2008a). And materialist science does not fare any better in the experimental arena either. Here are some examples of anomalous data:

Item: Physicist Alain Aspect and his collaborators (1982) have verified quantum nonlocality between quantum objects and neurophysiologist Jacobo Grinberg and his collaborators (1994) have demonstrated quantum nonlocality between human brains in the form of transfer of electric potential from one brain to another without electrical connection. These data have been replicated repeatedly (Radin, 2006; Sabel et al., 2001; Standish et al., 2004; Wackermann et al., 2003), at latest count, by some two dozen independent experiments. Once again I emphasize: material interactions cannot cause nonlocal phenomena.

Item: There is now an enormous amount of data demonstrating spontaneous communication between humans and other living beings at a distance (Targ & Catra, 1998). They are all examples of quantum nonlocality (Goswami, 2008a).

Item: It has been experimentally demonstrated that when electrons penetrate an energy barrier in a transistor, they do it by quantum leaping, without going through the

intervening space. In the same vein, creativity researchers have demonstrated with many case studies that creative insights come to us via a discontinuous movement of thought (Briggs, 1990). The subjective experience of this quantum leap is surprise, aha! This is why a creative experience is sometimes called an aha experience. The suddenness of creative aha has been verified by new neuroscience data (Kounios and Beeman, 2015).

Item: The fossil gaps in the fossil records of biological evolution similarly demonstrate discontinuous movements of species creativity (Eldredge & Gould, 1972; Goswami, 2008b).

Item: Discontinuous quantum leaps occur as well in the phenomenon of spontaneous healing, also called quantum healing (Chopra, 1990).

Item: The data on survival after death and reincarnation are now very solid (Goswami, 2001, 2008a). What survives? A personalized nonphysical subtle body (consisting of personalized mental and vital components). In this way, these phenomena empirically prove the existence of the subtle, mental, and vital bodies.

Item: How does acupuncture work? Via needed movement of vital energy. How does homeopathy work even when not even one physical molecule is administered in the medicine proffered? The answer once again: via the infusion of healing vital energy. (Goswami, 2004).

Item: There are instruments that measure vital energy. Humans have a bioelectric body which is sensitive to our emotions. Changes in the bioelectric body are measured to indicate our emotional state. Since emotions are feelings plus thoughts and feeling are movements of vital energies, these instruments are measuring the state of our nonphysical vital body (Swanson, 2009).

Item: New neuroscience data are showing that the brain not only functions in a local fashion but also in a nonlocal modality, a spectacular anomaly in brain functioning. Could it be because we have two selves—one local, one nonlocal? (Achterberg et al., 2008).

The conclusion is obvious. Scientific materialism is an incomplete metaphysics for science. We have to recognize a nonmaterial source of causation and nonmaterial subtle worlds in addition to our gross material world.

A Brief Summary of the New Quantum Science Within Consciousness

For the sake of brevity, I will not present the details of the new science (see Blood, 2001; Goswami, 1993, 2008a; Stapp, 1993). It will suffice to recap the basic elements of the developing science within the primacy of consciousness as we begin to apply it to spiritual activism:

- Consciousness is the ground of all being. Its possibilities follow quantum laws; that is, they are quantum possibilities. Consciousness has causal efficacy (call it downward causation in contrast to material upward causation) consisting of choice from the many-faceted quantum possibilities

the one facet that becomes the conscious experience of the actuality of an object.

- Downward causation is nonlocal and is applied in a discontinuous manner.
- Downward causation requires a tangled hierarchical device, that is, a device with circularly acting components. The brain is such a device; the circular components are a hierarchical system of apparatuses that produce perception and another hierarchical system of apparatuses that produce memory. Notice the circularity: perception creates memory, but memory creates perception. In the transition from the microlevel to the macrolevel, the circularity makes the entire hierarchy into a tangled hierarchy. As a result of the tangled hierarchy of the brain, consciousness identifies with it and we have self-reference, an abbreviation for its subject–object split (Goswami, 1993; Hofstadter, 1980).
- The quantum possibilities of consciousness are fourfold: material which we sense; vital energy which we feel; mental meaning which we think; and supramental discriminating contexts (archetypes) such as physical laws (the archetype of truth), contexts of meaning and feeling and ethics (the archetype of goodness) and love (the archetype of love) and aesthetics (the archetype of beauty) which we intuit. The material is called gross: because at the macrolevel of matter, quantum movement is much suppressed producing a Newtonian fixity in the way we experience it. Fixity makes the experience sharable and objective and apparently external. The movement of the non-material objects remains quantum always (there is no micro–macro division in the worlds they inhabit); no two people can ordinarily collapse the same experience giving the impression that their experiences are private and internal. In this way, these internal experiences make up the subtle domain of reality.
- Conscious choice is nonlocal without involving signals; in this way, dualism is avoided. Instead, nonlocal consciousness mediates the interactions between the four worlds of experience.
- Experience makes memory, and previously experienced stimulus is experienced not only as a primary experience but also as a secondary experience upon reflection from the mirror of previous memory. As memories accumulate, the response to a learned stimulus becomes conditioned in favor of previous responses. Eventually, as we grow up, our identity shifts from the “quantum self” of the primary experience to a conditioned ego of secondary experience upon reflection from the memory of previous experiences that takes about half a second.
- It is ego conditioning that produces habit patterns and learned qualities of the “character” consisting of nonlocal memory (Goswami, 2001). The

nonlocality of these memory patterns enable them to recycle from one incarnation to another. This is the explanation of reincarnation.

- Moreover, the brain's capacity of reconstructive memory and our habit of being conscious of being conscious before combine to produce masks of personality, programs that we selectively use as if we are the central processing unit of our behavior programs. In this way, the tangled hierarchy of the quantum self gives way to the simple hierarchy of the ego/character/persona (Goswami, 2019).
- When consciousness chooses from the possibilities the actual event of its experience (with physical, vital, mental, and supramental components), the physical has the opportunity of making representations of the subtle. The physical acts like computer hardware; the subtle is represented in the physical as software.
- Biological organs are software representations of the vital morphogenetic fields. Consciousness uses these fields as blueprints for making biological form (the organs). When consciousness collapses the organ corresponding to a particular biological function, it also collapses the associated morphogenetic field. It is the movement of the correlated morphogenetic fields (call it vital software) that we feel at the points around which the important organs of the body are situated. These points of the body along the spine are called the chakras.
- There are seven major chakras all along the spine going into the brain: at the anus (root chakra), at the sex organs (sex chakra), at the digestive organs (navel chakra), at the immune system and thymus gland (heart chakra), at the voice organs (the throat chakra), at the prefrontal cortex (the brow chakra), and at the parietal lobe of the brain (crown chakra). Chakras are places where exist organs and their vital correlates for carrying out all the important functions of the body.
- There are tangled hierarchies in two of the chakras in the body: namely, the navel and the heart. In this way, there is not only a self in our brain but also two more selves in the body. Ordinarily, especially for intellectuals, the brain's thinking self overwhelms the body selves (Goswami, 2019).
- The human being is a dynamical system in a dynamic balance between creativity (giving us insights for making new software for mental and vital functioning) and conditioning (the repertoire of old software that enables us to give form to the creative insights), to use Taoist words, between yin and yang.
- Our capacity for making physical representation of the subtle evolves via alternative stages of slow tempo (of Darwinian vintage) and fast tempo (of quantum leaps of biological creativity). First, the capacity for making

representations of the vital evolved through the evolution of life via more and more sophisticated organs to represent the living functions such as maintenance, and reproduction, and sensing. Next the capacity of making more and more sophisticated representations of the mental evolved. This is the stage of evolution that we are in right now (Aurobindo, 1996; Goswami, 2008b; Teilhard de Chardin, 1961; Wilber, 1981).

- Our capacity to represent the supramental has not evolved yet. However, there is evolutionary pressure on us in this direction, the primary reason some of us are attracted to meaning, values, and spirituality even in these times of “Newton’s sleep.” Responding to this, some people engage in “soul-making,” making representations of the archetypal intuitions and creative insights via thinking and feeling (Goswami, 2019). In this way, even today, for some of us, ethics and spirituality become categorical imperatives as Kant envisioned.
- In times of cataclysmic crisis, survival needs bring many more people into creativity looking for solutions. Evolution takes place via the effect of this collective biological creativity (Goswami, 2008b).

In this way, the new science gives us a powerful new perspective for spiritual activism. First of all, it gives us back free will and creativity in the form of discontinuous movements of downward causation from a nonlocal state of consciousness. Transformation is no longer a dubious proposition.

Ethics is now solidly based on a metaphysics that fundamentally recognizes the potential interconnectedness of all humans. Why ethics is no longer the question, but how ethics.

Since the external and the internal are treated on the same footing, clearly shallow ecology must give way to a deep ecology that cares for both. Again, the question shifts from why to how.

Alternative medicine’s search for more than physical body healing is now seen as clearly justified. If the vital is diseased, we must heal it before the physical (the representations) can be healed. Similarly, the disease of the mental will block the movement of the vital energy and therefore, the diseased mind needs to be healed first. Finally, it is clearly recognized that ultimately, healing is to acquire spiritual wholeness.

Transpersonal psychology’s emphasis on a superconscious state beyond ego is now seen as eminently scientific. It is the state of the self (quantum self) in any event of downward causation that involves full freedom of choice of the nonlocal consciousness. Prime examples are creative experiences, experiences that are called paranormal, experiences of love and aesthetics.

Below we will delve into each of these fields with further elaborations. However, a most important aspect of the new science is that it allows us to distinguish between spirituality and religion. This distinction opens the door for a new era of postsecularism.

But first, I must address one legitimate concern of the materialist: does quantum physics apply to the macrolevel of reality where our organs belong?

Does Quantum Physics Apply to the Macrocosm?

Physicist John Wheeler said: “*the whole world with all its systems are quantic.*” This suggests the fact that our concepts regarding the functioning of our own body will have to grant attention to quantum physics. However, many biology researchers consider nowadays that the “subatomic events are too small to have a practical importance.” Some scientists object in the same vein: “electrons and people are not the same thing.”

Maybe materialists have a legitimate concern here? Quantum physics was discovered in connection with our scientific search for a theory of behavior of the submicroscopic base level of matter. Matter is reductionist, bulk matter can be reduced to elementary particles, and vice versa, bulk matter can be built from elementary particles. So no doubt that ultimately, quantum physics rules all matter, micro and macro; however, for practical purposes, we must recognize that for bulk matter Newton’s dynamics approximately holds. This principle, too, is part of the quantum dynamics applied to matter.

What this means is that at the bulk macrolevel, matter is still wave-like, but the wave nature is much subdued leaving consciousness with very little possibility to choose from. Face it, bulk matter is largely independent of consciousness, creativity, transformation, and all that jazz.

So what makes us think that somehow quantum physics applies to bulk living matter though its effect is negligible for bulk nonliving matter? As I said in the very beginning, living matter is different. A living organ is a dynamic duo of a physical component and a vital component. *It is the vital component that is quantum; the physical is quantum by association.*

To understand things better, a little more quantum physics is needed. The turning point for our understanding of quantum physics came with the 1982 experimental verification by Alain Aspect and his collaborators of a 1935 theoretical idea of three physicists: Albert Einstein, Boris Podolsky, and Nathan Rosen. This EPR message is crucial to understand, fortunately not the mathematics.

The message of EPR is simple: if two quantum objects—waves of possibility—come close and interact they become correlated, now a days we say entangled. What this means is that they develop an unusual purely quantum characteristic of instant communication which remains intact even when they are not interacting, even when they move far away, even galaxies apart, from each other. We call such instant communication nonlocal.

Uncorrelated objects in space and time, they are particles, they do not have this characteristic. Objects in space and time require signals to communicate; signals have a speed limit, the speed of light. Signals travel with a finite speed taking a finite time from one locality to another through the intervening space. Objects in space and time generally are objects with separateness.

In contrast, if the waves of potentiality are correlated, then, when they are actualized as particles, their behavior indicates that they have communicated instantly, without signals. How could they have done that? Because, you must realize, the correlation or entanglement made them into one. One does not need a signal to communicate with itself. Their oneness reflects the oneness of consciousness—the domain of potentiality; consciousness maintains their oneness even at a distance.

The oneness of the domain of potentiality is a potential oneness. EPR gave us the clue how to actualize and thereby verify the oneness via measurements in space and time.

Now let's go back to conceptualizing the vital-physical duo, living bodies, as correlated quantum objects. They are one. So when we experience a physical organ, we also experience the movement of its correlated vital organ. The experience of this movement is called feeling, right? Vitality, experience vital energy, is a feeling.

I am saying vital movements are quantum; therefore, the movements of physical living bodies, the organs, are also quantum by virtue of correlation with the vital.

Postsecularism

The new science includes spiritual values as an important domain of possibilities for human experience which, evolutionarily speaking, is just opening up for human exploration en masse (see below). The new science also restores our free will and creativity and legitimizes our efforts toward spiritual transformation. In other words, under the aegis of the new science, spirituality is scientific: it has both scientific theory and empirical data supporting it. Religions, on the other hand, have a dogmatic side. All religions hold that their scriptures, which are exclusive, are infallible. Such infallibility cannot be subjected to scientific investigation.

Postsecularism is then the idea that we move beyond secularism by distinguishing between spirituality and religion. Where state and religion should still maintain separation, there is no need any more to keep spirituality out of the functions of the state.

It should be clear, however, that paradigms take a while to change and materialist science is right now very entrenched. For one thing, as the novelist Upton Sinclair said, “it is difficult to make a man understand something when his salary depends upon his not understanding it.” So spiritual activism is needed to reenchant our classrooms with spiritual (but not religious) values.

Conventional spiritual activism, however, needs to adapt to the new science when it broaches the subject of spiritual transformation. Quantum physics gives us the concept of downward causation, but downward causation has an entrance requirement. You cannot access it without a quantum leap from your ordinary state of ego-consciousness. And quantum leaps require you to engage with the creative process.

Most popular religions maintain that just by being a member of that religion you are “saved,” or that members of a religion are “God’s chosen people.” The new science is clear on this: No one is saved or can claim to be God’s chosen without spiritual awakening and

this takes a creative quantum leap and the arduous work that the manifestation stage of the creative process demands (Goswami, 2014).

We need a redefinition: spiritual activism is activism geared to revive spiritual values and to emphasize spiritual transformation using the transformative process of quantum creativity.

In an era of postsecularism the following question is bound to come up: is there any need for religion once we develop a science of spirituality as we have now? The answer is a resounding yes. This may require some explanation, however.

It may seem that since God is objective in our scientific approach, God experience must be the same for all of us. God is nonlocal consciousness; everyone's God is the same nonlocal cosmic quantum consciousness as mystics have declared throughout history. Any private experience of God must be secondary.

But in our regular ego consciousness, we cannot see God outside ourselves the way we see matter, so God is not public in the same way that the material world is public. It is more subtle than that. We can still verify that God is objective because we can experience the nonlocality of God-consciousness with others; the company of God-loving others helps us experience the public side of God-consciousness more easily.

Parapsychologist Dean Radin (1997) took random number generators to meditation halls and found that indeed their behavior deviates substantially from randomness. As the philosopher Gregory Bateson said, the opposite of randomness is choice. In the company of others, we become more prone to access the quantum freedom of choice of nonlocal consciousness. This substantiates what Buddha tried to do with his idea of *sangha* (meaning community), what Hindus do with *satsang* (meaning the company of people in search of reality), and what Jesus meant when he said,

When two or more meditate in my name
There I am in the midst of them.

Religions, communities of spiritually motivated people, grow out of the intuition of quantum nonlocality of God-consciousness!

Spiritual Activism and Evolution

Psychologist Abraham Maslow (1971) said, if you have a hammer in your hand, you tend to see the world as nails. Creationists (religious activists under the aegis of Christian fundamentalism) have their hammer in the form of the Biblical story of Genesis. So they only see the homeostatic parts of the fossil data. Conventional biologists have their hammer in the slow-and-continuous evolution theory of Darwinism; they see only the slow and continuously changing part of the fossil data. The rest they rationalize: we will fill up the gaps of the fossil data later. Only when we have injected quantum physics in biology can we use the idea of quantum creativity and quantum

leaps to explain the fossil gaps as epochs of fast tempo in evolution (Eldredge & Gould, 1972; Goswami, 2008b).

Immediately, other things fall into place. Evolution is now seen as the purposive evolution of consciousness, the purpose being to evolve better and better representations of the heavenly archetypes in earthly manifestations. The biological arrow of time, the overall evolution of life from simple to complex, is now explained.

Notice that, purpose, Aristotle's concept of final cause, teleology—an anathema word for physicalists, is making a comeback. Nonliving matter is cause driven, living hardware is cause driven, but living software is not, it is driven by both cause and purpose. Consciousness, whenever it chooses the new, always chooses with its evolutionary purpose in mind.

Most importantly, human evolution is now seen as the evolution of meaning giving capacity of the mind. First comes the physical mind with the capacity of giving meaning to the physical world (the hunter–gatherer era). Second, the vital mind of giving meaning to feelings (the horticultural era of small scale agriculture). Third comes the rational mind with the capacity for giving meaning to meaning itself, which evolved with the coming of large-scale agriculture. The agricultural era has given way to industry and technology, but we are still in the evolutionary era of the rational mind.

Not that we have not discovered intuition, we have. Even the inner creativity that we call spirituality has been in vogue for the last 2,600 years at least; with inner creativity we have been exploring archetypes such as love and goodness and truth. But mind of the human species as a whole has not evolved much; mind has not even achieved full rationality, let alone the next stage of its evolution—the intuitive mind!

The problem can be traced to the presence of neurophysiological brain circuits of negative emotions that are instinctual and the remedy has been identified. It is to collectively evolve brain circuits of positive emotions to balance the negative. Our new science is saying that even if a relatively few of us strive to achieve such brain circuits of spiritual transformations, it is likely that in a few generations, all of humanity will benefit; all human beings will be born with positive emotional brain circuits (Goswami, 2008b, 2022; Sheldrake, 1981;). This then is the focus of spiritual activism in the form of quantum activism.

Evolutionary Ethics

Why ethics? If we are nonlocally connected via a quantum consciousness, then ethics—being good to others—makes sense. However, when we identify with the ego, the nonlocality is obscure and therefore, ethics does not make complete sense any more.

Two points. first, we always have the capacity for intuiting the supramental archetypal domain. Through intuition, we can glimpse the archetype of goodness at any age. Second, during our early development, most of us make mental representations of the archetype of goodness which are no doubt influenced by our family, our educators, and our society. To

the extent we live up to these mental representations, we may develop some brain circuits that correspond to ethical actions. So whenever the question of ethics or moral judgment comes up, these brain circuits may be triggered arousing our “conscience.”

But not all of us follow the dictates of our conscience; in fact, today fewer and fewer of us do. Environmental conditioning has much to do with the efforts we make to follow up our intuitions about goodness. Growing up today under the aegis of scientific materialism with religions undermined as they are does not help to grow a healthy conscience.

In a postsecular era, we can bring back spirituality to our schools, we can bring back creativity and transformation. Thus ethics can be taught, spiritual transformation emphasized, helping students to grow a good conscience.

Intelligent students will still ask this: if there is no God to punish us, why should we follow ethics blindly? The new science has a clear answer on this: if we don’t learn our archetypes, in this case the archetype of goodness, we will reincarnate and again we have to go through suitable “karmuppance” for violating ethics.

There is a second aspect of the new ethics that emerges when we look at spirituality and ethics not from the old-fashioned mystical view but from a new-fashioned scientific view. There is a social dimension of spirituality. Spirituality is not only satisfying the personal goal of awakening to God-consciousness but also to evolve the cream of God-consciousness—the supramental archetypes, our spiritual values such as ethics in all humanity.

Whereas reincarnation is a reactive reason to follow ethics, evolution gives us the proactive incentive, the categorical imperative. The ethics that is imperative is *evolutionary ethics*: the idea that I cannot make personal progress in my spiritual path without making some effort to help my fellow humans to evolve, too. In this way, under the new science the old idea of spiritual activism must give way to what I call quantum activism: to transform self and society using the quantum transformative principles of nonlocality, discontinuity, and tangled hierarchy.

Deep Ecology

The root Greek word for “eco” is *eikos* meaning the place we live and “logy” comes from Greek *logos* meaning knowledge. Ordinary ecology is about the knowledge of our physical environment. But as the ecologist Arne Ness knew (Devall & Sessions, 1985), we live not only in a physical world; we also live in the three subtle worlds—vital, mental, and supramental. Deep ecology in this way refers to the knowledge of both our external and internal worlds, and it asks us to have ethical responsibility for all of these environments that we live.

But to materialist scientists, deep ecology is meaningless. If you hold to scientific materialism, you will be asking too much of yourself, you will be asking a machine (you) to have relationships with other machines, less sophisticated at that, and to have relationships based on unjustified rules of ethics.

Only when we become established in an evolutionarily ethical relationship with all our fellow human beings, it is time to ponder our ethical responsibility to all creatures, great and small, including the responsibility to our nonliving environment. Only then it makes sense to ask, What is our responsibility to the planet earth, to Gaia?

Deep ecology requires not only abiding by a few rules for preserving our ecosystem or passing a few governmental laws preventing environmental pollution but also taking actions in ambiguous situations that demand a creative quantum leap.

When you take such a quantum leap you realize one astounding thing: *I choose, therefore I am, and my world is.* The world is not separate from you. When we do this en masse, we leap into a truly Gaia consciousness (Lovelock, 1982). Naturally, movement toward deep ecology is part and parcel of quantum activism.

Integrative Medicine

In the new science, we have a body in each of our worlds of experience: a physical body of senses, a vital body of feeling, a mental body of meaning, and a supramental body or soul of archetypes represented through thinking and feeling. These four bodies are embedded in the whole—the limitless ground of all being—consciousness itself. We can call it a fifth body the doorway to which is the quantum self.

All these bodies ideally should function in perfect synchrony. Lack of synchrony (ease) will be experienced as disease. Five bodies, five sources of lack of synchrony, five kinds of disease. Hence to heal we need to go to the source of the disease and therefore, five kinds of healing.

Conventional allopathy or so-called modern medicine is physical body medicine in this terminology. Traditional Chinese medicine (that includes acupuncture), the Indian ayurveda, and homeopathy correspond to vital body medicine, and mind–body medicine is mental body medicine.

In materialist science, only allopathy, physical body medicine, is valid. But healing and wholeness come from the same root Greek word. Ultimately, healing requires total harmony in wholeness; this is the same objective as that of spiritual transformation. All the bodies must act in synchrony. Hence to bring alternative medicine to our culture that heals the subtle bodies has been an important emphasis of spiritual activism. This is good because alternative medicine is literally sacred technology. To experience the causal efficacy of alternative medicine is to experience downward causation.

If you are a nonscientist, you probably do not have any direct knowledge—theoretical or experimental—of electricity. Why do you believe in the science of electricity then? Because when you flip an electric switch, the light comes on! That is convincing. The same with alternative medicine. When you meditate and it slows your mind down relieving mental stress and reducing your blood pressure, it is equally convincing about the causal efficacy of consciousness and technology based on that.

The new science, treating all bodies on the same footing, integrates conventional and alternative medicine systems into a quantum integrative medicine (Goswami, 2004). In integrative medicine, the healing dynamics has a twofold perspective. Whereas the healer is interested primarily in regaining physical health and the relief of physical symptoms, why is the healer engaged? The materialist answer is money, but most healers would disagree. The new science says, in healing a patient with whom the healer has a tangled hierarchical relationship gives the healer an excellent chance to achieve wholeness, positive health. This defines no less than a healing path to spiritual transformation.

And because quantum principles are used in spiritual activism using the healing path of integrative medicine, such activism is quantum activism. To their credit, alternative healing researchers (quantum activists all) have been aware of the importance of quantum principles for healing for quite a while. As early as 1982, physician Larry Dossey (1982) emphasized the importance of quantum nonlocality in healing. In 1988, physician Randolph Byrd (1988) did the first controlled experiment on distant healing which remains one of the convincing demonstrations of quantum nonlocality. And in 1989, Deepak Chopra (1990) became famous with his idea of quantum healing as the explanation of spontaneous healing without medical intervention.

Transpersonal Psychology

In psychology, materialist psychology in the form of behavioral/cognitive branches of psychology dominates the academia. In this approach, our behavior originates from psychosocial conditioning, although the effects of evolutionary conditioning in the form of the genetic make-up are also acknowledged. However, in psychology, the causal efficacy of consciousness was introduced by no other than Sigmund Freud in the form of the psychological drive of the unconscious Id. Clinical psychology to this day is dominated by Freudian psychoanalysis. In this way, in the field of psychology, the battle of “matter-or-consciousness-which-is-primary?” remains undecided.

Transpersonal psychology began with the idea of bringing spirituality in the way mental health and healing is practiced. Instead of emphasizing the behavioral ego, it emphasizes the higher self of spiritual vintage; the higher self is more like the Holy Spirit of Christianity and the superconscious Samadhi state of Hinduism. Instead of analytical therapy for exploring the unconscious, transpersonal psychotherapy more depends on superconscious “peak experiences” for healing the mind.

But although based on nonduality, transpersonal psychology is only marginally more successful than dualism-based spiritual activism in terms of credibility. When transpersonal psychology is formulated within the quantum worldview and quantum science within consciousness, the transpersonal self is identified as the quantum self; then its ideas become experimentally verifiable, the credibility question undoubtedly improves.

Unfortunately, many exponents of the field, such as Ken Wilber, have taken an anti-science position. Wilber bypasses the question of worldview altogether through the use of phenomenology. Everyone must agree that there are first person, second person, and third person descriptions of conscious experiences. Of these, conventional (materialist) science only deals with the third-person consciousness, says Wilber. The other two then must be in the jurisdiction of the transpersonal approach. This seems to legitimize the transpersonal approach. Unfortunately, it introduces an outer (scientific) and inner (transpersonal/spiritual) dichotomy that can only be integrated, it is said, from the internal vantage point of mystical realization. Obviously, this is an elitist position. In the new science within consciousness, the external/internal dichotomy is resolved from the get-go (Goswami, 2000) and is resolvable by anyone by simple reasoning and looking at his or her own experience.

The nondual spiritual philosophy adapted by transpersonal psychology is not, *per se*, able to distinguish between conscious and the unconscious. This gives rise to unnecessary competition between this “height” psychology of the superconscious and the depth psychology with emphasis on the unconscious. The new science explains the distinction of the unconscious, conscious, and superconscious states. Unconscious is previously collapsed possibilities of personal memory; conscious is the collapsed state of subject–object awareness in the ego; superconscious consists previously uncollapsed possibilities of consciousness for which no memory exists experienced in the quantum self. By the way, the collective unconscious of Jungian vintage consists of possibilities of humankind’s collective memory.

Incorporating transpersonal psychology within the new science thus integrates transpersonal psychology with depth psychology. And all the somewhat quaint arguments between the two postmaterialist forces of psychology are resolved (Goswami, 2008a).

On the practical side, adapting the transpersonal psychology movement within the more general movement of the new science paradigm identifies transpersonal psychology as an important new technology of the new science, the technology of positive mental health.

Spiritual Activism and Social Change

Due to the perceived success of materialist science, our social sciences, economics and political science for example, are dominated by the behavioral/cognitive approach to ourselves. In the field of economics, this approach has resulted in a surreptitious corruption of Adam Smith’s capitalism into a materialist economics (Goswami, 2017). The result on our society has been disastrous; witness the economic meltdown of 2007–2009.

The new science, besides giving us integrative technologies for physical and mental health, is finding a most relevant social application in the form of a spiritual economics. Adam Smith (1994) recognized only our material need. The basic idea of spiritual economics is to recognize Maslow’s (1971) hierarchy of needs, which says that besides our

material needs we have subtle needs of feeling, meaning, and values in our lives, and then include these subtle needs in our economic demand–supply equation (Goswami, 2015).

Similarly, the new science shows us the way back for politicians to dedicate their political power to the advancement of meaning processing in the lives of increasingly large numbers of humans that is the purpose of democracy (Goswami, 2019).

Finally, the new science gives us the proper ammunition to take our education system back from its current job emphasis to its Jeffersonian liberal arts emphasis of freedom from all dogmas and a balance between creativity and conditioning (Goswami, 2011). However, much activism, call it spiritual activism or quantum activism—that is up to you—will be needed to bring about all this social change.

Quantum Activism, Personal Transformation, and the Quantum Scale of Happiness

One final issue. Quantum activism works only if the activist transforms as they transform the world. Like Gandhi used to say, “Be the change that you want to see.”

How do we change? Via inner creativity. Inner creativity is creativity directed to transformation of the experiencer, the product is a new you.

But where is the motivation? Outer creativity is easy to motivate for: name, fame, and money. But who will notice your capacity to love in this me-centered world we live in today?

No worries. There is motivation. Happiness for materialists is pleasure which sometimes produces happiness in the form of expansion of consciousness. But excessive pleasure, wrong motivation, perversion (getting pleasure from somebody else’s pain), all lead to contraction of consciousness, nothing to do with happiness. They are purely molecular effects of our pleasure circuits of the brain.

Happiness in quantum science is defined as that from an expansion of consciousness. As we progressively are able to expand our consciousness more and more via inner creativity, there are stations of happiness that we can recognize; and this gives us a quantum scale of happiness.

Psychopaths, sociopaths, schizophrenics, manic depressives, all become detached from unity consciousness; they constitute level zero of happiness. Neurotic people define happiness level 1. Let’s call psychologically normal people a level 2 as has been the custom of a scale of happiness proposed by positive psychologists (Ciarrocchi, 2012). When you have positivity, you achieve highest happiness of level 3 in that psychology.

Now begins realm of positive mental health beyond the scope of positive psychology. There we can identify three more levels. In quantum science, level 3 is the level of emotion management, the beginning of emotional intelligence and constitutes a doorway to higher levels of happiness.

Level 4 is the level of psychological individuation when a person becomes an original via the direct discovery of an archetype. Level 5 is reached by developing the capacity of living in flow defined as a dance between the ego and the quantum self. Finally, level 6 is reached with what in spiritual traditions is called enlightenment.

As I said, the first objective of inner creativity is to make positive emotional brain circuits of behavior to balance particular negative emotional tendencies on one hand (e.g., controlling violence circuit by developing a compassion circuit) and developing proactive positive emotional circuits, such as those of giving and altruism. Developing a whole bunch of brain circuits of positivity through disciplined practices is akin to practices of discipline (Sanskrit *niyama*) to keep away from the negative on one hand and proactive practices (Sanskrit *yama*) to promote positivity on the other hand in yoga psychology and other religious psychologies. These practices build brain circuits of positivity no doubt, but unless you fall into your quantum self, they do not become part of your character. So we use the creative process—situational creativity to gain faith in our practices enough so we use them without thinking. Balancing the negative emotional brain circuits with positive ones enables us to achieve emotion management: the beginning of emotional intelligence and happiness level 3.

However, you take only a half-step toward archetypal transformation if you engage in inner creativity within a traditionally defined path, within somebody else's definitions, understandings, and representation of the archetype, however rational and exalted the path may seem. "Truth," said the mystic Jiddu Krishnamurti, "is a pathless land." Only when you pursue inner fundamental creativity and explore the archetypes leaving all preconceptions behind, your discovery will lead to a new you who is an original—an "individuated" individual.

You see sociocultural conditioning does not make your brain memory identical to others who grow up in the same society and culture. This is what neuroscientists are telling us with powerful measurements with functional magnetic resonance imaging (fMRI). So heterogeneity is automatic for the human condition; you don't have to do anything to earn it. It's your ego-essence where the problem is, even with the individual heterogeneous brain, you essentially feel, think, and behave in similar ways as others under the same sociocultural conditioning. Like everyone, you, too, think and feel guided by other people's opinions via information processing, very machine like. Scientific materialists love you because you fit their theory that human beings are hu-machines, an individual but deterministic. Marketing analysts love you because they can predict your shopping proclivities. You suffer pain and enjoy pleasure—downs and ups—but your experiences are just predictable plays of molecular movements; they have no causal effect on the world.

With emotional healing and following up and engaging situational creativity and forming your own opinions based on your own understanding and performing behavior based on your own brain circuits that manifest your own creative meanings you transcend your machine tendencies and become a human person, a human individual. When you

begin to take quantum leaps, your experiences bring new meaning to the world—casual effects that disturb the society and help transform and evolve it toward positivity.

And then engaging inner fundamental creativity and exploring an archetype directly and embodying it based on your own insight, you become an original. This is what quantum science of happiness defines as individuation—becoming an original human individual. Not only have your actions brought happiness to the world but your own brand of happiness.

Engaging situational creativity to bring happiness via new meaning to an old archetypal context elevates your happiness level to 3, the first stage of positive mental health. When we use fundamental creativity and explore the archetypes directly to embody them, we also engage in developing further reaches of positive mental health, level 4.

The poet John Keats wrote:

See the world as a
Vale for soul-making.

If you do, he wrote to a friend, you will see the purpose of the world. The soul is our supramental/archetypal body, the body that we cannot manifest yet except through mental and vital representations. But as long as we are creative, we are okay, we are embodying archetypes albeit indirectly, we are into soul-making. The word “soul” here connotes what theosophists call higher mind—a mind where knowledge has given way to wisdom.

Soul-making this way can keep you busy indefinitely; the journey in wisdom never has to end. And as you cultivate wisdom, you not only become a “lamp unto yourself” but also a guiding light for others. This is level 5 of happiness.

The final goal of personal growth work is to discover consciousness in its suchness. This is often called self-realization because it is arrived at through the creative investigation of the self archetype. This also takes you to ultimate happiness, level 6, touted as the ultimate goal of human life as per yoga psychology.

At level 6, one spends much of one’s time in the ultimate state of consciousness, Oneness—called God-realization in the West and *Turiya* in Sanskrit. This claim is interesting from a scientific point of view: is one awake (which is rationally impossible) or asleep or awake while asleep (paradox)? I have already answered this question in the affirmative in my book with Sunita Pattani, *The Quantum Science of Happiness* (Goswami & Pattani, 2020) where you can find more details of this entire approach to a science of happiness.

Conclusions

My vision is that we are right on track with the quantum science within consciousness. Via the above-mentioned social changes, more and more people will be able to make their livelihood meaningfully and purposively. Quantum activism with much help from the internet will produce communities dedicated to collective transformation. The creativity of these communities will get a boost from the crisis conditions brought about by

materialist science. Soon a threshold will be reached and the collective transformation of today's efforts of activism will become inheritable positive emotional brain circuits of tomorrow, transforming all humanity to level 3 of happiness (Goswami, 2022). Only then shall we go into the next phase of the evolution of the mind, the intuitive mind.

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Beyond Ancient and Modern Superstitions

Dean Radin

Abstract

Superstitions are persistent beliefs or practices thought to have no basis in fact. Two superstitions that have attracted high levels of interest from ancient times to the present day are magic and psychic phenomena. Neither of these exists according to the prevailing scientific worldview, so magic and psychic phenomena are regarded as superstitions. Most college-level psychology textbooks explain away widespread beliefs in these phenomena as being due to delusion, fantasy, or wishful thinking. When someone has a truly strange but objectively verifiable experience, it is rejected as mere coincidence. This chapter argues that such denials are modern-day superstitions. Rather than having no basis in fact, from a rigorous scientific perspective both magic and psychic phenomena have been demonstrated to exist with high levels of confidence. The reason these ancient beliefs have become a modern taboo, at least within the academic world, has very little to do with the empirical evidence, and very much to do with the sociopolitical and ontological challenge of ideas that were once thought to be superstitions but turn out to be true.

Key Words: superstition, taboos, magic, psychic phenomena, meta-analysis, telepathy, remote viewing, presentiment

Introduction

Real magic, as opposed to stage illusions and fictional magic, is said to consist of three age-old practices: *divination*—perceptions that transcend the ordinary constraints of time and space; *manifestation*—influence of the physical world by mental intention alone; and *theurgy*—communication with purported nonphysical entities (Radin, 2018). Common methods of divination include use of Tarot Cards, Runes, I Ching, mirror gazing, and dreams (Laios et al., 2016). Manifestation recipes can be found in hundreds of published grimoires (books of magical spells), and in modern guise within the burgeoning book genre of affirmations and the power of positive thinking (Scheier & Carver, 1993). Endless books and television shows about near-death experiences, reincarnation, and mediumship testify to pervasive interest in theurgy (Lawrence, 2017).

What is not well known is that these esoteric forms of magic (occultists prefer the term “magick”) have been subjected to scientific tests for over a century, and the

accumulated evidence is strongly in favor of their existence. This may seem like a peculiar assertion given that many college psychology textbooks unequivocally declare that magic is an ancient superstition (Stanovich, 2010). But textbooks are regularly updated as advances in science form more comprehensive models of reality, and one of the many surprises at the leading edge of science is that some ancient beliefs about magic are not superstitions after all.

Bold claims require bold evidence, so we turn to authoritative reviews of the relevant scientific evidence. Consider an article published in May 2018 in *American Psychologist*, the American Psychological Association's (APA) flagship journal (Cardeña, 2018). The lead article in that issue summarized meta-analyses of the experimental evidence for phenomena virtually identical to the magical practices mentioned above. After reviewing 10 meta-analyses, which together comprised more than 1,000 published experiments, the author's conclusion was unambiguous: "The evidence . . . is comparable to that for established phenomena in psychology and other disciplines." This was not the first time that an article supporting traditional magical concepts has appeared in a mainstream academic journal, but it is one of the more persuasive because it spanned such a sizable peer-reviewed literature.

The experiments reviewed were not about magic per se. They were about commonly reported experiences labeled "psychic phenomena." These experiments fall into three major categories: *extrasensory perception*, which refers to perception through time or space; *psychokinesis*, which refers to mental influence of the physical world; and phenomena suggestive of survival of consciousness after bodily death. It is immediately apparent that the three classes of psychic phenomena and the three classes of magical practices refer to the same underlying experiences.

Another sign that blithe dismissals of magic—or if you prefer, psychic phenomena—are modern superstitions can be seen in the presidential address of the 2016 meeting of the American Statistical Association (ASA), the world's largest organization of academic and professional statisticians. The president that year said the following, which undoubtedly surprised some of the attendees:

For many years I have worked with researchers doing very careful work in this area [parapsychology], including a year that I spent full-time working on a classified project for the United States government to see if we could use these abilities for intelligence gathering during the cold war. At the end of that project I wrote a report for Congress stating what I *still* think is true. The data in support of precognition and possibly other related phenomena is quite strong statistically and would be widely accepted if it pertained to something more mundane.

Yet, most scientists reject the possible reality of these abilities without ever looking at data. And on the other extreme, there are true believers who base their beliefs solely on anecdotes and personal experience. I have asked the debunkers if there is any amount of

data that would convince them, and they generally responded by saying “probably not.” I ask them what original research they have read, and they mostly admit that they haven’t read any. Now there is a definition of a pseudoscientist: Basing conclusions on belief rather than data. (Utts, 2016, pp. 1378–1379).

Basing conclusions on belief rather than data is also the definition of a superstition, and unfortunately criticizing experiments for superstitious reasons is not a new problem. In the 1930s, when psychologist Joseph B. Rhine of Duke University was using card tests to study ESP, critics often assumed that the positive evidence reported by Rhine must have been flawed in some way, leading to the common belief that his statistical methods were wrong (Rhine, 1959). Such critiques persisted until the president of the Institute of Mathematical Statistics released the following statement to the press in 1937:

Dr. Rhine’s investigations have two aspects: experimental and statistical. On the experimental side mathematicians, of course, have nothing to say. On the statistical side, however, recent mathematical work has established the fact that, assuming that the experiments have been properly performed, the statistical analysis is essentially valid. If the Rhine investigation is to be fairly attacked, it must be on other than mathematical grounds. (Camp, 1937)

What sustains modern superstitions about psychic phenomena and magic? One factor is that generations of psychology students continue to be inculcated with the false belief that these phenomena violate one or more unspecified laws of physics. Students, not knowing any better, uncritically absorb these beliefs, and the consequences are clear. As the chair of the psychology department at Yale University wrote in 1985 in *American Psychologist*:

Books by psychologists purporting to offer critical reviews of research in parapsychology do not use the scientific standards of discourse prevalent in psychology. Experiments . . . on possible extrasensory perception (ESP) in dreams . . . have received little or no mention in some reviews to which they are clearly pertinent. In others, they have been so severely distorted as to give an entirely erroneous impression of how they were conducted. Insofar as psychologists are guided by these reviews, they are prevented from gaining accurate information about research that, as surveys show, would be of wide interest to psychologists as well as to others. (Child, 1985, p. 1219)

These distortions continue to persist, reflecting a problem with all superstitious beliefs: If they are repeated often enough, the beliefs take on a patina of self-evident truth, making it nearly impossible to extinguish even in the face of hard data. What are those data?

The Data

There are several classes of scientific experiments with overall strong positive evidence. They involve experiences labeled telepathy, remote viewing, presentiment, implicit precognition, intentional influence of distant physical systems, and physical effects associated with collective attention. In each case, there are many conceptually similar experiments with equally positive outcomes, but for this brief review we will just review a few of the more popular classes.

Telepathy

The word “telepathy” refers to the experience of a mind-to-mind connection. Telepathy is not like “mind reading” but rather involves feelings associated with emotional states or danger. Many experimental methods have been developed to study this experience under controlled conditions, but one protocol developed in the 1970s has been repeated in more than 20 laboratories around the world (Tressoldi, 2011; Williams, 2011), including by avowed skeptics of telepathy who, to their surprise, successfully repeated the effect (Delgado-Romero & Howard, 2005).

The experiment is known as the *ganzfeld*, a German word meaning “whole field”; it entails a mild form of unpatterned sensory stimulation. The method was originally developed by gestalt psychologists in the early 20th century to study the nature of perception and visual imagery (Radin, 1997). In a ganzfeld telepathy experiment a “receiver” (R) is asked to relax in a comfortable, reclining chair. An experimenter (E) places halved ping-pong balls over R’s eyes and gives her headphones to wear that play white noise. Then E shines a red light on R’s face and she is asked to keep her eyes gently open. After 15 to 20 minutes in this condition, R will find it difficult to tell if her eyes are open or closed, and this in turn stimulates a hypnagogic, dreamy, visionary state of awareness.

After being allowed to relax in this dreamlike reverie for a while, R is asked to speak aloud anything that comes to mind over the next 20 minutes. Meanwhile, E randomly selects a “target pool” from a large collection of previously prepared photographs. Each pool consists of four images, each as different from the other as possible. Then E randomly selects one of the four images in the target pool to be the image that a distant “sender” (S) will attempt to mentally send to R.

In many modern ganzfeld experiments, R’s verbal utterances are audio-recorded and simultaneously sent via a one-way audio link to S. This allows R’s mental impressions to be played back later, and it may also assist S to optimize her mental sending strategy. That is, S may find that R’s ongoing impressions seem to respond better to color and form than to words or mental images. As part of the experimental protocol, S and R are of course strictly isolated, so under the null hypothesis that telepathy does not exist, the one-way audio link cannot influence the results.

After the 20-minute sending period, R is taken out of the ganzfeld state and asked to examine four images from the randomly selected target pool, and then to select the

one image that best matches her impressions of what S was sending. R's audio recording is often played back to assist her in remembering her experience. By chance, R would be expected to select the actual target 1 in 4 times, for a 25% hit rate. If she and other participants consistently perform better than that over many trials, and experimental controls are strictly in place, then this provides evidence that information somehow transferred from S to R.

From 1974 through 2018, some 128 ganzfeld experiments had been reported. Those studies—most of which involved unselected pairs of participants who made no claims of telepathic abilities—reported a total of 1,705 hits in 5,326 sessions based on target pools with four images (Tressoldi, 2018). This resulted in an overall hit rate of 32% as compared to the chance-expected 25%. That 7% positive effect would occur by chance with a probability of 1.5×10^{-32} , or put another way, with odds against chance of 65,000,000,000,000,000,000,000,000,000,000,000,000,000 to 1.

Critiques of this result have assumed that this statistically unambiguous result must be due to one or more questionable research practices (QRP) (Alcock, 1981, 1986; Fiedler & Schwarz, 2016; Hyman, 2010; Rouder et al., 2013). This refers to practices that can inflate the results of one or more experiments, including selective reporting, “p-hacking,” use of multiple dependent variables without statistical adjustment, failing to state hypotheses or methods of analysis in the advance, accumulation of systematic recording errors, statistical mistakes, and so on. An analysis was conducted to gauge the effects of QRPs on these data, and in the worst-case scenario, where it was conservatively assumed that all known QRPs were present in these studies, the estimate was that as much as 60% of the observed effect might be attributed to one or more QRPs. Still, even under that extreme (and unrealistic) scenario the overall assessment still provided statistically significant evidence in favor of telepathy (Bierman et al., 2016).

Even with such evidence in hand, some continued to insist that because these experiments were conducted by “believers” in telepathy, the credibility of the results were questionable (Hyman, 2007). What would happen if hard-nosed “disbelievers” conduct these studies? In 2005, two psychologists who explicitly disavowed belief in psychic abilities attempted to replicate the ganzfeld telepathy experiment (Delgado-Romero & Howard, 2005). After conducting eight studies, they reported an overall average hit rate of 32%, which as we have seen is exactly the same as the estimate obtained in the meta-analysis. Their explanation for the 7% effect that has persisted over five decades of independent replications was, in their terms, an unspecified “crud” factor.

Remote Viewing

Remote viewing (RV) is a euphemism for clairvoyance, the experience of perceiving beyond the usual boundaries of space and time. Unlike an experiment in telepathy, in

an RV experiment there is no need for a sender, but the protocol resembles the ganzfeld telepathy experiment. Spontaneous episodes of RV occur most often in dreams, when visions of distant scenes turn out to match real-world events as they are occurring, or sometimes when they unfold in the future (Branfman, 1952).

To study these spontaneous experiences, laboratory experiments were devised. Consider one in “precognitive remote perception,” as conducted by the Princeton Engineering Anomalies Research (PEAR) Laboratory. The PEAR lab was active at Princeton University from 1979 through 2007, when the head of the laboratory retired.

The experimental protocol involves a “percipient,” a person who attempts to perceive a future object, location, or event, and an “agent,” a person who will later travel to a randomly selected distant location sometime in the future. The percipient is asked to record their impressions of where the agent would be, and later independent judges will blindly attempt to match those impressions against photographs and descriptions of three or four locations, one of which is the actual target. The term “remote viewing” was originally devised not only to deflect attention from superstitious prejudices about psychic phenomena but also to suggest that the percipient could view the scene through the experience of the agent. This variation of an RV experiment provided an exceptionally secure protocol, because when the percipient was recording her impressions, the future target had not yet been selected. This decisively excluded mundane explanations for the results, like clues about the target that the percipient might have picked up from the experimenters or the agent.

The largest collections of RV studies were produced by two sources. The first was part of a U.S. government-funded, formerly classified program located initially at SRI International from 1972 to 1988, and later at Science Applications International Corporation, a defense contractor, from 1988 to 1995 (May et al., 2018). The second was produced by Princeton’s PEAR lab from the 1970s through the late 1990s (Jahn & Dunne, 1987).

Analysis of 770 RV trials conducted at SRI resulted in odds against chance of more than 300 million to 1; a second collection of 445 tests conducted at SAIC resulted in odds against chance of 1.6 million to 1 (Uttis, 1996). At the PEAR lab, a total of 653 sessions were conducted, resulting in odds against chance of 33 million to 1. The average effect size—a measurement of the strength of the relationship between two or more variables—reported in these databases was about 0.20. This RV effect size can be compared to conventional phenomena studied in the social and behavioral sciences from a review of a century of social psychology studies, involving more than 25,000 experiments, 8 million participants, and 322 meta-analyses. That meta-meta-analysis showed that the average effect size over all those studies was 0.21 (Richard et al., 2003). This means that as a human ability, RV is neither more fragile nor rarer than phenomena demonstrated in thousands of traditional psychological experiments.

Presentiment

Presentiment, meaning prefeeling, refers to unconscious responses to unpredictable future events. In life, such experiences are typically associated with bad feelings prior to an emotional or shocking event. A commonly reported spontaneous example involves driving along an often-traveled route and suddenly getting a bad feeling about an upcoming intersection. That feeling causes the driver to slow down even though their traffic light is green. But just as the intersection is approached, a car coming from a cross-street blasts through a red light at high speed. If the driver had not slowed down, a horrible accident could have happened. The shock of that realization seems to have rippled backward in time to give the driver that bad feeling, but as with any anecdote, it cannot be known for sure if the other car might have been seen by peripheral vision or heard as a subliminal vibration. To test whether such experiences are genuinely precognitive, these kinds of prefeeling events can be simulated in the laboratory.

To do this, in a typical presentiment experiment, E will first wire up a participant (P) to continually measure aspects of their nervous system, including heart rate, skin conductance, pupil dilation, brain electrical activity, and so on. Then P will be asked to sit comfortably while looking at a series of photographs, some of which are calm and others emotional. Each photo is selected at random, so no one knows in advance what image is about to appear on successive trials. The presentiment hypothesis predicts that before a calm image the nervous system will remain calm, and before an emotional image the body will become aroused. Depending on the nature of the underlying physiological system, the prestimulus response may be detectable from 1 to 10 seconds before the future stimulus occurs.

A meta-analysis of 49 presentiment experiments conducted between 1978 and 2010 found that 26 of the reported studies were close conceptual replications (Mossbridge et al., 2012). Those 26 studies showed a combined odds against chance ranging from 17 million to 370 billion. The former figure assumed that the presentiment effect varied randomly from one experiment to the next, which is the most conservative assumption. The latter figure assumed that the presentiment effect was constant across experiments, which is a more liberal assumption. That meta-analysis was updated in 2018, and the results of 19 new presentiment experiments confirmed the findings of the original meta-analysis (Duggan & Tressoldi, 2018).

While the presentiment experiments provide evidence for a repeatable, unconscious precognitive effect, if the claimed phenomenon were real, a critic might argue that surely such a surprising effect would be obvious. Perhaps, but it is also possible that no one had bothered to look for an “impossible” effect. Nevertheless, to test this idea a psychologist from the University of Amsterdam examined the conventional psychophysiological literature to find experiments similar to those used in presentiment experiments. He found three cases where data could be extracted from published graphs to explore whether there

might be a presentiment effect. In all three studies, the investigator asked an assistant who was blinded to the purpose of the task to measure skin conductance values in graphs appearing in the published reports. When data from all three studies were combined, it showed a result that was significantly in agreement with the presentiment hypothesis. After that report, another researcher from Northwestern University repeated this effort with new data, again finding the same effect (Radin, 2013). These two investigations confirmed the prediction that presentiment effects are indeed pervasive, appearing even in experiments conducted for entirely other purposes.

Implicit Precognition

Implicit precognition is similar to presentiment in that it is an unconscious effect, but rather than involving physiological measures it explores whether future events can influence present-time behavior. The basic design of these experiments involves time-reversing conventional cause-and-effect sequences commonly used in experiments in the cognitive and social sciences.

For example, in a social psychology experiment, a person might be asked to look at a pair of images presented on a computer screen. The images might be two similar faces, objects, or abstract shapes. The participant's task is to select the one image they prefer. Because the images used in these experiments were preassessed so the images in each pair would on average be considered equally likable, by chance one would expect over many trials that each image would be picked about half the time. What is observed in this standard experiment is that if one of the images is first presented or "primed" subliminally, such that the participant cannot consciously perceive it, then they will prefer that image over the other one. This is known as a "mere exposure" effect (Van Dessel et al., 2017). The experiment demonstrates that we tend to prefer what we are familiar with, even if we are not aware of being primed. This is why advertising shows the same product again and again.

In the implicit precognition version of this experiment, the participant is first asked to select one of a pair of images, and then, after the selection, the computer randomly selects one of the two images and presents it subliminally. This design predicts that experiencing the image in the future will bias the subject's present-time decision.

In a series of nine variations of these experiments reported in 2011, eight of the nine were statistically significant (Bem, 2011). The combined odds against chance was 73 billion to 1. As with any experiment, what is important is not only that one investigator reported an interesting effect, but that many investigators can independently repeat the effects. Five years after the first report was published, some 90 replications had been reported by 33 laboratories in 14 countries. A meta-analysis of these studies was associated with odds against chance greater than a billion to one, confirming the existence of an implicit precognition effect (Bem, 2015).

Individual Intentional Influence

This line of research, known as psychokinesis (PK), involves mental influence of distant physical systems. The most common form of PK practiced in everyday life is prayer, like praying for another person's good health. This is a mental act whereby one hopes or wishes that some aspect of the physical world is altered as a result of the intention (Radin et al., 2015).

The most-studied physical target in PK experiments is electronic random number generators (RNG). An RNG is a electronic device designed to produce truly random sequences of bits (0s and 1s), each with probability $\frac{1}{2}$, like an automated coin-flipper. The source of randomness in these devices is not a software algorithm, but physical events like electron tunneling in a semiconductor or radioactive decay latencies. These events are considered in physics to be fundamentally random, and thus they are completely unpredictable. The RNG is considered a suitable target for use in PK studies because deviations in the output of the RNGs are easily detectable via straightforward statistical methods, and an extremely small amount of "force" or "influence" would be required to influence the underlying random events to shift from 1 bit to a 0 bit, or vice versa. Note that the words force and influence are in quotes. This is because it is not well established that either of these conventional physical concepts are involved in this phenomenon.

Over the past half-century, hundreds of psychokinesis tests using RNGs have been published, and several meta-analyses have summarized the combined results. One of the first meta-analyses, published in the journal *Foundations of Physics*, found 832 experiments reported in 152 articles by 68 different investigators, and published between 1959 and 1987 (Radin & Nelson, 1989). Of these, 597 studies involved individuals attempting to mentally influence RNG outputs and 235 were control studies where no one was asked to intervene with the RNG. The conclusion, after considering the methodological quality of each study and the possibility of selective reporting biases, was as follows: "After considering all of the retrievable evidence, published and unpublished, tempered by all legitimate criticisms to date, it is difficult to avoid the conclusion that under certain circumstances, consciousness interacts with random physical systems" (Radin & Nelson, 1989, p. 1512).

A more recent meta-analysis was published in 2006 in the journal *Psychological Bulletin* (Bosch et al., 2006). The authors of that analysis excluded any RNG studies involving indirect or implicit forms of intention, or where animals, plants, or babies were participants, or studies using hidden RNGs as targets, retrocausal designs, or designs using pseudorandom algorithms. These exclusions removed more than 200 experiments from the published literature, and it resulted in a subset of 380 experiments.

The authors' conclusion was that there was a significant overall effect, meaning that mental intention was indeed correlated with the output of the RNGs. But they also proposed that selective reporting was the simplest conventional explanation for this effect. An article published in response to that analysis argued that that conclusion was incorrect because it assumed that the PK effect was independent of the sample size (Radin et

al., 2006). That is, it assumed that each random bit generated by the RNG would be influenced the same way, regardless how many or how fast those bits were generated. This was deemed implausible because it ignores the psychological side of an ostensibly psychophysical phenomenon.

That is, say a PK experiment involves a thousand meditators, each of whom prepares for a month to participate in a study where they will each attempt to influence an RNG to generate a single random number. The meditators are also told that the outcome of that random decision will determine whether they get an important scholarship. Now consider a second PK experiment in which a bored student investigator recruits a person at random, and with no preparation that person is asked to mentally influence a thousand random bits generated in a millisecond. The participant gets no feedback about the results, and there are no consequences regardless of the outcome.

These two experiments may be physically and statistically identical, but the psychological contexts are obviously different. If we imagined that the only important factor in this type of study was the speed and number of bits generated, then the two experiments are identical. But if we assume that we are dealing with a psychophysical phenomenon, which seems reasonable given that it is not just a physics experiments, nor is it just a conventional psychological experiment, then we cannot ignore the psychological set and setting. In this case, the use of selected participants who are motivated and adept at attentional focus would presumably be more likely to produce a better outcome than a randomly selected person who is completely unengaged in the task.

Besides this issue, the Bosch et al. meta-analysis also excluded three large-scale experiments, declaring them to be “outliers.” That decision was a bit strange, because those studies reported highly significant outcomes and they contained more than 210 times as many data as all the other experiments combined. In addition, a survey was later conducted among the researchers who had conducted most of the RNG studies to estimate the actual number of unreported experiments (Radin, 2006). The answer was one unreported experiment per investigator. And it was not the case that the unpublished studies were consistently unsuccessful. Some of them had significantly positive outcomes, but the investigator did not get around to publishing a report. This suggested that perhaps 59 studies (the number of investigators) were potentially missing from the meta-analysis. If each of those 59 studies had resulted in a null outcome, it would not have affected the overall positive results. This suggests that publication bias as an explanation of the RNG results was unjustified. In sum, based on a half-century of experiments using RNGs as targets of intentional influence, it appears that PK effects exist.

Collective Intentional Influence

The Global Consciousness Project (GCP), which ran as a formal experiment from 1998 to 2015, was a global version of an RNG experiment. Instead of investigating an individual who attempted to mentally influence an RNG, the outputs of RNGs located in major

cities around the world were examined during major global events, like the opening ceremony of the Olympics or terrorist attacks (Nelson et al., 2002).

As a metaphor, the GCP experiment can be thought of as a tsunami detection system, but instead of monitoring the ocean, it monitors waves in the “ocean of consciousness.” That is, imagine the ocean with scores of buoys dancing on the waves. Each buoy has a bell attached to it to alert passing ships about hidden reefs and shallows. The sounds of each buoy’s bell may be broadcast by radio to a land-based central receiving station. That station receives all the radio transmissions and consolidates them to form a single collective sound reflecting the ocean’s grand dance.

Most of the time this sound is unpatterned, similar to the random tinkling one might hear from wind chimes dangling in a breeze. But every so often, the buoys become mysteriously synchronized and their sounds swell into a great harmonic chord. When that occurs, we know that a huge wave is causing the buoys to act in concert. Buoys reflect movements only on the ocean’s surface, but the ocean is complex and deep, so these synchronized events suggest a number of possible explanations. They include an earthquake, a meteorite strike, or perhaps something big stirring in the ocean’s depths. That something might be quite small and subtle at its origin, but if it is deep enough, then by the time it rises to the surface it can become enormously powerful and encompass the entire ocean.

Whatever the cause, we are interested in two types of analyses when the buoys’ tinkling bells coalesce into a great, harmonious chord. The first is how loud it is (the amplitude of the tone), and the second is how coherent it is (the harmony of the tone).

The GCP’s network began with three RNG sites in 1998. Over time, it increased in size as volunteers were found who were willing to host an RNG on their personal computer. After a few years the network size had expanded to about 65 RNGs located throughout the world. Each RNG collects one sample of 200 random bits each per second, and each of those sample is time-stamped and synchronized to standard internet time. Every five minutes, all data in the worldwide network is sent to a web server in Princeton, New Jersey, where it is automatically entered into a database.

The GCP experiment required that each event be analyzed in a predefined way, before looking at the RNG data. The hypothesis was that samples generated by the RNGs would deviate from chance expectation when millions of people were all focused on the same event. The events included New Year celebrations, natural disasters, terrorist activity, mass-scale meditations, sports events, outbreaks of war, outbreaks of peace, unexpected deaths of celebrities, and so on. After collecting 500 formally defined worldwide events, the experiment finally ended, with an overall result associated with odds against chance greater than 3 trillion to one.

One interpretation of this result is that the GCP demonstrates a global mind–matter interaction phenomenon. That is, if one imagines that mind and matter are like two sides of the same coin, then when the mind side of the coin experiences an unusual period where millions of minds are in alignment, all focusing on the same event, then the matter

side of the coin—which is necessarily correlated with the mind side—must also experience a period of coherence. In an RNG, coherence would be detected as a statistical deviation from chance expectation (Nelson & Bancel, 2011). Another interpretation is that the events selected for this experiment somehow differed from other events that might have been selected (Bancel, 2017). However, because the events were selected first, and the data were examined afterward, this second interpretation does not suggest a mundane selection bias but something stranger, like a psychic effect on the part of the investigators. In either case, there is little doubt that this experiment offers further support to the reality of psychic phenomena.

Evidential Summary

The experiments briefly described above are the tip of an evidential iceberg. The relevant literature is vast, consisting of more than 5,000 controlled experiments reported by academic, industrial, and private laboratories around the world for over a century. There are many other classes of experiments that could have been described, including unexpected correlations arising between brain activity of distant people, studies of distant healing, experiments testing the “feeling of being stared at,” precognition in dreams, effects of mental intention on growth of cells, bacteria, water structure, food, beverages, plants, human behavior, and so on.

Given the existing experimental database, most researchers who are actively engaged in this discipline agree that there is little need for further proof-oriented evidence. Healthy debates persist over ways to best interpret these data, but the core *existential* question—that some forms of psychic phenomena exist—is for all practical purposes settled in the affirmative. And given the close relationship between psychic phenomena and esoteric magic, this foretells a coming magical renaissance. When that renaissance is in full bloom, new and more accurate terms will undoubtedly be devised to replace the word “magic,” which we may now understand as a placeholder that is patiently waiting for us to become wiser.

What is not yet settled is how to adequately explain these findings within today’s scientific worldview. Until the development of general relativity and quantum mechanics, psychic phenomena seemed to violate everything known about how the physical world operated. As a result, it was easy for skeptics to dismiss the evidence. Today, such assertions are no longer tenable. Modern physics reaches far beyond common sense, and it expands our sense of reality in a most interesting way.

Consider that there are two aspects of psychic phenomena that make it seem strange: First, these experiences transcend the everyday boundaries of space and time. This is why remote viewing and precognition seem so puzzling. Second, there is something odd about consciousness whereby focusing attention on a physical system affects the behavior of that system. This is why psychokinesis is so perplexing.

Now here’s the rub: these two features of psychic phenomena are *exactly the same* reasons why relativity and quantum mechanics are considered weird. Physics tells us that

space and time are intimately intertwined relationships. It tells us that quantum entanglement takes place “outside” ordinary space time. It tells us that observing objects at the quantum scale causes those objects to change their behavior. Because of the psychophysical similarities, then we can imagine the objective universe viewed from the outside to be what we describe with physics, and the subjective universe viewed from the inside to be what we experience as psychic, mystical, or magical events. These two views are describing the same thing from different perspectives.

Spirituality

How is any of this relevant to our understanding of spirituality? The term “spiritual” refers to experiences variously described as nonmaterial, transcendent, divine, exalted, sublime, and ethereal. Such experiences typically carry a sense of profound certainty that the universe is permeated with meaning, that everything and everyone are connected, that reality emerges from a primordial consciousness, and that the everyday notions of space and time are, in some fundamental way, illusory.

What the scientific evidence for psychic phenomena tells us is that sometimes these experiences are real, and not just hallucinations, fantasy, or misfiring brains. What real magic tells us is that the esoteric traditions, spanning the Vedas, Buddhism, Neo-Platonism, Hermeticism, Gnosticism, the Kabbalah, as well as many other medieval to modern variations, are not just archaic stories about reality, but clues about the actual nature of reality.

Those clues, across virtually all the esoteric traditions, can be collapsed in three words: *consciousness is fundamental* (Huxley, 1945). This perennial philosophy postulates a primordial, universal awareness, a sort of living “substance” from which the known universe arises. From the perspective of the esoteric worldview, scientific concepts like space, time, energy, and matter are said to *emerge* out of this consciousness. It also means that our personal sense of awareness, our self-consciousness, is ultimately composed of the same substance. That is, in this essential way, each individual *is* the universe.

This idea has been echoed by mystics throughout history, and in modern times the same idea has been expressed by some of the most prominent scientists in history. For example, the Nobel Laureate physicist Max Planck, credited with developing the key insight that underlies quantum theory, famously said: “I regard consciousness as fundamental. I regard matter as derivative from consciousness. We cannot get behind consciousness” (Planck, 1931). Similar sentiments have been expressed by a long line of equally famous physicists, including Erwin Schrodinger, Werner Heisenberg, Wolfgang Pauli, Eugene Wigner, and David Bohm (Dossey, 2013).

The bottom line is that historical, experiential, and scientific evidence all indicate that the future of science and the future of spirituality appear to be on converging paths. If this trend continues, at some point ancient and modern superstitions will dissolve, go through a metamorphosis, and ascend into a more comprehensive truth. What that truth

may entail, and when it is likely to appear, are not yet known. But that it will appear seems increasingly certain.

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Nonlocality, Intention, and Observer Effects in Healing Studies: Laying a Foundation for the Future

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Abstract

All research domains are based upon epistemological assumptions. Periodic reassessment of these assumptions is crucial because they influence how we interpret experimental outcomes. Perhaps nowhere is this reassessment needed more than in the study of prayer and intention experiments: If positive results from this field of research are sustained, the reality of nonlocal consciousness must be confronted. This chapter explores the current status of healing and intention research, citing a number of major studies and using the “Study of the Therapeutic Effects of Intercessory Prayer (STEP) in Cardiac Bypass Surgery Patients: A Multicenter Randomized Trial of Uncertainty and Certainty of Receiving Intercessory Prayer” as a case study of this line of research. The chapter argues that the dose-dependent model typical of drug trials, and adopted for use in the STEP and other studies, is not the optimal model for intention-healing research, and critiques this approach in detail, citing apposite research from which we draw our recommendations and conclusions. The chapter suggests that the usual assumptions concerning blindness and randomization that prevail in studies using the pharmacological model must be reappraised. Experimental data suggest that a nonlocal relationship exists among the various individuals participating in a study, one which needs to be understood and taken seriously. We argue that it is important to account for and understand the role of both local and nonlocal observer effects, since both can significantly affect outcome. Research is presented from an array of disciplines to support why we feel these issues of linkage, belief, and intention are so important to a successful, accurate, and meaningful study outcome. Finally, we offer suggestions for new lines of research and new protocol designs that address these observer-effect issues, particularly the nonlocal aspects. The chapter finally suggests that if these effects occur in intention studies, they must necessarily exist in all studies, although in pharmacological studies they are often overshadowed by the power of chemical and biological agents.

Key Words: intention, prayer, healing, observer effect, consciousness, placebo, nonlocal consciousness

Introduction

Periodic reassessment of what constitutes good research is crucial because this process gives us the ability to distinguish justified belief from opinion. Perhaps nowhere is this distinction of greater significance than in the study of prayer and intention experiments:

If the positive results from this field of research are sustained, the reality of nonlocal consciousness must be taken seriously. This chapter explores the current status of healing and intention research, cites a number of major studies, and uses the “Study of the Therapeutic Effects of Intercessory Prayer (STEP) in Cardiac Bypass Surgery Patients: A Multicenter Randomized Trial of Uncertainty and Certainty of Receiving Intercessory Prayer” conducted by Herbert Benson et al. (2006) as a case study of this line of research. In April 2006, researchers from Harvard Medical School published this long-awaited study in the *American Heart Journal* (Benson et al., 2006). The \$2.4 million study was funded in large part by the John Templeton Foundation, which promotes the study of the intersection of religion and science. Its publication grabbed headlines across America for two main reasons: It originated from Harvard Medical School, and it had an unexpected result—patients who were prayed for, and knew they would be prayed for, fared the worst of the three intervention groups.

Because of its venue, its level of funding, and the media attention the study has engendered, we have selected this study as a case demonstrating issues common to much of this research field, and we use it to explore those issues. In the process, we also examine attitudes that prevail in the arguments of both proponents and skeptics of prayer and intention research. What we seek is a discussion on the basic assumptions implicit, but usually unacknowledged, in these studies, and a reappraisal of the design parameters upon which prayer and intention studies have been grounded. In our view, STEP is a noble failure; noble because it was done with integrity, on the basis of imperfect understanding, and because its failure has much to teach us.

STEP Background

The STEP experiment involved 1,802 patients undergoing coronary artery bypass surgery at six US hospitals (Benson et al., 2006). These 1,802 patients were then assigned to one of three subpopulations. Therapeutic intention in the form of prayer was provided by one Protestant and two Catholic groups, whose members were told to pray for a quick recovery with no complications. They were provided only with the first name and the initial of the last name of the prayer participants—for example, “John D.” Prayers were initiated on the eve or the day of surgery and continued for 2 weeks thereafter.

The three groups consisted of the following (the group names are our designation):

- Group A: 604 patients who were told they might or might not be prayed for, and were; of this group, 52 percent had postsurgical complications
- Group B: 597 patients who were told they might or might not be prayed for, and were not; among this group, 51 percent had postsurgical complications
- Group C: 601 patients who were told they would be prayed for, and were; among this group, 59 percent had postsurgical complications

To many skeptics in both media and science, it was this last result that was the headline of the study, suggesting that prayers for the sick might actually be harmful.

How can these results be understood? To begin with, the differences between the two blind groups, those who were told they might or might not be recipients, one of which eventually was prayed for, whereas the other was not, are nonsignificant. *The only significant outcome in the study is between those who were blind and those who were not* ($p = .003$; $z = 2.8$). Yet an attempt to analyze this result is almost wholly absent in both the published report and much of the commentary about it (Casatelli, 2006; Freed, 2006; Giberson, 2006; Kalb, 2006).

We are disturbed by the fact that not only skeptics but the researchers themselves turned a blind eye to this challenging result, and we are not alone. Duke University Medical Center cardiologist Mitchell W. Krucoff, and his research partners, Suzanne W. Crater and Kerry L. Lee, explain this carefully in their article accompanying the publication of the STEP study in the *American Heart Journal* (2006). They say:

[T]he most striking element of the STEP report is in the interpretation of the study results showing significantly worsened outcomes in one of the experimental arms. . . . [T]he investigators take an almost casual approach toward any explanation, stating only that it “may have been a chance finding.” It is rather unusual to attribute a statistically significant result in the primary end point of a prospective, multicenter randomized trial to “chance.”

In fact, such attribution is antithetical to the very definition of what error and statistical certainty imply: that the worse outcomes are almost certainly related to the therapy and not the play of chance. If the results had shown benefit rather than harm, would we have read the investigators’ conclusion that this effect “may have been a chance finding,” with absolutely no other comments, insight, or even speculation?” (p. 763)

Observer-Expectancy Effects, Both Local and Nonlocal

The randomized, double-blind clinical trial is widely considered the gold standard of judging the efficacy of any therapy. If a study is adequately randomized and blinded, it is assumed that the effects of belief, intention, and conviction of subjects and researchers are bypassed. Applying this logic to prayer experiments, it is assumed that what an experimenter privately thinks about the intercession is irrelevant. Yet experimental results suggest it is not that simple.

Rather, data suggest that intention, belief, attitude, and expectancy, on the part of everyone involved with a study, expressed both locally and nonlocally, can be determining variables. Chemist Douglas Dean and parapsychologist Karlis Osis showed that different experimenters carrying out the same experiment got different results (Osis & Dean, 1964). Psychologists Gertrude Schmeidler and Michaelen Maher made videos of well-known researchers conducting experiments and then played them for students with the

volume turned so low as to be inaudible (Schmeidler & Maher, 1981). The students were asked to describe the researchers, assigning them words like “friendly” or “cold.” Estimates were then made as to how experiments conducted by these researchers would turn out. Those with “cold” type responses were estimated to have respondents who produced lower scores; the converse was true for researchers described as “friendly.” The actual results of the experiments were then compiled. Those with “cold” type adjectives did in fact have informants who scored lower (Schmeidler & Maher, 1981).

Perhaps the starkest example, however, showing the observer latency effect of belief is an experiment series done by psychologist Richard Wiseman, a leading denier of nonlocal consciousness, and anthropologist Marilyn Schlitz, a researcher long associated with successful studies exploring whether an individual knows through some kind of linkage that he or she is being stared at, even by a person at a distance looking at his or her image on a closed-circuit television (Wiseman & Schlitz, 1997). The measurement for this effect was galvanic skin response. Schlitz had earlier worked with psychologist William Braud and carried out a series of studies demonstrating this effect (Braud & Schlitz, 1989).

Wiseman sought to replicate these studies and made three attempts, all unsuccessful. Schlitz then proposed that she and Wiseman do a new series, a kind of hyperreplication *using his same laboratory, the same protocol, and the same participant pool*. Once again with Schlitz as the principal investigator, the study was successful. Once again, the participants being stared at showed significant physiological response that was absent when they were not being focused on (Wiseman & Schlitz, 1997). Wiseman then ran the same study again, without success, confirming his passionate negative expectation.

Hazellrigg et al. (1991) examined “personality moderators of experimenter expectancy effects” and focused on five, looking at them from the perspective of both researcher and participant. They reported, “Experimenters with stronger interpersonal control orientations, more positively evaluated interpersonal interaction styles, and greater ability to encode nonverbal messages are believed to be more likely to produce expectancy bias” (Hazellrigg, Cooper, & Strathman, 1991). They also looked at subjects with greater need for social approval and greater nonverbal decoding ability, and hypothesized that such individuals would be more susceptible to bias.

They reported two “moderators” mattered: “the experimenter control orientation and subject need for social approval hypotheses. There was also evidence for a boomerang effect— subjects low in need for social approval gave ratings opposite to the experimenter’s outcome expectancy. Finally, effects appeared stronger when positive expectancies were communicated than when expectancies were negative” (Cooper & Hazellrigg, 1988, p. 569; Hazellrigg et al., 1991, p. 576).

None of these factors are discussed in the STEP report. They are absent in most other similar studies as well, and they will continue to be a confounding problem until they are addressed and understood. No intention study, whether it involves intercessory prayer or some other variety of therapeutic intent, should be conducted without careful

consideration of observer effects as part of the protocol, and we believe it should be extended to all research exploring nonlocal consciousness with any protocol.

It would be helpful if the STEP study answered questions, such as “Did the experimenters believe that intercessory prayer would work in the world, or were they expecting neutral outcomes?” “Could the negative beliefs of critics who knew about the STEP study during the several years it was in progress, and who may have wished to see it fail, have affected the outcome?” “What about the impact of the attitudes of religious individuals who believe in prayer but don’t want to see prayer studies done because of doctrinal objections?”

Questions such as these are awkward and make people uncomfortable. In our culture, probing such concerns is considered indelicate and intrusive. But this does not mean they are irrelevant. We suggest that an intention study cannot be properly designed if it does not take the intentions and beliefs of everyone involved with the study into consideration.

It strikes us as odd that observer effects were not considered in the STEP study, when Benson himself addressed observer effects in his previous work and has apparently long believed in their importance. In 1979, Benson and David McCallie coauthored a paper on a range of treatments for angina pectoris, including placebo. In this study, they refer to “Three recognized components of the placebo effect—the beliefs and expectations of the physician, the beliefs and expectations of the patient, and the physician-patient relationship” (Benson & McCallie, 1979, p. 1424). Why would the beliefs and expectations of physicians and researchers not apply in the STEP study?

This Benson paper reports that treatments which enjoyed efficacy rates as high as 90 percent when a treatment was new and enthusiasm in the medical community was high fell back to the typical 30 percent to 40 percent effectiveness when studies critical of the treatment began to emerge in the literature (Benson & McCallie, 1979). The attitude of the clinician, locally mediated through subliminal body clues, tone of voice, or choice of words, was judged by Benson and McCallie (1979) to be important factors in this huge spectrum of response and to be clinically important. (We would add that a physician’s intentions can act nonlocally as well, bypassing the senses, to shape therapeutic responses.) In their paper, as an historical grace, note they cite 19th-century French physician, Armand Trousseau, who observed sarcastically, “You should treat as many patients as possible with the new drugs while they still have the power to heal” (Benson & McCallie, 1979, p. 1425).

Because the evidence favoring belief and intention in affecting clinical outcomes is so strong, why aren’t belief and intention—“expectation,” as Benson and McCallie would have it—more carefully considered in intention studies? Psychologist William Braud (2003) has explored the influence of intention. He notes, “I think the reason that the intentions of other persons are not taken into consideration in most prayer studies is that the investigators are not aware of the possible influence and alternative processes

that might be involved, but instead, consider prayer outcomes only in terms of entreaties to, and actions of, the Divine” (W. Braud, personal communication, August 2006). This seems to us a very limited view. We see the “Observer Effect,” in its most generous interpretation, as one of the fundamental questions to be addressed in future work.

Without sacrificing any rigor in the process of randomization and blinding, what other factors need to be controlled for an intention or prayer study? Which factors operate locally, mediated via the senses? Which operate locally sourced sensory mediation? How do both local and/or nonlocal influences affect experimental outcomes? Do they operate concurrently or independently?

The classic “sheep/goat effect” is an example of the kind of variable we have in mind. First reported by physicist Robert McConnell and psychologist Gertrude Schmeidler (who coined the terms), this belief effect is now recognized as one of the most consistently determinative variables in the intention research literature (Schmeidler & McConnell, 1958). Sheep—those who accept that nonlocal phenomena exist in the context of the experiment *in which they are taking part*—generally achieve higher scores in controlled studies than goats, who are skeptics. But is the effect local or nonlocal, or both? The STEP study doesn’t address this kind of question, and neither do most other intention studies. They should.

The Question of Time

Nonlocality also opens another consideration important to understanding intention/prayer studies: the issue of time. Consider the retroactive intercessory prayer study carried out by Israeli immunologist Leonard Leibovici (2001). Highly skeptical of the claims of intention/prayer studies, Leibovici designed an experiment that only some kind of nonlocal linkage could explain. The very idea of such an effect challenges many assumptions. Yet retrocausality has become an area of intense research. The American Association for the Advancement of Science, in conjunction with the American Institute of Physics, held a conference on this topic, and a reader interested in pursuing retrocausality in the context within which it is discussed in this paper should read the published conference papers (Radin, 2006; Sheehan, 2006). They suggest that from a physics perspective, Leibovici’s research is conceptually plausible.

Leibovici’s protocol was a hospital-sited, “double blind, parallel group, randomized controlled trial of a *retroactive intervention* [emphasis added]” (Leibovici, 2001, p. 1450). It was a study with a large enough *N* to have gravitas. In July 2000, Leibovici identified 3,393 adult patients each of whom had suffered from a bloodstream infection that was detected while they were in the Rabin Medical Center, in Israel, between 1990 and 1996—that is to say, *4–10 years earlier*. All of these individuals were long out of the hospital. These 3,393 *former hospital patients* were randomized into two populations; 1,691 were assigned to the intervention treatment group and 1,702 to the control group. The treatment group was the focus of therapeutic intention in the form of

prayer, which “was said for the well-being and full recovery of the intervention group” (Leibovici, 2001, p. 1450).

The study discovered that “length of stay in hospital and duration of fever were significantly shorter in the intervention group than in the control group ($p = .01$ and $p = .04$, respectively).” Leibovici concluded, “Remote, retroactive intercessory prayer said for a group is associated with a shorter stay in hospital and shorter duration of fever in patients with a bloodstream infection and should be considered for use in clinical practice” (Leibovici, 2001, p.1451).

For this study to have worked, it seems that therapeutic intention from the “future” must have affected the “past” *when it was the present* to produce a biased outcome—not to have changed the past, but to have produced the original effect in the first instance. No local explanation can subsume what happened. (A possible alternative nonlocal explanation is based on decision augmentation theory [DAT], which we shall examine shortly.) Leibovici’s study is an extreme example of an intention study because of its retrocausal essence, but all intention studies must consider that intention is not blocked by time. To understand intention/prayer studies, we must expand our horizons.

Dosage

The STEP study required prayer for only 14 days. Is a 2-week intervention an adequate test of prayer? What about the duration of each prayer session? One positive prayer study required an hour of prayer (Sicher, Targ, Moore, & Smith, 1998); one failed study required 5 minutes (Matthews, Conti, & Sireci, 2001). Is duration the determinant factor here? Many studies do not even consider this issue. What is the requisite dosage of therapeutic intention? Does this question even make sense given the nonlocal nature of the effect? We are aware of only one study by Schwartz (coauthor of this paper) et al. (1990) that examined the relationship of time and effect, a study measuring changes across 5, 10, and 15 minutes, and no significant differences were observed.

One might reasonably expect that long repetitive experience would lead to insincerity and boredom, and that freshness and sincerity are more likely to be found in those new to an endeavor. And yet this is another area where our actual knowledge is slight. In the chemical drug model, dosage and composition are crucial. This leads to a fundamental question: What do dosage and composition mean in an intention/prayer study? Do these concepts apply?

Experimental evidence suggests that reiterated acts of intention—which could be seen as a kind of dosage—produce a cumulative nonlocal field effect. Biologists Graham and Anita Watkins carried out a series of experiments in which they anesthetized mice from the same line, which were then put in one of two cradles, one designated “treated,” the other “control” (1971). The task of the influencer/healer was to awaken the treated mouse through mental intention alone. There was no physical contact. The revival times of the “treated” mice were compared with those randomly assigned as controls. The results

were statistically significant (Watkins & Watkins, 1971). Without planning initially for this effect, but having been consistent in their assignment pattern, they then wondered what would happen if no healer was involved. In subsequent sessions, those mice assigned to the “treated” cradle continued to awaken more quickly than the controls (Belousov & Popp, 1995).

Another attempt to model this cumulative effect can be found in the concept of a field, which has some of the properties of a wave and some of a particle, which was independently developed in the 1920s by Russian biologist Alexander Gurwitsch, who also discovered ultraweak photon emission from living systems (Watkins & Watkins, 1971), and Austrian biologist Paul Weiss. They called them morphogenetic fields, or biological fields. In the interests of historical accuracy, perhaps it would be best to say they called them biological fields.

Most recently, this line of research has been taken up and expanded by English biologist Rupert Sheldrake (1981). This work suggests that not only do individual acts of observation—observer awareness, one might call it—cause an observer effect, but that the effect becomes stronger as more iterations of awareness occur. Perhaps the best illustration of this can be seen in two contemporaneous studies, one designed by psychologist Gary Schwartz, then of Yale, the other by psychologist Alan Pickering of Hatfield Polytechnic in England (Sheldrake, 1995). Their protocols were different but essentially the same. In Schwartz’s case the study involved different reactions non-Hebrew speakers and readers had to real words as compared to Hebrew letters randomly assembled to create nonsense words. In Pickering’s study, the words and nonsense letter combinations used were in Farsi. Both studies were highly significant, and alternative explanations were systematically eliminated (Sheldrake, 1995). The oldest words, the ones that had been the subject of the most acts of intentioned awareness, produced stronger effects than did the new words, and they more than the nonsense words.

A third facet of this cumulative effect has shown up in nonlocal perception studies, particularly in experimental studies using a protocol known as remote viewing, in which individuals, under rigorously controlled conditions during an experimental session, are typically asked to describe persons, places, or objects that are not designated as targets until after the sensory and descriptive data have been recorded. Literally millions of these remote viewing sessions have been carried out, and they show that targets which have been the focus of reiterated acts of intentioned awareness, particularly in a state of heightened emotion (whether positive or negative does not seem to matter), say, for instance, a religious shrine, are easier than other targets, perhaps a rice paddy, which may be visually more arresting but harder to perceive in nonlocal awareness. Why? Because, we suggest, targets such as shrines have become numinous (Otto, 1958). The term *numinous*, coined in 1917 by the German Protestant philosopher and theologian Rudolf Otto (1869–1937), is based on the Latin word *numen* (Belousov & Popp, 1995). The word, *numen*, which dates to early 17th-century Latin, represents a prescientific attempt to explain the sense of

nonlocal awareness associated with totemic things and places by imputing this numinous empirical experience to a divine power or spirit over that thing or place. The particular quality that seems apposite to intention research was described by Carl Jung: “We should not be in the least surprised if the empirical manifestations of unconscious contents bear all the marks of something illimitable, something not determined by space time. This quality is numinous . . . numina are psychic entia . . . ” (1974, p. 256).

Research also suggests this numinous quality is not something inherent to the target, but instead, accumulated within the nonlocal information architecture linked to a physical target. Obviously then different viewers respond to the same target differently. An Irish lyre has a special meaning for an Irishman that it does not have for a Czech. Different individual viewers perceive the same target differently because it holds a different numinosity for each. Different groups and cultures similarly invest images with differing numinous significance. In terms of intention studies, consider the now-classic study done by cardiologist Randolph Byrd (1988). His study was conducted with Christian healers because of Byrd’s personal beliefs. This leads one to ask, in intention/prayer studies, what is the intention observer effect created by a researcher with strong religious beliefs? Also, what is the effect if the study protocol conflicts in some way with those beliefs?

The “field” concept, of course, is admittedly a hand-waving term whose meaning is imprecise. Even so, field effects appear to be lawful in the scientific sense, particularly in studies such as those reported by Watkins and Watkins (1971). We believe this dimly understood cumulative intention effect is a significant variable that must be better understood if intention/prayer research is to advance.

Blindness and Randomization

For over 30 years, research has suggested that both randomization and blindness do not perform the same functions in experiments involving nonlocal perception or perturbation, of which intention/prayer studies are a subcategory, as they are assumed to do in drug trials. The literature supporting this conclusion is now so large that we will simply mention three studies: two involving perception—remote viewing and Ganzfeld protocol studies—and perturbation—direct mental interactions with living systems (DMILS) studies.

As in Leibovici’s (2001) study, a time factor is often involved, because accurate impressions are frequently obtained before a target is even selected, making these experiments truly triple blind.

In 1995, the US Congress commissioned the American Institutes for Research, a Washington, DC–based, not-for-profit think tank with close government ties, and a long history of work in human performance, to assess the validity of remote viewing research that the US government had previously funded. That body of research was just a fraction of similar research that had been conducted up to that point. To make the assessment, American Institutes for Research selected statistician Jessica Utts of the University

of California, Davis, and psychologist Ray Hyman of the University of Oregon, a fellow of the Committee for the Scientific Investigation of Claims of the Paranormal. Hyman was selected for his avowed skepticism, Utts because of her reputation as an academic statistician. Both had previously published in the field of nonlocal awareness and were notably sophisticated in the issues involved. Utts had previously addressed the question the US Congress was asking in a 1991 paper published in the journal *Statistical Science* (Utts, 1991). In their joint report, Utts concluded:

Using the standards applied to any other area of science . . . (this) functioning (Remote Viewing) has been well established. The statistical results of the studies examined are far beyond what is expected by chance. Arguments that these results could be due to methodological flaws in the experiments are soundly refuted. Effects of similar magnitude have been replicated at a number of laboratories across the world. Such consistency cannot be readily explained by claims of flaws or fraud. The magnitude of . . . functioning exhibited appears to be in the range between what social scientists call a small and medium effect. That means that it is reliable enough to be replicated in properly conducted experiments, with sufficient trials to achieve the long-run statistical results needed for replicability.

(Utts, 1995, p. 3-2)

And Hyman, responding to Utts's statement, wrote:

I want to state that we agree on many . . . points. We both agree that the experiments (being assessed) were free of the methodological weaknesses that plagued the early . . . research. We also agree that the . . . experiments appear to be free of the more obvious and better known flaws that can invalidate the results of parapsychological investigations. We agree that the effect sizes reported . . . are too large and consistent to be dismissed as statistical flukes.

(Hyman, 1995)

A similar meta-analysis used a related but quite different Ganzfeld protocol, also used by laboratories and universities around the world. In a Ganzfeld experiment, the person providing the impressions is in a state of sensory deprivation and is exposed to white noise. The Ganzfeld meta-analysis was carried out by psychologist Daryl Bem, of Cornell University, and Charles Honorton, then at the University of Edinburgh (Bem & Honorton, 1994). It reached conclusions similar to those of Utts in the Utts and Hyman meta-analysis.

A third protocol, DMILS, designed by psychologist William Braud and anthropologist Marilyn Schlitz, explored whether people could detect when they were the focus of another person's intentioned awareness (Braud & Schlitz, 1991). This was achieved by placing one person in a room and measuring his or her electrodermal activity, which correlates with sympathetic autonomic activity, while a closed-circuit video feed of this individual was sent to another person in a room some distance away, beyond the reach of

sensory communication. In the distant room, the second person either viewed the televised image of the individual or listened to white noise. The image was shown randomly for a few seconds. The results showed that when the target person's picture was being viewed on the monitor, his or her physiology reacted with a deviation in electrodermal activity (Schwartz, De Mattei, Brame, & Spottiswoode, 1990). These findings have been replicated numerous times; the only notable failure being the Wiseman and Schlitz study (1997) when a self-defined skeptic served as one of the researchers. The DMILS protocol is of particular relevance to intention research because it is a very close approximation of the healing intention protocol. It raises the question, could one be aware when one was being prayed for? No one seems to have asked this important question.

These three protocols suggest that randomization and blindness, although they prevent conventional biases, are not the absolute barriers they are presumed to be. As far as intention/prayer studies are concerned, we propose that the prevailing perception of blindness be reexamined, and that the intentions of *all* the participants in the study be evaluated. The STEP study makes no such consideration, nor do most other intention/prayer experiments.

Agent of Action

One of the most pressing questions future intention research must consider is who is the agent of action? Is there only one? What would the effect be if all the participants were somehow linked—or there are no such linkages at all? Positive prior studies suggest that something nonlocal is happening, but exactly what? Are the results achieved because of a person's therapeutic intention? Or is the outcome determined by the beliefs of the person who is the overt focus of the intention? Or, even more fundamentally, does the person who selects the participating subjects produce a successful or unsuccessful outcome? Or do all these factors operate simultaneously? Our ignorance runs deep; we do not even know if the healing effect results from the healer's intention producing a perturbation in the recipient's body, or whether the healer nonlocally provides information to the recipient, who then uses that information to stimulate his or her own psychophysical self-regulation.

One compelling line of research known as decision augmentation theory (DAT) specifically addresses some of these questions. DAT proposes that researcher intention, not healer intention, can be the determining factor in any experiment's outcome. This hypothesis, initially called intuitive data sorting, was first developed by an interdisciplinary team headed by physicist Ed May, experimental psychologist Dean Radin, and statistician Jessica Utts (May, Hubbard, Humphrey, & Utts, 1985; Radin,). Subsequently, DAT has been explored by other researchers, and its essential tenets have been confirmed (May, Paulinyi, & Vassy, 2005; May, Utts, & Spottiswoode, 1995). The theory proposes that the outcome of an experiment can be determined by the decisions made by the experimenters, *and that nonlocal perception on the part of the researcher—not nonlocal perturbation in the form of intercessory prayer or any other variety of therapeutic intent—is responsible for the*

outcome. That is, if investigators could optimize (via nonlocal perception) their decisions while designing and carrying out an experiment, and take advantage of natural fluctuations in disease outcomes or differences in patients' inherent ability to heal, then by such favorable selections, placing these individuals in the intention group, a successful experimental result would be achieved. But it would not be due to healing intervention; rather, it would be due to the experimenters' "augmented" decisions. This hypothesis requires nonlocal perception on the part of the experimenters, and as such is as controversial as nonlocal perturbation, but it is plausible and more important, it provides a dramatically different interpretation of successful healing studies, so we feel researchers should take DAT into consideration when planning their experiments.

One possible approach would be to conduct healing studies with two groups. Group A might contain two patients, and group B, 15 patients. Each group would have one healer assigned to them. Neither recipients nor healers would know how many others were within each of the two groups. There would also be two similar-sized groups, C and D, to provide a (blindly) matched nonintention control condition. Assume that on average the hypothesized intentional healing effect operates with the same effectiveness on each patient, say e . Then, the overall statistical outcome for the healing measurement of interest in group A would be approximately $e \times \sqrt{(2)}$, whereas in group B it would be $e \times \sqrt{(15)}$. That is, group B would achieve a greater level of statistical significance than group A. This is a simple consequence of the greater statistical power provided by group B. If such a study produced a statistically significant outcome (beyond the results of the control groups C and D), it would provide evidence in favor of healing as a nonlocal perturbation, not as a result of "augmented" selection.

However, if the statistical outcomes of groups A and B were about the same (not the effect size e , but rather the resulting P values), then the assumption that intentional healing operates about the same on each patient would not be supported, and the observed effects would be more likely due to the investigators' augmented decisions. This is because under DAT, no healing is assumed to occur in these tests, and so the only way to obtain results that favor the experimental hypothesis is by taking advantage of natural "noisy" fluctuations and selecting individuals with a strong capacity for spontaneous healing, thus producing the positive outcome intended by the hypothesis. There are fewer opportunities to select strongly favorable fluctuations out of larger groups of 15 patients than from smaller groups of two patients.

There are two studies known to us that address the DAT issue, although this was not the authors' intention in either case. One of the largest therapeutic intention studies, the 2005 MANTRA II research conducted by Mitchell Krucoff at Duke, and researchers at eight other medical centers, involved a total of 748 patients (Krucoff et al., 2005).

Each of these individuals had been diagnosed with coronary artery disease and was scheduled to undergo percutaneous coronary intervention, or elective cardiac catheterization with possible percutaneous coronary intervention. All were enrolled between May

1999 and December 2002. They were randomized equally to each of the two noetic therapies or standard care, creating four treatment groups. “One group (189 patients) received both off-site intercessory prayer and music, imagery, and touch (MIT) therapy; a second group (182 patients) received off-site intercessory prayer only; a third group (185 patients) received MIT therapy only, while the fourth group (192 patients) received neither the intercessory prayer nor the MIT therapy” The interventional heart procedures were all conducted according to each institution’s standard practice, and the study called for a 6-month period of follow-up.

Initially, this was a standard single-tier research project—one group of healers prays for one group of recipients. However, MANTRA II underwent a major protocol redesign part way through the study. Following the terror attacks of September 11, 2001, enrollment rates in the study fell sharply for approximately 3 months. During that time, the research team adopted a two-tiered prayer strategy. Twelve additional “second-tier” prayer groups were formed and added. “These groups were given a list of the primary tier prayer groups, and asked on notification *to pray for the prayers of the prayer groups*”

Patients treated with two-tiered prayer had absolute 6-month death and rehospitalization rates that were about 30 percent lower than control patients. This was statistically characterized as “a suggestive trend,” and these results suggest that it is therapeutic intention and not DAT that at least sometimes is operative, and that researcher selection would not explain these results.

The MANTRA II researchers explicitly created this two-tier protocol to emulate an earlier study by Cha and Wirth (2001) in which a three-tier design had been employed to explore the effect of therapeutic intention/prayer on the success of in vitro fertilization. This in vitro study, became notorious after publication, because of a criminal conviction of the second author for behavior in another area of his life, having nothing to do with the study. As a result the insights afforded by this well-designed research often are overlooked. It may be the clearest guidance we have concerning the DAT hypothesis.

The study was a prospective, double-blind, randomized clinical trial in which patients and providers were not informed about the intervention. Statisticians and investigators were masked until all the data had been collected and clinical outcomes were known.

The setting was an IVF-ET program at Cha Hospital, Seoul, Korea. IP was carried out by prayer groups in the United States, Canada and Australia. The investigators were at a tertiary medical center in the United States. The patients were 219 women aged 26 to 46 years who were consecutively treated with IVF-ET over a four-month period. Randomization was performed after stratification of variables in two groups: distant IP versus no IP. The clinical pregnancy rates in the two groups were the main outcome measure.

After clinical pregnancies were known, the data were unmasked to assess the effects of IP after assessment of multiple comparisons in a log-linear model. The IP group had a higher pregnancy rate as compared to the no-IP rate (50% vs. 26%, $P = 0.0013$). The IP group

showed a higher implantation rate (16.3% vs. 8%, $P = 0.0005$). Observed effects were independent of clinical or laboratory providers and clinical variables.

(Cha & Wirth, 2001, p. 781)

The statistical effect size of the study is what everyone focused on. But, in terms of the issues raised by DAT, the most important finding is this one: “The people praying . . . were separated into three groups. One group received pictures of the women and prayed for an increase in their pregnancy rate. Another group prayed to improve the effectiveness of the first group. A third group prayed for the two other groups” (Cha & Wirth, 2001, p. 783). Once again it would seem that DAT is not the explanation, and that therapeutic intention is. The DAT issue may be far from settled, but one thing seems very clear to us. In the future, therapeutic intention/prayer studies must accommodate themselves to DAT and design protocols accordingly.

Can Prayer Harm?

Biologist Carroll Nash of St. Joseph’s College, Philadelphia, carried out a therapeutic intention study involving bacterial colonies, cultured in common, and then split into three independent subpopulations (Nash, 1982). His purpose was to replicate earlier studies by nun and biochemist Sister Justa Smith (1973) and nursing pioneer Dolores Krieger (1974), who along with Dora Kunz would later develop the nonsectarian approach to therapeutic intent known as therapeutic touch. Smith’s studies had shown significant differences between treated and controls measuring changes in hemoglobin and enzyme activity, which were the focus of the expressed intention. But Nash had a second question. He asked, “Could intention alone not merely affect the cell colonies, but could it do so both positively *and* negatively, when compared to controls?” (Nash, 1982, p. 63). The results showed that it could, although positive intention produced a more significant result than negative intention. Nash’s experiments provide a clue that intention can do harm, and that it can be value weighted.

In their critique of the STEP study, Krucoff et al. (2006) agree saying, “Leading researchers such as the STEP team should be underlining the imperative that . . . even well intentioned intercessory prayer . . . must be scrutinized for safety issues at an equal or even higher level than efficacy measures if medically important and useful knowledge in this arena is to truly step forward” (p. 764).

If one considers the STEP study, for example in this “can prayer harm” context, the relevance of the issue to good protocol design becomes clear. Let’s imagine what the results of the STEP experiment might have been under three conditions: (1) if prayer is effective, (2) if prayer is ineffective, or (3) if prayer is harmful:

1. *If prayer is effective*, groups A and C should have benefited equally from it, with C having the added benefit of the placebo response owing to the certainty of

receiving prayer. Group C, then, should have had the best clinical outcome of the three groups. This was not the case; C had the worst outcome. So “effective prayer” is unable to explain the outcome of the STEP study.

2. *If prayer is ineffective*, it should not have exerted any effect on any of the three groups, but group C should have done better because of the certainty of receiving prayer, thus benefiting from the placebo effect. But group C did the worst of all the groups. So “ineffective prayer” is unable to explain the outcome of the experiment.
3. *If prayer harms*, both A and C should have demonstrated worse outcomes than B, which was spared prayer, in which case B would have done better than the other two groups. But B responded equally with A. Therefore, harmful or negative prayer cannot explain the results of the STEP study.

The STEP researchers essentially ignored the possibility that prayer might be harmful in their report, simply saying that the worst outcome in group C “may have been a chance finding.” They were taken to task for this in Krucoff et al. (2006) in the *American Heart Journal*. The criticism is appropriate in view of the anthropological evidence that negative beliefs and intentions can be lethal (curses, hexes, spells), as well as the controlled laboratory studies showing that negative intentions can retard or harm living, nonhuman systems (Dossey, 1997).

What other possible explanations are there for STEP’s outcome?

Extraneous Prayer

Randomized, controlled studies in prayer in humans acknowledge that patients in both treatment and control groups may pray for themselves and that their loved ones may pray for them as well, but it is assumed that the effects of this extraneous prayer is equally distributed between the intervention and control groups and does not create statistical differences between the two. This assumption may or may not be true, and in any case does not eliminate the problems posed by extraneous prayer in controlled studies. The positive effects of extraneous prayer, if they exist, may diminish the effect size between the two groups, therefore limiting one’s ability to detect the effects of assigned prayer in the intervention group. As one of the coauthors of the STEP study said in a news release from Harvard Medical School, “One caveat [of STEP] is that with so many individuals receiving prayer from friends and family, as well as personal prayer, it may be impossible to disentangle the effects of study prayer from background prayer” (Harvard Medical School Office of Public Affairs, 2006).

An analogy would be a pharmaceutical study in which the intervention group is treated with 10 mg of the drug being tested, and the control group with 9 mg. Even if the medication were effective, could the effect be detected?

No one knows how extraneous prayer could be eliminated in human prayer-and-healing studies. It may be impossible to do so, especially in American culture, where the great majority of individuals pray routinely when they are *well*. Trying to eliminate prayer in a control group may be unethical as well, for who has the right to extinguish personal prayer and prayer by loved ones during sickness? In contrast, extraneous prayer can be handily eliminated in nonhuman studies involving animals, plants, or microbes. They presumably do not pray for themselves, and neither do their fellow beings pray for them. In these studies, one often sees profoundly positive effects of healing intentions (Dossey, 1993).

Randomization Differences

In May 2008, Ariel et al. examined the demographic differences between the three groups in the Harvard study and found that group C, which had the highest rate of postoperative complications, may have been predisposed to do worse. This group had a higher incidence of chronic obstructive pulmonary disease (emphysema and chronic bronchitis), a higher incidence of smoking history, a higher rate of three-vessel coronary bypass surgery, and a lower rate of beta-blocker use prior to surgery, which many experts consider to be cardio-protective during coronary bypass surgery, when compared with the other two groups. For a fair trial of prayer, the study should have established a level playing field between all three groups through proper randomization, such that no group was worse off than any other going into the study.

Psychological Factors

The overall design of the study may have created psychological dynamics in groups A and B that could have led to the results that were observed. Patients in A and B were told they might or might not be prayed for by the intercessors. Think for a moment what this means. Surveys show that around 80 percent or 90 percent of Americans pray regularly when they are well, and it can be assumed that even more pray when they are sick. Faced with the prospect of being denied prayer in the study, the subjects in A and B may therefore have aggressively solicited prayer from their loved ones to make up for the possible withholding of prayer in the experiment, and they may have redoubled their personal prayers for themselves. Thus, a paradox may have resulted in which A and B received more prayer—not less—than C, even though this was not the intent of the study. If prayer is effective, this additional unforeseen, extraneous prayer may have lifted A and B above C in terms of clinical outcomes, accounting for the study's results.

Another possibility is that patients in group C, who knew that many outsiders were praying for them, felt stressed and pressured to do well. Moreover, "It might have made them uncertain, wondering, 'Am I so sick they had to call in their prayer team?'" said cardiologist Charles Bethea, MD, a member of the STEP research team (Cromie, 2006, p. 2). "We found increased amounts of adrenalin, a sign of stress, in the blood of patients

who knew strangers were praying for them,” said STEP researcher Jeffrey A. Dusek, PhD, associate research director of Harvard’s Mind/Body Medical Institute at Massachusetts General Hospital. “It’s possible that we inadvertently raised the stress levels of these people” (Cromie, 2006, p. 2).

For many believers—including believing researchers—the idea that prayer might harm is a horrifying consideration. Yet, as we have noted, it is completely consistent with both ethnohistorical traditions—negative prayer outcome is an iconic part of voodoo, and it can be found in the Tibetan *Bön* faith—as well as the major scriptural texts of several religions, including Christianity.

The Bible is full of events in which people and things were harmed or killed when people invoked prayer for destructive ends. In the New Testament, Jesus cursed and killed a fig tree (Matthew 21:9; Mark 11:13–14, 20–22). The apostle Paul cursed a sorcerer and made him blind (Acts 12:11). In the Old Testament, the prophet Elisha cursed 42 children and caused them to be devoured by bears because they made fun of his baldness (II Kings 2:23–24).

Although not often acknowledged as such, veiled negative prayer is very much a part of our culture. To cite an obvious example: When you pray for victory in the current second Iraq War, are you explicitly praying for the defeat, destruction, and the killing of those who oppose us? Do you think others might be doing this, and if so, how prevalent do you think this is? A 1994 Gallup poll found that 5 percent of Americans explicitly admitted to praying that harm will come to others—and that’s only the 1 in 20 who will own up to it (Gallup, 1994). Television and history tell us daily that death and destruction are the handmaidens of victory in war. Can there be any doubt that some prayers for victory hold an implicit negative intention toward the opponent? The truth is, although we do not want to admit it explicitly, we consider prayer as capable of harm as good.

The placebo literature also shows this. As long ago as 1955, physician Henry Beecher admonished researchers to pay attention to the negative aspects of intention expressed as a “nocebo” effect, saying, “Not only do placebos produce beneficial results, but like other therapeutic agents they have associated toxic effects. In a consideration of 35 different toxic effects of placebos that we had observed in one or more of our studies, there is a sizable incidence of (such) effects attributable to the placebo” (p. 1605). What is not known is what aspect of intention is local and what is nonlocal.

Experimental data, placebo evidence, and ethnohistorical and religious traditions all point in one direction. Intention can be expressed in both positive and negative ways. It is increasingly clear that this reality needs to be better understood and incorporated into study design. We also need to study the differences between positive and negative intention and how they manifest. The STEP study was silent on all this, as are all too many other research efforts.

Healers, Rituals, and Prayers

We know very little about what qualifies a person to successfully express therapeutic intention as a healer. Most investigators believe that the sincerity and genuineness of prayer must surely make a difference, but in most prayer experiments these factors are merely assumed without being rigorously assessed. In contrast, the skills of the cardiac surgeons in the STEP study were not assumed; the surgeons had met stringent objective requirements that qualified them for their role. Intention/prayer must incorporate these kinds of considerations into experiment design. One place to begin might be employing empathy rating scales like those used to rate the empathic capacity of therapists who work as caregivers and counselors (La Monica, 1981). Or, if children and parents are involved in an intention study, perhaps the Parent-Child Relationship Inventory (Coffman, Guerin, & Gottfried, 2006). And there are sure to be other considerations that may affect outcome. The point here is that a number of useful measures have already been established and may be of use in intention/prayer research. Research teams should incorporate specialists in these areas.

Ethnohistory and anthropological research suggest that the role of form and ritual is important to understand. Yet few intention studies consider this. Left to themselves, people generally pray according to the dictates of their heart. In the STEP experiment, although intercessors were free to pray as they saw fit, an 11-word prescribed prayer was required of all of them. In other studies, the expression of therapeutic intention is more free form. What role does form of expression play in these studies?

There is also the issue of God. Some intercessors follow a nondirected or “Thy will be done” approach in prayer, whereas others are more comfortable with a more traditional, formally religious, directed form in which they pray for a specific outcome according to their religious belief. Some presume no involvement of a deity at all, as in therapeutic touch. What is the role of religious belief?

Experience and the role of intention-focusing disciplines, religious or secular, are also factors that have received inadequate study. In a study looking at changes in the molecular structure of water exposed to healing intention, Schwartz (2007) compared the performance of two subpopulations: one consisting of individuals who defined themselves as healing practitioners, and had some established approach to expressing their intention, and a second group who had never done such work or even considered it. Each sample was independently significant, but the experienced practitioners were much more effective (experienced, $p = .001$; naive, $p = .04$; Schwartz et al, 1990). The comparison showed, “Those who trained in some kind of therapeutic technique, and characteristically involved themselves in such activities, produced more significant results than those who had not undergone such training or who did not characteristically involve themselves in such activities, although even with no training, or regular practice, it is possible . . . if the intent is strong” (Schwartz, 1990). This study looked at changes in the structure of water, but clinical studies support the same conclusion. Some of the most effective healing studies employed dedicated healers with decades of experience. To us this suggests expressing effective healing intention

may be a skill set attained like any other. That is, one's innate talent can be more effectively expressed by mastering a technique to enhance it, and then practicing it.

One place to begin research into techniques is by examining the meditation literature—both ancient and modern. One ancient source of particular interest is the Patanjali Yoga sutras, which date at least to the 2nd century BCE (Patañjali, 1998). The Sutras speak at length about moving into nonlocal awareness through meditation.

Braud, who has made a particular study of this, notes: “The sixth, seventh, and eighth ‘limbs’ of ashtanga Yoga are *dharana* (concentration), *dhyana* (meditation), and *samadhi* (profound absorption), respectively” (Braud, 2008, p. 228).

The Patanjali source refines this further: “The repeated continuation, or uninterrupted stream of that one point of focus is called absorption in meditation (*dhyana*), and is the seventh of the eight steps (*tatra pratyaya ekatanata dhyanam*)” (Yoga sutras of Patanjali, 3.2. n.d.). Braud continues:

When these three are practiced together, the composite process is called *samyama*. *Samyama* might be translated as *constraint; thorough, complete, or perfect restraint; or full control*; it might also be translated as *communion* or *mind poise*. *Samyama* conveys a sense of knowing through being or awareness through becoming what is to be known. Through mastery of *samyama* comes insight (*prajna*), and through its progressive application, in stages, come knowledge of the Self and of the various principles of reality (*tattvas*). With increasing yogic practice come a variety of mystical, unitive experiences, states, conditions, or fulfillments—the various *samadhis*—along with the attainments or powers (*siddhis*).

(W. Braud, private communication, October 2008)

Although couched in Eastern terms, the Sutras describe the same insights and processes concerning nonlocal functioning that have been elucidated by a modern peer-reviewed meditation literature too large to cite—including papers and a best-selling book, *The Relaxation Response*, by Benson and Klipper (2000).

Meditation is also potentially important because it produces placebo-like effects, as Benson et al. (1990) reported. In a small study, Buddhist meditators using several different meditative practices were able to raise their resting metabolism (VO₂; up by 61 percent) or lower it (down by 64 percent; Cromie, 2006). The reduction from rest was the largest ever reported when the paper was published in 1990. On the electroencephalogram measure, there was marked asymmetry in alpha and beta activity between the hemispheres, and increased beta activity (Cromie, 2006).

Honorton (1981) carried out a study explicitly to explore this linkage of Patanjali and modern research involving nonlocal phenomena. Radin, for several years now, has been conducting an online experiment involving nonlocal awareness expressed through several protocols. It is a study that now has a baseline of data numbering into the millions of trials. He reports that the strongest predictor of success with his protocols is whether the person participating is a meditator (Radin, n.d.). Therapeutic intent, expressed through

intercessory prayer, is another manifestation of nonlocal consciousness and, not surprisingly, prayer and some kind of discipline to develop focused awareness is a part of almost every spiritual tradition.

It seems obvious to us that understanding the role of mind-altering disciplines such as meditation may have much to say to intention/prayer research. Like placebo research, meditation research tells us about the power of intention to produce psychophysical effects. Understanding this will help us comprehend how healing occurs. Is it something the intercessor does, or is it something stimulated by the healer but activated by the recipient, much like a placebo response?

The STEP study paid little heed to any of this and, once again, is representative of intention research as a whole. It drew no attention, for instance, to the fact that the study did not generate the expected placebo response among the participants who knew for certain they were the focus of prayer intention. This is an odd lacuna, given that Benson is one of the pioneers of both placebo and meditation research and, as long ago as 1975, entitled one of his papers, “The Placebo Effect—a Neglected Asset in the Care of Patients” (Benson & Epstein, 1975).

Evidence Ignored

To place the STEP study in context, one would expect that critics and analysts would cite and compare it with earlier prayer studies that reported positive outcomes. This has not happened. Study of the Therapeutic Effects of Intercessory Prayer has become such a marked feature of the healing intention debate that it often goes unchallenged and is assumed to be the final word. This seems an undeniable bias—a position counter to accepting science’s fundamental commitment to go where sound data lead. Why is this area of inquiry so threatening, particularly positive studies of intention/prayer? We think it is because it requires extending our concept of consciousness to include the nonlocal; it gives us a model that is not exclusively physiological. How can this bias be seen as any different than the creationist’s dismissal of all evolutionary science in the service of his bias? Why is this not a form of scientific superstition? In response to the critics’ eagerness to declare the further study of intention expressed through intercessory prayer moribund, we say, look at the data. And look across the spectrum of science. Consider, for instance, the “Quantum Cooperation of Insects,” reported by Austrian scientist Johann Summhammer (2005), which suggests nonlocal linkage between insects, a provocative new area for further study. And the last several years have seen many papers involving quantum physics, largely in the context of Bell’s theorem (Bell, 2004) and string theory (Josephson, 2003), in which observer effects are fundamental.

Even within just the medical literature, the research is compelling to the objective observer. Wayne B. Jonas, former director of the National Institute of Health’s National Center for Complementary and Alternative Medicine, and his colleague Cindy C. Crawford, recently surveyed the literature for studies involving prayer and directed

intentions (Jonas & Crawford, 2003). They discovered 80 randomized controlled trials in humans and 122 controlled laboratory studies involving cells, tissues, animals, plants, microbes, and inanimate devices such as random number generators. Using accepted Consolidated Standards of Reporting Trials criteria specifically designed to allow readers to understand and compare protocol design, procedure, analysis, and the interpretations advanced, to evaluate the quality of medical research, they found that the laboratory intention studies merited an “A” or “good” grade, and the human trials a “B” or “fair grade.”

In addition to the Jonas and Crawford review (2003), many systematic and meta-analyses have been published, nearly all of which are positive (Dossey & Hufford, 2005). Most of the prayer-and-healing studies are abstracted, reviewed, and analyzed by psychiatrist Daniel Benor in his book *Healing Research* (2002).

How to Do a Prayer Study

Four months before the Harvard study was published, mind-body researcher Jeanne Achterberg, a veteran explorer of indigenous healing methods and the role of imagery and visualization in health care, published an experiment incorporating many of the propositions we raise here (Achterberg et al., 2005). The work of Achterberg and her team was ignored by the nation’s media, which, we believe, was a shame, because it is the kind of next-generation study needed if we are to more fully understand the effects of intention. That the study of Achterberg et al. (2005) with its positive findings was overlooked, whereas the ambiguous STEP study received international attention, we suggest, is not a coincidence but another expression of the bias we have discussed. Achterberg’s work began with an attempt to understand the culture of the people with whom she would be working and to find a way to incorporate their worldview into a rigorous, meticulously designed, modern scientific protocol without compromising either, which is exactly the sort of approach we think will lead us to real understanding concerning intention/prayer. This led her to the island of Hawaii, where she spent 2 years observing the culture and healing methods of indigenous healers, many of whom took her into their confidence and shared their healing methods with her.

Achterberg was interested in exploring whether healers can exert a positive influence on a distant individual with whom they have no sensory contact, as healers universally claim. She and her colleagues at North Hawaii Community Hospital in Waimea recruited 11 indigenous healers to participate in a healing experiment (Achterberg et al., 2005). The healers were not casually interested in healing; they had pursued their healing tradition for an average of 23 years. Each of them was asked to select a person they knew, with whom they had previously worked professionally, and with whom they felt an empathic, compassionate, bonded connection, to serve as the recipient of their healing intentions. Although the researchers summarily referred to the various healing endeavors as distant intention, the healers themselves described what they did in specific ways—prayer, sending energy, good intentions, or wishing for the highest good.

Not only was Achterberg cordial to the idea of remote healing as a result of her prior ethnological work, but she appreciated and respected both how the healers understood what they were being asked to do and why the sociocultural context of the experiment favored its success. The Big Island of Hawaii is often called “the healing island.” There, prayer is “in the air”; its effectiveness is assumed. In essence, Achterberg had explicitly designed her study to deal with Benson’s beliefs and expectations of the “physician” healer, the beliefs and expectations of the “patient,” and the relationship of healer and recipient. We particularly single out the Achterberg study because although she was sensitive to the cultural aspects of this experiment, she made no concessions concerning rigor in her protocol. Each recipient in Achterberg’s study was isolated from all forms of sensory contact with the healer and placed in a functional magnetic resonance imaging (fMRI) scanner. The healers then sent their various forms of distant intention to their participants at random, 2-minute intervals that could not have been anticipated by the recipient. When the fMRI brain scans of the participants were analyzed, significant differences in brain function were found between the experimental (send) and control (no-send) conditions. There was approximately 1 chance in 10,000 that these differences could be explained by chance ($p = .0001$). The brain areas that were activated during the healing, or send periods, were the anterior and middle cingulate, precuneus, and frontal regions (Achterberg et al., 2005). When the experiment was repeated, using participants with whom the healers felt no empathic bonding, no significant fMRI changes were found in the recipients during either the send or no-send conditions (Achterberg et al., 2005).

This study suggests that compassionate, empathic healing intentions and prayer can exert measurable effects on a distant recipient, and Achterberg’s study does not stand alone. Several earlier experiments demonstrated correlations in brain function between empathic individuals who are widely separated and who have no sensory contact with each other (Duane & Behrendt, 1965; Radin, 2004; Standish, Kozak, Johnson, Johnson, & Richards, 2004; Wadkerman, Seiter, Keibel, & Walach, 2003).

If there was one thing we could have wished included in Achterberg’s study, it would be monitoring to ascertain whether, and in what time frame, therapeutic intention altered the course of an illness. Several other studies suggest that this will be a fruitful area for future study.

Future Directions

Therapeutic intention expressed through prayer is now and always has been a universal human activity. We wear different clothes. Speak different languages. Eat different foods, spiced by different condiments, consumed using different implements. We worship different Gods, with different rituals. But the overwhelming majority of us not only believe but operationalize some way of opening ourselves to a greater whole to express therapeutic intention. We pray. Individuals or minority cohorts may dissent, but it is hard to look across the millennia, seeing therapeutic intention expressed in any one of a thousand ways, and conclude that intention effects, such as those claimed for prayer, are

only delusion. Yet, for the skeptics, none of this—neither carefully controlled research nor universal practice—seems to evoke the slightest curiosity. To us it seems long past time to ask skeptics to justify their positions by providing not polemics but careful methodological criticism to justify their assertions.

The positive outcomes of prayer research require a new view of consciousness. The conventional local view of the nature of human consciousness, in which the actions of consciousness are confined to the individual brain and body, must eventually yield to a more comprehensive, nonlocal view in which consciousness also acts beyond the brain in ways that transcend direct sensory contact between humans (Dossey, 1989, 1999).

Just asking questions about prayer distresses many religious individuals, who fear that the sacred act of prayer may be swamped and profaned by being examined by what they see as a Godless science, which they consider practically demonic. This is a groundless fear. Therapeutic intent research may tell us how the process works, but in no way does it either prove or disprove the existence of God. This remains as always an illumination of faith and gnosis.

Researcher William Harris and his colleagues, in their 1999 study of prayer in heart patients, suggest that God cannot be either affirmed or denied by prayer research. They say, “We have not proven that God answers prayers or even that God exists. . . . All we have observed is that when individuals outside the hospital speak (or think) the first names of hospitalized patients with an attitude of prayer, the latter appear to have a ‘better’ CCU experience” (Harris et al., 1999, p. 2277).

The inability to specify divine action in a prayer study is fortunate, because this discourages any specific religion from using prayer experiments to claim superiority over other faiths. Another way of inhibiting claims of superiority by specific religions is to openly study this issue by using intercessors from various religions in prayer experiments, thus replacing speculation and assertion with data. This is the custom followed in the high-profile MANTRA studies at Duke University Medical Center. In the pilot study, prayer groups around the world prayed for people undergoing urgent cardiac catheterization and angioplasty (Harris et al., 1999). The prayed-for group had 50 percent to 100 percent fewer complications (bleeding, arrhythmias, death, etc.) than the group not assigned prayer (Krucoff et al., 2001). In other experiments, healers have been both secular and nonsecular (Achterber et al., 2005). Thus far, there is no compelling evidence from prayer studies that any particular faith enjoys an advantage over any other. Rather, prayer experiments seem to democratize and universalize prayer. They affirm religious tolerance, and that, we believe, may be one of their most valuable contributions.

One area of remote healing research that is particularly productive currently is hypothesis development. Although there is no consensus about how these nonlocal, consciousness-related phenomena occur, hypotheses abound and have been offered by a variety of scholars, including Nobelists, in physics, mathematics, and neurobiology.

Those who prefer theological explanations for prayer’s workings need not worry. Physically based theories of how prayer may work are not incompatible with transcendental

explanations, just as Darwinian explanations do not rule out operations of the Divine through evolutionary processes.

Is the STEP study an obituary for prayer research, as many claim? Following the premature publication of his obituary in the *New York Journal* on June 2, 1897, Mark Twain wrote, “The reports of my death are greatly exaggerated.” So, too, with reports of the death of prayer research. In fact, in our view, we are just beginning to understand the right questions to ask.

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The Neuroscience of Savant Syndrome, Enlightenment, and Other Extraordinary States

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Abstract

The profound memories of people with savant syndrome cannot be explained by neuroscience's current model. Similarly, neuroimaging of severely hydrocephalic individuals with superior IQs suggests that neural circuitry might not be what stores memories. Instead, our brains might simply be navigational tools for informational fields. Since antiquity, individuals have reported seeing consciousness fields, or energy bodies, around us in the shape of a torus. Neuroscience has ignored these biofields in its model, but if information can be encoded holographically in them, this could explain the abilities of savants and psychics to access nonlocal information. The updated model proposed here suggests our brains could be performing an analogous function to what electronic devices do when we navigate the Cloud. Electromagnetism and light do play a central role in brain function, as revealed by the functional properties and locations of these lesser-known brain components: neuromelanin, magnetite, microtubules, biophotons, glial cells, ventricles and electrical synapses.

Key Words: enlightenment, savant syndrome, mind/body, consciousness fields, neuromelanin, magnetite, microtubules, biophotons, glial cells, torsion

Neuroscience 2.0: A Postmaterialist Model

"Materialism" is the name of the dominant model for understanding consciousness that was adopted by neuroscientists. It arose because the scientific method required the removal of subjectivity from the process of discovery. Thus, it rendered us a model that has become increasingly materialistic, or focused upon the material components of the brain for answers to questions about consciousness. As a result, materialism has led to a highly secular view of what it means to be human, and suggests we are nothing more than biological robots. This is not only a dismal perspective with potentially dangerous consequences, it leaves the most intriguing questions unanswered. If we are just bags of chemicals that mechanically react according to our programming along predetermined laws of nature, it is hard to explain how we can be truly creative or exercise free will. We are also left wondering how each of us has such a persistent sense of being an "I" who

perceives and responds to the world around us. Rather than accept materialism, it is worth exploring alternative approaches to our ageless questions.

If one takes a deep dive into the sciences, it becomes apparent that much of the wisdom from ancient traditions might be valid. For example, Hinduism tells us that everything is *Maya*, or an illusion, but we are fooled into mistaking it for reality. One of our brain's main functions is to use sensory data to fabricate an approximation of reality, which is never the real reality. We experience this reality as happening outside our bodies, and usually occurring in the here and now. We are continuously fooled into confusing this fabrication with reality itself, because all our senses seem to align perfectly with our physical environment. Even though our perception of reality differs considerably among us, we rarely recognize this, and it can be seriously distorted by our expectations and beliefs. For example, in anorexia nervosa, a cachectic person who believes they are fat will actually see themselves that way when looking in the mirror.

The degree to which our brains can fabricate a visual reality is demonstrated by our visual blind spots. All vertebrates have blind spots because there aren't any photoreceptors at the back of our eyes where the optic nerves exit. Blind spots aren't perceived as black holes in our visual fields, because our brains can automatically function like a sophisticated computer graphics program that uses adjacent information from our visual fields to fill in the holes with matching colors and textures. The discrepancy between what we see and physical reality isn't usually a problem unless something such as a truck enters our blind spot and we move in front of it.

A common phrase among those who follow certain spiritual traditions is: "We create our own reality." Our reality does become that which we choose to focus upon and expect to happen, but a more literal interpretation can also be applied. Physics tells us that when our consciousness interacts with the material, it defines it. An electron and a photon stop behaving as waves of potential to become particles when they are observed, because the mere act of paying attention defines their outcome. Our bodies are loaded with receptors for differentiating light and other frequencies of electromagnetism, which we experience as our senses. As sentient human beings, we are constantly measuring and observing.

An example of how radically individuals can differ in processing capacity is our mind's eye, an internalized visual fabrication of reality frequently described as occurring inside one's forehead. Some visual thinkers can manipulate objects in their mind's eye just as well as they can rotate real objects in three-dimensional space. Nikola Tesla's generation of mental imagery was so powerful that he first built, and tested, complex machines using only his mind. Most of us don't have the ability to visualize inventions, but we can recall the appearance of someone's face. This can be so easy for us that we take it for granted, which is why it was a shock to Neurology Professor Adam Zeman to discover that approximately 1 in 50 people are born without this ability. He also discovered we can have it and then lose it, as happened to one of his patients after heart surgery (Zeman, 2015).

Savant Syndrome and Its Scientific Implications

A new model would need to be able to explain many scientifically documented phenomena that are currently either ignored or rejected, because neuroscience cannot account for them. For example, materialism has no explanation for many of the abilities of “savants,” which is Latin for “people who know.” Savants are so-named because they demonstrate remarkable cognitive feats, but the catch is they don’t possess the associated underlying basic skills. For example, many savants perform calendar calculation, which is the ability to almost instantaneously tell you what day of the week any date would fall on, often for a span of thousands of years, but they don’t even know how to add or subtract. The answers just come to them.

The direct perception of answers that is described by savants might suggest that their brains are capable of quantum computation. That form is exceptionally fast, because it derives an answer by simultaneously considering all possibilities before choosing one, rather than deriving the answer through a series of sequential steps. Making a choice would entail “collapsing the quantum wave” of potential answers. However, although scientists agree that quantum physics appears to have an application in biology, they still debate where this “collapse” might occur. Nonetheless, even if the location for it were known, quantum computation couldn’t explain all scientific observations.

Our model also needs to reject that which was based upon assumptions with little to no evidence, build upon the old by retaining that which has solid evidence, and include that which has evidence but was previously rejected purely for theoretic reasons. The correct theory is one that can comfortably explain everything, as astonishing as it might be. In order to better explain consciousness, some philosophers and scientists have proposed something very radical: The major flaw of materialism might be its most basic assumption itself, that the brain is what generates consciousness. That is a shocking notion to neuroscientists. Materialism is so engrained in our education, its basic assumption is usually unquestioned, and even treated as a fact. Nonetheless, the mechanism by which the brain could create consciousness is so elusive it creates what David Chalmers calls the “hard problem of consciousness”: How could something as seemingly immaterial as consciousness arise from something as physical as a brain (Chalmers, 1995)? If the basic assumption behind materialism is incorrect, the “hard problem” disappears.

Clues toward this new model can be found in the remarkable stories of savants. Their extraordinary gifts often entail having such a profound ability to effortlessly recall information, that it suggests our model for memory and learning is wrong. Autistic savant Daniel Tammet has difficulty with many daily tasks, but he can recite the constant pi to 22,514 digits in five hours and nine minutes because the numbers just appear to him as a parade of various colors and shapes. He says each number up to 10,000 has its own unique shape, color, texture, and feel (Tammet, 2007). He has synesthesia, which is common in savants, and has a variety of forms. Each form blends more than one type of sensory input together, such as sounds with colors, or combines a primary sense with symbols, such as

seeing red around the letter D. Synesthesia appears to aid memory, because a pattern of colors can be much easier to remember than a series of numbers.

However, not all savant skills can be explained by a superior memory. Sometimes they have no history of exposure to the information. Mathematical savants are an example. They excel at solving complex equations at a “lightning speed,” but they usually have no ability to do simple math. One of the first to be discovered was Zerah Colburn. He was born in Vermont in 1804, and just before turning six years old, he astonished his father by repeating calculations for no apparent reason. Zerah had not been taught how to do math, or even how to write. Nonetheless, he could accurately provide the answers to very complex mathematical problems. The following is a brief description of his feats:

He was asked the square root of 106929, and before the number could be written down, he immediately answered 327. He was then required to name the cube root of 208,336,125, and with equal facility and promptness he replied, 645. One of the party requested him to name the factors which produced the number 247483, which he immediately did by mentioning the two numbers 941 and 263 (Colburn, 1833).

Another striking example of savant syndrome is the case of a pair of autistic identical twins, John and Michael, who were studied by Oliver Sacks in the 1960s (Sacks, 1998). They instantaneously generated several digit prime numbers, which are defined as those only divisible by themselves and one. Calculating primes requires a significant number of mathematical steps, and can't be done quickly. However, instead of deriving the answers, the twins described the numbers as just visually appearing to them. They could effortlessly give consecutive prime numbers of up to, and including, 20 digits, which far exceeded the 12-digit computational capacity at the time.

John and Michael could also tell you the day of the week for any date spanning 80,000 years, forward or backward, as well as the dates for Easter. Their capacity for calendar calculation exceeded any algorithms for it. The twins also had the ability to accurately count large numbers of objects at a glance. When a box of matches accidentally spilled onto the floor, Sacks (1998) heard them spontaneously say the number “111,” in unison, which was the exact count.

Savants might sound like geniuses, but this is not always the case. Kim Peek, the savant after whom the movie “Rainman” was modeled, possessed a phenomenal memory, especially for factual information. By the time he died in his late 50s, Kim had memorized more than 10,000 books, and could recite them word for word, forward and back. He could also give driving directions between almost any two cities in the United States and perform calendar calculations. Nonetheless, his IQ was tested and found to be 87, 13 points below average (Treffert & Christensen, 2005).

Kim's intelligence scores were not the only surprise to researchers. Kim could also read two books simultaneously, one with each eye (Treffert & Christensen, 2005). When

his brain was imaged as an adult, it was found to contain a large central cavity. Kim has been assumed by many to have been autistic, because most savants are, but he was born with hydrocephalus, or “water on the brain.” Hydrocephalus shares many clinical features with autism, but the cause is very different. In hydrocephalus, cerebrospinal fluid accumulates and builds up pressure in the brain’s ventricles. That causes the brain to be pushed against the skull, which can expand to accommodate the increased pressure if the sutures haven’t yet fused. Kim’s skull expanded so much as an infant that his head was too large and heavy for him to be able to hold it upright in his early years. His brain lacked the corpus callosum and other neuronal axons that ordinarily unite the two cerebral hemispheres. Perhaps this separation somehow made parallel visual processing possible.

Kim is not alone in defying our sense of what a brain should look like given someone’s abilities. British neurologist John Lorber examined more than 600 patients who were born with hydrocephalus. One was written about in *Science* (Lewin, 1980). Dr. Lorber had divided his patients into four groups. The most interesting were the 10% who were the most severe, having 95% of their cranial cavity filled with cerebrospinal fluid. To his surprise, only half of these were profoundly retarded. The remaining half had IQs greater than 100, the average IQ for the general population. Some even had superior IQs, despite having barely any cerebral cortex. If the exception determines the rule, as it should, neuroscientists need to stop their continued focus on the cortex as the place where higher thought processes occur.

Our current theory for memory requires intact circuitry, which is disrupted in many of these hydrocephalic individuals. In this theory, specific neurons are activated when acquiring a memory, which is supposedly maintained by the enduring physical or chemical changes that result from activation. This memory is recalled when these neurons are subsequently reactivated by a particular sight, smell, or other trigger. If this theory is correct, people with severe hydrocephalus shouldn’t be able to demonstrate superior cognition.

An earlier version of this synaptic theory for memory fell into disfavor long ago, as the result of work by Harvard psychologist Karl Lashley. After teaching rats a task, he surgically removed tissue from their brain’s outermost layer, the cortex, to determine which areas were essential for retaining that memory. To his surprise, the location from which the brain material had been removed didn’t matter, but the total amount removed did (Lashley, 1950). In other words, the memory appeared to be distributed throughout the brain’s cortex. However, Lashley’s conclusions have since turned out to be overly simplistic. Information gained from learning a task may have a redundant representation in the brain, but factual information, such as our vocabulary, is stored differently. It appears to be highly organized in a specific location. For example, a small stroke can selectively wipe out our memory for all of the words for vegetables, while leaving the rest of our vocabulary intact.

The neocortex is the evolutionarily newest area of the brain involved in memory, but it is not responsible for the consolidation of memory. That is ascribed to the hippocampus,

an ancient structure that is essential for navigation of both physical and mental space. The hippocampus is also part of the limbic system which regulates emotional reactions to specific stimuli. Neurosurgeons at UCLA recorded the activity of specific neurons in the hippocampus which will selectively fire only when images of a specific famous individual, such as Bill Clinton or Jennifer Aniston, are shown. What is remarkable is that the same cell will fire when the image shows the face from any angle, at different ages, and even if it is just a caricature (Quiroga et al., 2005). In other words, the abstract concepts related to recognition of someone's identity appeared to be encoded in the circuitry of our evolutionarily oldest part of our brains, not our neocortex, which might be more responsible for grainy details.

Kim Peek's brain suggested the possibility that memory itself might not actually be encoded in the brain but rather might be merely accessed or detected by it. The brains of some other species also pose significant challenges to the synaptic theory for memory. A moth's brain is essentially liquefied during its transformation in the cocoon. Although only a small number of neurons are left intact, it can retain memories obtained as a caterpillar (Blackiston et al., 2008). Similarly, planarian flatworms can retain conditioned responses acquired before being decapitated and growing a new head (Shomrat et al., 2013). If memory is stored in neurocircuitry and synapses, neither of these would be expected. Instead, both studies suggest such information might be stored elsewhere. One possibility is in a biofield that also directs the organism's regenerative and/or transformational development.

Another source of potential clues toward a new understanding is "acquired savant syndrome." This rubric applies to ordinary people who have reportedly become gifted after head injury. One of the most famous acquired savants is Jason Padgett, a former futon salesman who was severely beaten after leaving a karaoke bar. While recovering in the hospital, he suddenly became obsessive over tiny details and started noticing intricate shapes in otherwise everyday objects. He quickly became a successful artist who calms his "overstimulated mind" by drawing fractals (Padgett & Seaberg, 2014).

Orlando Serrell is another example of an acquired savant. He was 10 years old when he was momentarily knocked unconscious after a blow to his head while playing baseball. Afterward, he suddenly had the ability to do complex mathematical equations. His memory also vastly improved. For any given date, following his accident, he could tell you the day of the week, temperature, and his exact whereabouts (Treffert, 2010).

Being struck by lightning can also result in savant skills and is considered by many indigenous cultures to be a means of initiating shamans. For Anthony Cicoria, it brought him musical fame. He was chatting to his mother on a payphone when lightning struck the phone booth and shot through the phone into his head. A nurse happened to be nearby waiting for the phone and was able to resuscitate him. After this, he developed a new interest in music and started teaching himself how to play piano. Within three months he realized he had already composed dozens of songs in his head (Treffert, 2010).

At first glance, autism, hydrocephalus, head injury, and being struck by lightning share nothing in common, yet they can all result in similar and remarkable abilities. These stories of transformation, from the ordinary to the extraordinary, suggest that we all might have hidden capacities, but our brains somehow block us from accessing them. Savant syndrome also suggests that information might be stored in fields, instead of our brains, similar to the informational cloud accessed by our computers. If this is so, we need to reevaluate other phenomena that are regarded by most scientists as impossible, but are reported widely and could be explained by this alternative model.

Evidence for a Sixth Sense

Abilities such as telepathy and precognition were previously labeled extra sensory perception (ESP), because they imply a sense that operates outside our usual way of detecting, or knowing things. These are not as reliably produced as savant skills, but evidence suggests that they might be just as real (Bem & Honorton, 1994; Powell, 2008; Powell, 2015a; Powell, 2015b; Radin, 1997; Sheldrake & Smart, 2000; Targ & Puthoff, 1974). In fact, they can be brought about by the same conditions discussed above that lead to acquired savant syndrome and were considered to be savant skills by psychologist Bernard Rimland in his study of hundreds of autistic savants (Rimland, 1978). However, because the possibility of ESP is generally dismissed, the scientific evidence for these abilities has been largely ignored.

The automatic dismissal of ESP has been a huge mistake. There are no scientific facts that forbid it. ESP is dismissed only because of our beliefs, which are informed by our personal experiences. This is problematic because we are not all born capable of receiving the same input, and we don't all process information the same way, hence, the dilemma of abilities being regarded as impossible by people who don't experience them and accepted without need of scientific data by those who do. Because scientists are primarily logical and analytical, this might render them less likely to accept, let alone report experiencing ESP, but there are exceptions.

Shafica Karagulla was a neuropsychiatrist in Los Angeles who investigated what she called higher sensory perception in the 1950s. Many of the people Dr. Karagulla investigated needed to remain anonymous, because they were professors, doctors, lawyers, businesspeople, and even government officials. They were highly intelligent, well-educated, and eager to discuss their puzzling and unusual abilities. One subject was a Nobel Prize winner who described how his discoveries arrived. It was "as if a light went off on his head and the information came in a clear flash" (Karagulla & Neal, 1993). Another scientist told her that he saw himself "in moving pictures on the wall in front of him doing things in a laboratory that solved the problem on which he was working." Like many others who were merely describing how their brains worked, he was astonished that she found his experiences unusual (Karagulla & Neal, 1993).

Others examined by Dr. Karagulla seemed capable of precognition. "Dr. George" was a famous surgeon who could foresee the outcomes of his patients. On one occasion, he

was in the operating room when he suddenly changed his mind about where to place his incision. His associate protested, but he went ahead and cut. The choice was fortuitous. The patient's artery was in an uncommon place (Karagulla & Neal, 1993). "Lucia" was a world-famous reporter and commentator during World War II whose war analysis and predictions of next moves won her prizes in her field. When she sat down to write, she saw mental images that came in flashes. Before anyone knew of Hitler's intentions to move into Greece, she saw the map of Europe with the Nazi flag flying over Greece. She made this prediction, which turned out to be right. (Karagulla & Neal, 1993).

Precognition is hard for most of us to comprehend because our sense of time is that it moves like an arrow. Modern physics says this is an illusion, but as Einstein said, it is a very persistent one. If the past, present, and future all simultaneously coexist, the possibility of being able to access events from the future could make sense. However, if the future already exists and we are on a predetermined course, our sense of free will could be an illusion too.

Free Will, the Sensation of "Self," and the Mind–Body Disconnect

In our daily lives, whenever we make decisions, or change a course of action, it reinforces our sense of selfhood and free will. Hinduism teaches that free will and predetermination both exist, but this seems paradoxical. Many spiritual traditions reinforce our strong sense of "self" by their concept of an eternal soul that can be damned if one makes poor choices, which implies we must have free will. In contrast, materialists regard our sense of "self" as purely the result of brain function. They even attempt to identify the basis for it.

Neuroscientist Christof Koch and Francis Crick, the co-discoverer of the helical structure of DNA, spent years searching for a brain structure that could be housing a "seat of consciousness." They chose the claustrum, a thin layer of uniform neurons beneath the cerebral cortex, as the best candidate because stimulation here led to the loss of consciousness. They likened the claustrum to being the "conductor of an orchestra that regulates consciousness and cognition" (Crick & Koch, 2005). However, although the claustrum is well-positioned to coordinate neurons, the presence or absence of consciousness is only one aspect of the complex relationship between mind and brain. A complete loss of consciousness can also be caused by a seizure that spreads across the brain to involve both halves. In other words, stimulating the claustrum might have its effect merely because this location impacts such a large area.

The search for an anatomical location for a "seat of consciousness" could be misguided for many reasons. Our concept of "self" as being housed within our bodies is challenged by out-of-body experiences (OBEs), which have been reported since antiquity and across all cultures. During an OBE a person is able to have a perspective that is impossible from within the body, and their core concept of self, the so-called seat of consciousness, appears to no longer be confined to it. Some people report that they can even obtain nonlocal information, or details about another location in space or time, during an OBE.

As fantastic as this might sound, it might be true. Controlled experiments by psychologist Charles Tart revealed that at least one subject could read a several digit number that was placed out of view during her OBE (Tart, 2009). Similarly, nonlocal information obtained by OBEs was reported in the experiments on remote viewing done at Stanford Research Institute (Targ, 2004).

A stroke can permanently, and dramatically, alter our psychological relationship to our body. If the damage occurs in the right cerebral hemisphere, this can cause a syndrome called “unilateral neglect.” Afterward, the person no longer identifies their left half as belonging to themselves. In an extreme case, one patient tried to throw the left half of his body out of his bed, and then wondered how *he* ended up on the floor.

Our sense of free will can be completely lost or seriously compromised by neurological and psychiatric conditions involving the frontal lobes, which are highly developed in humans. These lobes are associated with planning ahead and thinking of consequences, but that doesn’t mean free will resides there. Increased activity in the frontal lobes can result in difficulty making decisions because of excessive worry and doubt. A severe case of this is sometimes called “analysis paralysis,” which occurs most often in people with obsessive–compulsive disorder (OCD). They have obsessions, which are repetitive thoughts they cannot control, and compulsions, which are behaviors they feel compelled to do. Imaging has shown that their left frontal lobe is invariably overactive.

Frontal lobe damage can cause a person to have the opposite problem and become too uninhibited. A stroke involving this area of the brain can affect behavior and cognition so much that loved ones can feel as though the person they knew had died and was replaced by someone else. For example, an elderly woman who had always been very proper might become seductive and come on to her doctor with the salty language of a sailor. Because of her frontal lobe damage she no longer has her normal filter to control her behavior.

Dr. Strangelove Syndrome, or “alien hand syndrome” (AHS), is when one completely loses control over one of their hands. The hand will still respond appropriately to objects, but not as the result of free will. Both hands can even act at cross-purposes with each other. For example, one hand might be trying to dress you, while the other is trying to take your clothes off. AHS can be caused by a stroke, or it can be created by severing the corpus callosum, one of the bands of neural fibers connecting the left and right cerebral hemispheres. This connection was missing in Kim Peek, so AHS doesn’t occur in someone with this separation since birth. Extensive damage to both frontal lobes can cause the complete loss of control and is sometimes called a “bilateral alien hand syndrome.” In severe cases the person has “environmental dependency syndrome” in which nearby objects compulsively direct their behaviors. For example, if a hairbrush is on the table in front of them, they cannot refrain from brushing their hair (Lhermitte, 1986; Lhermitte et al., 1986).

Another syndrome that demonstrates a mismatch between the mind and body is the “fugue state.” Someone in a fugue state can purchase an airline ticket, board the appropriate airplane, and even obtain an apartment in a new city while their brain and body

appear to be on autopilot. The fugue state demonstrates that we do not require conscious awareness to engage in highly complex interactive behavior that can go on for an extended period of time. The person also has no recollection of what he or she did when they come out of it. This amnesia is not unusual for seizures in the temporal lobe, which is one of the causes of the fugue state. Sometimes temporal lobe epilepsy and/or severe childhood trauma can be so severe it results in a person with a very fragmented self. This condition is now called dissociative identity disorder, but was previously called multiple personality disorder because other personalities seem to take over.

Reverse-Engineering the Brain

We can conclude from the AHS, fugue state, OBEs, and dissociative identity disorder that our sense of self as unitary and synonymous with the physical body is probably incorrect. Furthermore, savant syndrome and the research on ESP suggest that information, including our thoughts, might not be confined to our brains. This means that instead of generating consciousness/information, our brains might primarily be tools for navigating/detecting it, similar to how our electronic devices navigate information within the Cloud. To investigate whether brains might function in this capacity, we will explore the brain's macro- and microanatomy to see what that suggests.

When asked about the brain, most laypeople are only aware of brain cells called neurons and the chemicals (neurotransmitters) they use for communicating with each other, such as serotonin. However, neurons are only a small percentage of brain cells. They became the main focus of neuroscience at the beginning of the last century because they were detected first. At the time, the brain was a hopelessly indistinguishable blob. When cellular staining techniques were initially applied, neurons were what selectively took up the Golgi stain, making their distinct boundaries capable of being seen under a microscope for the first time. The remaining 90% of the brain's cells were transparent with indistinguishable boundaries.

Another reason the more abundant cells were viewed as being of less importance until relatively recently was that neurons were the cells that generated electrical signals, whereas the others seemed primarily involved in providing insulation and meeting the neurons' metabolic needs. The major debate during the 1940s became whether electrical or chemical signaling was the most important for driving neurons. The debate ended when Sir John Eccles discovered the first chemical synapse in 1949. He won the Nobel Prize for his discovery, but ironically, Sir Eccles originally believed neural transmission was primarily electrical. It was only after this discovery, and at the urging of Sir Karl Popper, that he reluctantly conceded to a chemical model. The propagation of electrical impulses was demoted to being the means for stimulating vesicles to release chemical neurotransmitters as chemical "messengers" into the synapses between neurons.

Neuroscience became predominantly focused on synapses, neurotransmitters, and their receptors. This emphasis has persisted in the public's mind, at least in part, because

most psychoactive drugs act via the receptors for neurotransmitters. Many medications actually mimic neurotransmitters to cause their cognitive and perceptual effects. For example, narcotics mimic endorphins, which are described as our “natural opiates.” Other medications, like fluoxetine (Prozac), block neurotransmitter reuptake, enabling more of it to be present in the synapse. Prozac, in particular, altered how the general public thinks about the brain and dramatically shifted the field of psychiatry toward the wider use of medications. This arose because the medication didn’t just treat depression; it brought about changes previously obtained only by long-term psychotherapy. In *Listening to Prozac* (Kramer, 1993), Peter Kramer described Prozac as being like cosmetic surgery for unattractive personality traits. He even wondered if it was ethical to prescribe such medications. Rather than discouraging people from medication, the emphasis in psychiatry became increasingly chemical. Soon thereafter, people started describing moods in terms of their “chemical imbalances,” and researchers proposed roles for neurotransmitters in our individual temperamental differences.

Neurotransmitters are, unquestionably, a major part of our nervous system’s hardware for affecting our moods and controlling biological processes. However, despite identifying many of the associated effects of more than 100 different neurotransmitters and multiple neurotransmitter receptor subtypes, this approach has not really brought us any closer to understanding the mechanisms behind conscious experience. When we get an idea, where does it come from? In order to understand such cognitive processes, scientists are looking more closely at the cells in our brains that they previously ignored.

Glial Cells, the Other 90%

The term “neurotransmitter” is actually a misnomer, because neurotransmitters are also secreted by glial cells, or glia, which comprise the other 90% of brain cells. The name “glia” comes from the Greek word for “glue,” because of the misconception that these cells just held the working neurons of the brain together. However, nature is not as wasteful as to have 90% of our brain cells serve such a minor function; nor is it so reckless as to do this for trivial reasons, especially when the size of our head at birth, relative to the mother’s pelvis, has put babies and mothers at great risk during childbirth.

Glia are essential to neuronal existence. They can exist in tissue culture in a petri dish without neurons, but neurons cannot exist in culture without them. Like neurons, glia come in many types. Glia called Schwann cells create insulation for the neuronal axons, which helps to speed up nerve conduction. Microglia, another type, are closely related to macrophages in the immune system. They clean up and remove faulty synaptic connections, and play a major role in pruning synapses during our brain’s development. They can become overactive in reaction to cytokines released by the peripheral immune system, especially at times when the brain is undergoing major developmental changes and they are already engaged in sculpting the brain. When this occurs, they retract their appendages and change into roaming cells that can cause major damage.

The true stars among the glia are the astrocytes, so named because they are star-shaped. Astrocytes are more than twice as numerous as neurons, or any other type of glial cell, and comprise anywhere from 20% to 40% of our brain. They are our brain's stem cells, which means they generate all of the neurons and glial cells during embryological development. Many astrocytes retain their capacity to become either glial cells or neurons, depending upon what is needed at a later time. This enables them to play a major role in the brain's ability to repair and rewire itself, which had been previously thought impossible. Their ability to respond so precisely in this repair process implies that they are operating according to some road map, similar to the salamander that can regrow its tail.

A single astrocyte in the cortex will connect with 50 to 100 other astrocytes via gap junctions. In contrast to chemical synapses, these enable rapid and seamless signal transmission among them. They function like a multinucleated single cell, which is called a syncytium. The other examples of syncytia are also tissue types where a coordinated response is essential, such as cardiac and skeletal muscles. The glial syncytium appears to actually be coordinating the activity of neurons. In fact, the synapse is no longer thought to consist solely of one neuron connecting with another. We now have the tripartite synapse in which a glial cell appendage envelops the synapse, monitoring and influencing the synaptic space and adjacent neurons (Farhy-Tselnicker & Allen, 2018). This is a paradigm shift that is similar to what occurred with "junk DNA." That material was also about nine times more abundant than our genes, and was also misnamed. It was thought to be merely scaffolding for genes but is now thought to contain the controls for their expression.

Some scientists believe glia are where higher thought processes might actually occur (Koob, 2009). Because glial cells do not have disruptive action potentials, they present a much better candidate for quantum processing than neurons. They also communicate among themselves via gap junctions in the form of electrical waves, which can be triggered by the influx of calcium ions and spread to an area hundreds of times the size of the original astrocyte (Cornell-Bell et al., 1990). This enables significantly faster speeds of processing than neuron to neuron transmission. Astrocytes also have tetrahydrocannabinol (THC) receptors, and THC is known to be psychoactive. When stimulated by THC, glia release calcium, which causes neurons to fire. Astrocytes can also modulate neuronal behavior without input, suggesting an autonomy that is usually not seen in neurons. The calcium waves in astrocytes have been proposed to represent the physical equivalent of our thinking mind (Koob, 2009). Even if this is incorrect, we must conclude that we can no longer ignore glial cells in brain functioning.

Adding to the argument for the importance of glial cells to consciousness is the fact that the proportion of astrocytes in the cortex is greatest in highly intelligent animals. In fact, humans may have the most abundant and largest astrocytes of all species (Vasil et al., 2017). Among humans, the variation in percentage of astrocytes, and their location, appears to correlate with intelligence. The major difference found between Einstein's brain and most other brains was an increase in the percentage of glial cells, primarily near the

left angular gyrus, which is involved in mathematics and symbolic thought (Falk et al., 2013). Similarly, an unusual ring of increased white matter was seen on imaging around the hippocampus of a patient whom Johns Hopkins neuropsychologist Jason Brandt described as possessing the type of phenomenal memory we associate with savants, one where nothing is forgotten (Brandt, personal communication, 2017).

The latest interpretation of familiar brain imaging technology has punctuated the importance of glial cells. The original assumption behind functional magnetic resonance imaging (fMRI), which measures cerebral blood flow, was that an increase in blood flow directly reflected increased neuronal activity. When it was discovered that there were brain areas in which an increased blood flow did not correlate with increased neuronal activity, it temporarily created a crisis of confidence in the 19,000 studies that have used this technology. Many of the functional correlates for specific brain activity continued to hold up, which confused matters further. The dilemma was resolved when it was discovered that glial cells also control cerebral blood flow (Swaminathan, 2008).

Electromagnetism and Biological Systems

In building a new model, there are good reasons to return to Sir Eccles's original belief that electromagnetism might be more important to understanding brain function than neurotransmitters. We can only understand the therapeutic impact of some of our most successful treatments by looking at the electromagnetic properties of the brain. Electromagnetic stimulation of our brains can have such powerful and specific effects that electroconvulsive shock therapy, transcranial magnetic stimulation, light therapy, and vagal nerve stimulation are recognized treatments for depression that has failed to improve through medication. More recently, engineers have explored the potential of brain interfaces with electronic technology, and the Defense Advanced Research Projects Agency has been funding initiatives that are developing chips for brain implantation to stimulate specific regions to treat psychiatric and neurological disorders.

The historically greater emphasis on the chemical properties of the brain, rather than considering its electromagnetic ones, has not only guided most of our previous treatment choices toward medications, it might have contributed to our earlier confusion. For example, lithium has been found to be helpful for illnesses with a periodicity, such as bipolar disorder and migraines, but by a mechanism not fully understood. Lithium is a light metal that gives up its electron easily. Perhaps it directly facilitates our electromagnetic field, instead of having its effect via the usual biochemical channels. This line of logic could also explain why lead and mercury are two of the worst toxins for the brain. They don't let go of their electrons easily, which makes them poor conductors of current.

Electromagnetism is an essential feature of all cellular life, including bacteria. All cells can create an electric current and its associated magnetic field because of potassium channels, which are proteins that sit in cellular membranes, just like neurotransmitter receptors. These channels respond to stimuli such as calcium ions, or voltage changes in

their surrounding membrane. They can serve multiple functions by changing their shape, which determines their porosity, and hence the rate positively charged potassium ions can flow along an electrochemical gradient.

Humans have at least 90 types of potassium channels, which is far more diversity than any single neurotransmitter, and glial cells are particularly loaded with them. One of the reasons for that might be that an important role of glia is to remove the excess potassium ions from the extracellular space. Over 98% of the potassium in our bodies is contained within our cells, and it needs to be tightly regulated within a narrow range, because too much potassium in our blood can cause heart arrhythmias and death. Too much in the brain can cause seizures. Too little is also life-threatening.

In excitable cells like neurons, a rapid rise and fall of the membrane's voltage causes potassium to rapidly leave the cell, carrying its positive charge with it. This results in a flow of electrons, or a current, called an "action potential," or AP. The AP current travels along the neuron's axon to its synaptic connections with other cells, leading to the release of neurotransmitters. However, a fair percentage of synapses between neurons don't use neurotransmitters as the communication signal. Humans, and many other animals, have electrical synapses throughout their brains. Like the glia, these use gap junctions, making them significantly faster. They are also capable of sending current bidirectionally, which chemical synapses cannot do.

Encephalograms (EEGs) measure the electromagnetic potential at the surface of our skulls. Hans Berger, a German psychiatrist and early proponent of consciousness being closely associated with electromagnetism, recorded the first human EEG in 1924. When Berger published his paper in 1929, his work was widely disbelieved. At that time, the idea seemed absurd that our brains had "electricity," albeit different from that coming into our homes. Since then, changes in the frequencies of our brainwaves, as measured by the EEG, have been found to be the most highly correlated with changes in our state of consciousness. For example, each of the stages of sleep has a characteristic wave form and frequency. Medical doctors even use a flat-line EEG as the definition of death, which we equate with the absence of consciousness. Additionally, Tibetan monks with decades of meditation experience have EEGs with gamma waves of unusually high amplitude (Lutz et al., 2004). However, like fMRIs, EEGs might actually be a more accurate reflection of glial cell activity than neurons. This is because they primarily reflect the movement of ions in the extracellular space, and not the current inside neurons.

The exact relationship between electromagnetism and consciousness is still unclear. It is important to remember that tight correlations do not provide a direction of causation. If "A" correlates with "B," there are at least three, if not four, possible conclusions: "A" could cause "B," "B" could cause "A," or a third factor could be the cause of both "A" and "B." Complicating matters further, "A" could both be the cause and the result of "B," or vice versa. For example, our brains both generate, and respond to, electromagnetic fields.

An electromagnetic theory for consciousness has been proposed more than once (McFadden, 2002; Pocket, 2012). It is attractive to some because it resolves the so-called “binding problem, which has puzzled philosophers and scientists for centuries: How does information from our sensory organs (auditory, visual, tactile, and olfactory) become recombined into a seamless whole? Each of our sensory organs is distinct and separate, so sensory information enters the brain through separate pathways. It undergoes further separation into even finer categories at the level of the cortex. For example, the visual cortex is packed with highly specialized cells, each of which only responds to one aspect of an image: a particular angle, movement, sharp contrast or edge, specific color, and so on. How does this information recombine to create a full experience? This binding problem might no longer be an issue if the recombination is occurring within an electromagnetic field.

If you ask neuroscientists if consciousness is electromagnetic, the majority will tell you “definitely not.” Why? Three major influences drove neuroscientists away from electromagnetism in the late 1940s. One was the previously discussed discovery of the chemical synapse. Another was LSD, which showed just how powerful of an effect a small chemical can have on consciousness. The third was Karl Lashley’s failure to find memory traces encoded in brain circuitry. Instead of being localized, they appeared to be widely distributed. Lashley’s conclusion that the brain is equipotent and interchangeable was not what would be expected for organs using electrical circuitry. At the time it described organs, such as the liver, which do chemical processing. However, Lashley’s work was before there was much discussion among consciousness researchers of how holography could apply to the organization of the brain. Lashley’s findings, taken from this perspective, are no longer incompatible with an electromagnetic theory.

Another reason given by scientists for rejecting an electromagnetic theory of consciousness has been that chemicals and synapses are confined within the skull, whereas electromagnetic fields are not. If the electromagnetic model were valid, scientists argue that humans should experience telepathy, but the prevailing view is that we do not. Ironically, Hans Berger developed the EEG because he considered a personal experience with his sister to be telepathic, which gave him the idea that consciousness could be electromagnetic. The problem is that once the chemical model was adopted, evidence for telepathy no longer fit science’s paradigm. Telepathy became an extraordinary claim, and mainstream science hasn’t accepted any of the extensive evidence for its existence. This circular reasoning could easily be resolved by reexamining the basis for our assumptions and conclusions.

Many of us use phrases in our everyday discourse that reflect the idea of consciousness being akin to electromagnetism, such as “being on the same wavelength.” We express feelings about people’s “vibes” or “energy.” Perhaps when this occurs we are unconsciously detecting their heartbeats, or their combined electromagnetic output. The ability to detect electromagnetism is found in many other species. Electric fields are directly detected for location and communication by animals as diverse as sharks, cockroaches, and the

duck-billed platypus. Research has even suggested that bacteria, one of the earliest and simplest forms of life, don't need to be in the same test tube to detect the presence of another bacterial species. They might be responding to the other species' electromagnetic signature.

Since we do generate electromagnetic fields, and our daily experiences with technology makes a transmitter/receiver model easy for us to relate to, this analogy for telepathic communication intuitively makes sense. Why wasn't it adopted? It was ruled out years ago by parapsychologists who initially thought that information transfer from one person to another could be electromagnetic. That is why subjects were placed in Faraday cages: to block all high-frequency electromagnetic signals (EMS). However, instead of preventing telepathy, the subjects actually reported improved accuracy in the shielded cages. Blocking the higher frequency EMS appeared to reduce the "psychic signal's" background noise. Although predominantly imperceptible, we are constantly bathed in a sea of electromagnetic energy from the sun and other cosmic sources, even at night.

Any potential psychic signals would have to be extremely low frequency (ELF) waves, which the Faraday cages don't block. These weren't believed to have a high enough resolution to transmit specific information over long distances, so researchers concluded telepathic transmission could not be electromagnetic and started looking for answers in quantum mechanics and entanglement. However, ELF waves are the only frequencies that can penetrate deep water, which is why they are used by the military for communication with submerged submarines. This usage means they must be capable of carrying some information.

Furthermore, the frequencies of our brains which are thought to be the most associated with ESP are theta waves (6 to 10 Hz), at the very low end of the ELF spectrum. To completely eliminate ELF waves as a possibility, it would be essential that the cages blocked these biological frequencies as well. What might really matter is our brain's potential for detecting ELF waves, directly or indirectly. If we did have this capacity, what would the sensory organ look like? Clues come from the study of the remarkable navigational skills of other species.

Navigation and the Human GPS

Because of its constant motion, the Earth's molten iron core generates an electromagnetic field that consists of ELF waves, which happen to be in the same range as human brainwaves. Evidence suggests most biological organisms, including humans, are sensitive to this field (Belova & Acosta-Avalos, 2015). For example, animals behave differently just before an earthquake, which is thought to be due to changes in it (Freund, & Stolc, 2013). Also, in the absence of artificial electromagnetic fields, grazing animals apparently align themselves with the Earth's field, as though it aids digestion. Similarly, ancient cultures have recommended sleeping in alignment with the Earth's north-south axis for its

health benefits. Research has found that our orientation to this field does affect our REM-latency, as measured by EEG (Ruhenstroth-Bauer et al., 1993)

Some species appear to be able to navigate long distances by detecting the earth's ELF waves. Such navigation requires both an internal map and a way in which the ELF waves are detected. The location for an internal map was discovered by John O'Keefe, May-Britt Moser, and Edvard Moser, who were awarded the Nobel Prize in Physiology or Medicine for that discovery in 2014. They found that mammalian brains, including those of humans, have their own internal GPS composed of "grid" cells that create the mental map for navigating space, and "place" cells which fire when an animal is in a familiar location. Both types of cells are in the hippocampus, which is part of the paleocortex, the evolutionarily oldest cortex in the brain shown to encode episodic memory and discussed earlier as containing the identity recognition cells. The hippocampus is also the major producer of the theta waves associated with dreaming, deep meditation, and intuition. As alluded to earlier, it appears to be key to navigating mental space, in addition to physical space.

Navigation, of any kind, might be the primary reason animals developed brains. A "sea squirt" is a tube-like invertebrate that develops a brain only when it needs to navigate, and then reabsorbs it when its lifestyle becomes stationary (Beilock, 2012). Navigation is such a vital human function, our brains can create workarounds for those who would otherwise be disabled, such as Brian Borowski. He was born blind, and began teaching himself to echo-locate at age three. Brian can move about, and even climb dangerous landscapes alone, by clicking his tongue, or snapping his fingers. The brains of echo-locators were found to repurpose their visual cortex to unconsciously decode echoes into maps and other information about their surroundings (Kolarik et al., 2014).

Most of the information our brains use for navigation comes from specialized sensory organs, each of which detects a different range of electromagnetic frequencies. Our skin has temperature receptors that can detect the infrared range as heat. Our ears detect frequencies in our audible spectrum and are located on opposite sides of our heads to improve our ability to localize a signal's source, especially if it is moving. Our eyes contain photoreceptors that detect electromagnetic waveforms in the human visible spectrum, and are located side by side to enhance depth perception by binocular vision. Our eyes also contain receptors for magnetic fields called cryptochromes, but their function in humans is still undetermined. In birds, these receptors have been proposed to aid their migration because blindfolding them interferes with this ability (Mouritsen et al., 2004). Some birds appear to be able to navigate extremely long distances in part by actually seeing the Earth's magnetic field lines which, like tangents to a circle, exhibit predictable changes in their angles as one goes up or down in latitude.

A relationship between magnetism and navigation in humans was suggested by research done at the University of Manchester by Robin Baker, but it didn't involve vision. He took people to various destinations, blindfolded them, and asked them to find

their way home. He found that they had a better than chance ability to do so. However, magnets attached to their heads would interfere. After a decade of research, Baker said, “Whatever the repercussions, we have no alternative but to take seriously the possibility that Man has a magnetic sense of direction” (Baker, 1980).

Why might a magnet interfere? A potential answer comes from work by Joe Kirschvink, a geophysicist at Cal Tech. He believes that navigation for most species involves magnetoreception, and that this might be a primal sense in biology. This sense appears to use magnetite, or iron sulfide, which forms unique crystals in biological organisms. These crystals, called magnetosomes, can have strong magnetic properties, as is seen in lodestone, a natural magnet. However, the crystals found in living organisms, including bacteria and worms, demonstrate two features not found in lodestones. First, their shapes do not occur in other situations in nature and are thought to result from how they are formed in the tissue. Second, their orientation appears to maximize their magnetic moment. The latter gives them the capacity to act together as a system (Kirschvink et al., 1992).

Magnetite in the beaks of migrating birds appears to play the role of a compass in their ability to navigate by using the Earth’s magnetic field, but this might not be limited to birds. Humans have magnetite in the bridges of their noses, and in the ethmoid and sphenoid bones of their sinuses. The locations of these magnetite-enriched bones are perfect for providing information about directionality. They are at the base of the cranium, and in three strips on the head: one at the center of our face, and one at each temple above the ears. Similar to our ability to localize sound using two ears, our brain can unconsciously compare the oncoming signals from each source.

Other than our craniofacial bones, most of our body does not contain magnetite. The exception is our brain, which contains 5 million particles of magnetite per gram. More striking, the membrane lining our skulls and sheathing our spinal cord, the dura mater, contains a concentrated array of magnetite at 100 million particles per gram. So does the pia mater, the membrane that intimately covers our brain’s extensive cortex, in all its convolutions. The two maters are narrowly separated by a cavity filled with conductive electrolyte fluid that is constantly being created, and recirculated. These membranes, and the space between them, would be overengineered to be only protecting our brains physically. Nature is efficient and frugal, so what might be the purpose of this structure? What role could the magnetite be playing here?

Kirschvink analyzed the properties of magnetosomes and concluded, “Magnetosomes moving in response to Earth-strength ELF fields are capable of opening trans-membrane ion channels, in a fashion similar to those predicted by ionic resonance models” (Kirschvink et al., 1992). In other words, magnetic fields can have direct effects on biological organisms via their cellular membranes. This has profound implications for our ability to detect ELF waves, especially given the magnetite throughout the human brain. Kirschvink agrees and said, “The presence of trace levels of biogenic magnetite in virtually all human tissues

examined suggests that similar biophysical processes may explain a variety of weak field ELF bioeffects” (Kirschvink et al., 1992).

The magnetite-rich pia mater is connected to the brain by astrocytic processes, which could be monitoring, integrating, and transmitting any input to this membrane, including ELF waves. These astrocytes are in communication with other astrocytes and neurons, which is an arrangement that provides a possible means by which electromagnetic waves could influence a person’s unconscious thoughts. In other words, the location and composition of the magnetite in our skulls, membranes, and brains suggests what could be the equivalent of a human antenna. Perhaps, like the hippocampus, this structure is involved in more than physical navigation.

If we have an antenna capable of detecting ELF waves in the same frequency range as human brainwaves, the possibility of telepathy does not seem to be as big of a stretch. Nonetheless, if telepathy is real, why wouldn’t more of us experience it? Perhaps, the magnetite lining our skulls can also serve as a shield to protect the privacy of our thoughts and limit potentially undesirable outside influences. If it does act like a shield, a disruption or modification of these magnetite arrays might explain why head injuries and lightning can cause acquired savant syndrome, and/or the onset of psychic abilities. Consistent with this is the fact that Kim Peek’s skull bones never completely meshed together because of his hydrocephalus, which would have created a disruption of his magnetic arrays. Perhaps this disruption could partially explain why some people with severe hydrocephalus have superior cognition; it could theoretically give them a greater access to memory stored in holographic informational fields.

Neuromelanin, the Semiconductor in Our Brains

Another clue in the quest for an alternative model for brain function is that the brain contains pigments called neuromelanin with unique properties. It is only the neurons that contain this pigment, making them the “gray matter” of our brain. Glial cells are not pigmented, and are therefore referred to as the “white matter.” Neuromelanin is structurally related to the melanin in our skin that increases in amount when exposed to sunlight, thereby causing fair-skinned people to freckle or tan. However, unlike melanin, neuromelanin is highly conserved. It is still present in normal concentrations in albinos, who have absent or decreased skin melanin, which suggests neuromelanin serves an important function in the brain.

Neuromelanin appears in greatest quantities in humans, in lesser amounts in some other nonhuman primates, and is absent from the brains of many lower species. It is produced in specific populations of catecholaminergic neurons in the brain, and is particularly concentrated in brain stem nuclei, which are clusters of neurons in the section of the brain immediately above the spinal cord. These pigmented nuclei include the locus coeruleus, or “blue spot,” which triggers our “fight or flight” response; the raphe nuclei, which play a major role in the stages of sleep; and the substantia nigra, or “black

substance,” which is essential to overcoming inertia in our movements. It is the death of neuromelanin-containing neurons in the substantia nigra that causes the movement disorder Parkinson’s disease.

Melanin is an ancient and very complex molecule. It has been found in 150-million-year-old dinosaurs, as well as human mummies. Melanin is not only in our skin. It is also concentrated in the eyes and ears of humans, and abnormalities in it are associated with blindness and deafness. Melanin can absorb a broader range of wavelengths than that of rhodopsin and photopsin, the photopigments found in the rods and cones of our eyes. Because of melanin, we might have the capacity to unconsciously detect electromagnetic frequencies above infrared and below ultraviolet. Our retinas also contain intrinsically photosensitive retinal ganglion cells (ipRGCs) that can respond to light independently from the rods and cones, because of their photopigment melanopsin. These cells are involved in circadian rhythms, especially our entrainment with the daily rising and setting of the sun.

Melanin doesn’t just absorb light or photons. It also absorbs units of vibrational energy, or phonons, which means it can be influenced by sound. Additionally, it has the ability to scavenge, produce, release, and manipulate free radicals, which are highly reactive unpaired electrons. It can bind, and release, the full range of metal ions involved in multiple cellular processes and has been proposed to be the major organizational molecule in living systems (Barr et al., 1983). These properties all suggest that melanin could be serving as a biological semiconductor with physiological responses to photic, acoustic, and electrical stimuli. Why is this important? Semiconductors are a critical component for our current technology. The central processing units, or CPUs, that operate our personal computers are made with them. The semiconductor properties of neuromelanin might also suggest a mechanism for new treatments. Perhaps, like buttons on a remote control, activating the brain stem nuclei by photic and phonic stimuli will be able to shift our consciousness someday.

Microtubules and the Mitogenic Rays of Light

The presence of neuromelanin throughout the gray matter also hints that light might be very important to brain function, particularly because of its close association, both anatomically and functionally, with another prominent intracellular component of the brain: the microtubules. Microtubules are present in all eukaryotes, ranging from single-celled bacteria to humans. They play a major function in the transportation of molecules and organelles within cells, and form the ancient structures that provide motility, from the cilia lining our lungs to the flagella of sperm. All sensory receptors, whether they are used for olfaction, vision, sound, vibration, and so on, are modified cilia, and therefore, composed of microtubules. There is also a microtubule-based organelle that projects like an antenna from the surface of all vertebrate cells called the primary cilium. It has gone from being a poorly understood curiosity to one that is recognized as extremely important

for normal development, as well as playing a role in inherited human diseases and cancer (Parker et al., 2014).

Like glial cells and “junk DNA,” microtubules were initially regarded as primarily structural, no more than scaffolding to maintain cell structure, and to assist in cellular division, where they form spindles to align our chromosomes in matching pairs for replication. Microtubules are especially prevalent in our brains, where their quantity far exceeds what would be needed for structural support. Each neuron contains up to 2,500, in parallel like the rails of multiple train tracks.

Anesthesiologist Stuart Hameroff and physicist Sir Roger Penrose have proposed that microtubules might play a primary function in consciousness (Hameroff & Penrose, 2014). Microtubules fall apart under anesthesia, regardless of the anesthetic used, which might explain the mechanism of many anesthetics, which all produce a loss of consciousness but have widely variable molecular structures and sizes. This proposed mechanism for anesthetics might also explain why people can have cognitive deficits after major surgery, when such drugs are used. Furthermore, when microtubules and their associated proteins become bunched up, they make up the tangles associated with Alzheimer’s disease and boxer’s dementia.

Microtubules are constantly being built and rebuilt, several times an hour, assembling long enough to do their job, after which they fall apart. They are known to help guide neuronal migration during development, and to guide the formation of connections between brain cells. When a neuron migrates, microtubules stretch the neuronal cytoplasm, producing an extension in the direction it is moving. The microtubules then relocate the cellular nucleus to the front of the migrating cell and retract the extension lagging behind. Microtubules also guide cellular division, the means by which our bodies are constantly renewing themselves, destroying cells that are replaced by new ones. How are they guiding all these cellular processes? What controls them, and what determines their repurposing? Tubulin units are magnetic dipoles, so they might be under the influence of very local electromagnetic fields.

Experiments by Anirban Bandyopadhyay, a physicist at the National Institute of Material Sciences in Tsukuba, Japan, have shown that microtubules are biological “superconductors,” composed of 40,000 tubulin protein units each. They are considered superconductors because, by organizing into a microtubule, tubulin can conduct electricity more than 300 times faster than a single tubulin protein. This is very unique. Usually, larger structures have more electrical resistance than their constituent parts and therefore conduct more slowly.

In close proximity to the brain’s microtubules are mitochondria, our intracellular source of energy. These organelles are also abundant in the brain. They appear too numerous to be merely satisfying energy requirements of synaptic functioning and might be a source of biological light, which was first discovered in replicating cells by Alexander Gurwitsch in 1922. Gurwitsch called the blue streaks of light “mitogenic rays,” because

they appeared during “mitosis,” or cellular division. Initially, Gurwitsch’s discovery was met with much fanfare. However, after a decade of research, and more than 100 publications on mitogenic rays, Gurwitsch’s discovery was declared debunked. Others couldn’t replicate his work, because they didn’t have sensitive enough photomultipliers (Gurwitsch, 1988).

However, Gurwitsch’s work has been revived by scientists such as German biophysicist Fritz-Albert Popp, who coined the term “biophoton.” He believes that biophotons originate with DNA, which is capable of storing light and releasing it (Popp et al., 1984). He also found these biophotons to be coherent and suggested that they regulate all processes of an organism. Biophotons have also been suggested to be a means by which animals could communicate with each other (Sanders, 2014).

Before electron microscopy enabled us to see the details of cellular components, Gurwitsch’s “mitogenic rays” did not look like a recognizable structure. However, if someone with a background in electron microscopy were to see Gurwitsch’s picture of those mysterious rays, they would immediately recognize them as being exactly the shape of the spindle apparatus, the structure scientists later found to be instrumental to cellular division. This adds tremendous credibility to both Gurwitsch’s claim and the potential role of microtubules. The spindle apparatus is composed of microtubules.

Other evidence for microtubules being capable of transmitting light comes from their structure itself. Microtubules are cylinders with hollow cores that are lined with a monolayer film of water, which may be ideal for reflecting and transmitting biological light in a highly organized way. Microtubules also contain several prominent chromophores that react to light, which could be how light influences them.

Gurwitsch’s discovery suggests that embryological development, and the continual renewal of tissues, could be directed by light. Austrian physicist Erwin Schrödinger considered light so essential to development that he proposed that living cells can only maintain their high degree of order by perpetually obtaining it from sunlight (Niggli, 2014). Light is the most efficient and fastest mediator of information. If light is guiding development, it could solve one of the biggest mysteries in developmental biology: How does it happen so rapidly? Research suggests only one biophoton per cell is needed to orchestrate the 100,000 processes occurring per second when cells divide. More evidence for the potential role of light in cellular division was found when Gurwitsch tested the ability of UV light to stop mitosis in onion roots. He observed differences in the number of mitotic cells depending upon whether they were covered by glass, which blocks UVC and UVB light, or quartz, which transmits UV light.

We Aren’t Merely Made of Stardust, We Glow

Recognition of the major role of light in biological processes is becoming mainstream, and it has implications for phenomena scientists previously disregarded as New Age, such as the notion of energy bodies or auras. In 1911, Walter J. Kilner, a physician and X-ray

specialist at St Thomas's Hospital in London, England, wrote a book titled *The Human Atmosphere* in which he described energy fields around patients that changed under various conditions. This was a decade before biological organisms were discovered by Gurwitsch to create biophotons, and close to a century before their existence was accepted. Most of this light is used for biological processes, but some is released. That means we literally glow, albeit 1,000 times below what can be detected by the naked eye (Kobayashi et al., 2009). The light we emit varies with our diurnal cycle, being stronger at 4 pm than in the early morning. It is also affected by our state of consciousness; highly experienced meditators have been shown to emit fewer photons during their meditations (Joines et al., 2012).

Dr. Karagulla investigated the abilities of people who reported seeing a vital energy interpenetrating people's bodies. "Diane" described it as being like a "sparkling web of light beams." She was able to successfully predict medical conditions of patients before they developed, but insisted that it was not precognition. She saw the corresponding patterns in their energy fields. Several medical professionals evaluated by Dr. Karagulla also claimed to see energy fields, including "Dr. Frank," a practicing psychiatrist in New York City. Like Diane, "Dr. Dan" saw moving vortices of energy associated with each endocrine gland, and made diagnoses by observing the force field he saw around the patient. "Dr. Philip" was a consultant at the Mayo Clinic. He could see any organ in the patient's body, observe its function, and see any potential pathology (Karagulla, 1967).

Dr. Karagulla went to Germany after she learned that the Planck Institute in Munich had been given a sizable grant to study the "radiations or fields of force around the human body." The director was very evasive on the topic, so she decided to conduct her own research as an associate of Dr. Wilder Penfield at the Montréal Neurological Institute in Canada with Diane as her main research assistant. Dr. Karagulla was given a complete history of patients, with full documentation of their conditions, but did not consult it until after Diane conducted her reading. One patient's right temporal lobe was removed because of temporal lobe epilepsy. The energy field around her head appeared to be "thicker" in texture on the right as compared to the left. Diane described the left side of the brain as working faster to compensate for deficiencies on the right. She also said, "On the right side there is a bare patch with nothing in between. The energy has to jump across" (Karagulla, 1967).

Seeing such energy might not be as bizarre as you would think. We have already discussed the fact that our eyes contain melanin, which has a much broader spectrum of detecting light. We also now know that the rods in our eyes have cryptochromes, which can detect magnetic fields. In 1842, Baron Karl Von Reichenbach did experiments on people who claimed they could sense or see the field around magnets, various metals, and crystals. Diane was similarly gifted. When asked to look at bar magnets, she was able to say immediately which was the North and South Pole, even when the magnet was placed on a table three feet away from her. How did she do it? The North Pole always had a bluish haze around it, and the South Pole always had a reddish haze (Karagulla, 1967).

In traditional illustrations of the energy vortices along the spine, or “chakras,” the lowest energy vortex is usually depicted as red, and the one at the top is blue. This suggests that our spinal column has similarities to a bar magnet. Additionally, the force fields of bar magnets are always in the shape of a torus, which is donut-shaped, and the way bioenergy fields surrounding our bodies have been depicted. In fact, toroidal energy fields are said to exist around practically every system that contains moving electrons, including the Earth, trees, and other animals.

Evidence supports the idea that the energy bodies closest to our physical bodies contain a holographic representation of the entire body. In physics, a three-dimensional holographic image can be created by the interference patterns between the waves from two lasers. The image is called holographic because, if we shatter the substance in which it is embedded, the whole image would still be contained in each of its parts. Iridology and reflexology are predicated upon the health of our entire body being represented in our eyes and feet. The appearance of our eyes can change in specific ways when we are ill, and massaging the corresponding sections of our feet offers a means of healing internal body parts. Other than possibly being encoded in an energy body, there isn't any anatomical foundation for it.

According to physicist Claude Swanson, these subtle energy fields are due to a force called torsion, which he believes is a fundamental force, and one that is intimately connected to consciousness. Torsion is posited to be a form of radiation which pairs particle spins together and propagates through space as a spiraling wave. DNA is a helical structure, and every biophoton created by DNA is accompanied by a torsion wave. These biophotons are coherent, and their field forms a hologram throughout the body but stays mostly within the body. On the other hand, the torsion waves that are generated can easily penetrate tissue and are believed to form a holographic field outside the body. If information about all of space time is encoded holographically in these torsion fields, this could help explain savant syndrome and ESP.

Making Sense of Unusual Senses

“Dermo-optical perception” is a term for the people who seem to be able to “see” with their fingers while blindfolded. Extensive experiments were done on dermo-optical perception with a woman named Rosa Kuleshova by senior lecturers S. Dobronravov and Y. Fischelev, with further research by Dr. I. Goldberg and senior lecturer M. Kojevnikov in the laboratory of Psychology of the Nizhny Tagil Teachers Training Institute. Rosa was accurate in reading different types of fonts, describing drawings on post cards, and detecting the color of paper, fabrics, and threads just by touching them (Ostrander & Schroeder, 1970).

“Dr. Dick” was a subject of Dr. Karagulla's who was able to outline where a baby and mother were in a picture with his finger. This agitated and distressed him, because he

didn't understand how he could do it when he couldn't see. Dr. Karagulla also tested two women named Joan and Mary for their ability to see pictures and read while blindfolded. Joan was able to describe contents taken from magazines at random: a tree, water, boat, child on the riverbank, flowers, and even words. Mary gave descriptions that were accurate but vague, such as "wetness," when her finger was over an image of water, and "stickiness" when she touched a picture of chocolate frosting. Joan and Mary could read pictures with the tip of their elbows, but not as well as with their fingertips (Karagulla, 1967).

In September 1957, the *Miami Herald* ran an article about a teenage girl who could read while blindfolded by passing her fingers along the lines of print. The two psychiatrists who conducted the demonstration could not explain it, so it was declared impossible, and largely ignored. However, the phenomenon keeps resurfacing. In 1964, the June 12 issue of *Life* magazine had a feature article about the discovery, and there are currently children who claim to have this ability in India.

Dr. Joseph Rodes Buchanan was a 19th-century American physician and writer who coined the term "psychometry" to refer to an ability to identify the nature of objects by touch. It literally means "measuring the soul of things." He met an Episcopalian bishop who could differentiate metals when he touched them in the dark, because touch somehow created a characteristic taste in his mouth. Buchanan went on to test other individuals and found that a large number of people could taste the metal just by touching it. Sometimes, those able to comprised as much as 50% of a group that was chosen at random (Buchanan, 1885).

Scientists have generally ignored these reports of sensory abilities that sound bizarre, but they might actually be pointing to a new model. Some of these skills suggest sensory information can come from sources other than our primary sense organs. Our largest sensory system is our skin, which contains receptors and raw nerve endings that constantly send messages to our brains about light and deep touch, pain, proprioception (position in space), temperature, and vibration. However, scientists recently discovered that our skin can detect more than these senses.

A team of biologists at Ruhr University Bochum in Germany found that our skin is loaded with receptors for olfaction, or smell (Busse et al., 2014). According to the lead researcher, Dr. Hanns Hatt, our skin has more than 15 of the 350 receptors known to be located in our nose. Because taste and olfaction are so closely related, having receptors for olfaction in our skin could play a role in the alleged ability of some people to know what something is simply by touching it. Research in Japan, by Moe Tsutsumi and others, shows that our skin contains the same photoreceptors that are found in high concentrations in our eyes (Tsutsumi et al., 2009). These include the rod receptors, which detect low levels of light and are associated with peripheral and black and white vision, and the cone receptors that enable us to perceive colors. Perhaps the ability to read while blindfolded is not much more challenging than cracking a safe.

Hydrocephalus Revisited

We are still left with trying to make sense of the people studied by Lorber who appear to function fairly well, despite little in the way of brain tissue. The usual brain has four interconnected cavities called ventricles, but these merge to various degrees in hydrocephalus, and can become extremely large. The lateral ventricles are usually partially separated by the neural connections between the left and right cerebral hemispheres, but in Kim Peek's brain these structures were missing, so the ventricles were merged. Perhaps, given the cognitive abilities of some of these people, in addition to underestimating the importance of microtubules and glial cells, we might be underestimating the importance of the brain's ventricular system.

The ventricles are filled with an electrolyte-containing cerebrospinal fluid, or CSF. The ventricles not only connect with each other, they connect with the space between the dura and pia maters of the brain, and the central canal that extends down to the base of the spinal cord. Initially, the ventricular system was thought to serve the metabolic requirements of the brain. However, the CSF is kept fairly constant in composition, which would not be consistent with that function. Also, we now know that the brain has a lymphatic system to help remove waste. The ventricles do provide some buoyancy that helps cushion the brain from being damaged, but, like the abundance of glial cells, this argument fails because the ventricular system would be overbuilt simply for that function and doesn't really do that great a job.

The fact that the fluid contains charged electrolytes that stay relatively constant might suggest another function. This function could potentially provide hydrocephalic individuals, and possibly all of us, an alternative means for information processing. The ventricles contain some of the key elements discussed before, such as glial cells, melanin, and microtubules, but in a different arrangement. The brain's ventricles are lined with specialized glial cells, each of which has a microtubule-containing cilium that lies in the ventricle, constantly moving in complex and changing patterns to circulate the CSF. It is feasible that these cilia might be involved in a sensory capacity that is yet to be discovered, because modified cilia are used as sensory receptors for electromagnetic signals in our eyes, ears, and skin. Melanin is also present in the ventricular lining and determines the beat frequency of the cilia. In fact, problems with cilia motility are one of the causes of hydrocephalus.

If our brain's ventricles do participate as part of an information detection and processing system, most likely the pineal gland is involved. It sits in the center of the brain, in the third ventricle, surrounded by the largest amount of electrolyte fluid of any structure in the brain. Its position enables any chemical or electromagnetic signal emitted from it to reach the entirety of the ventricular lining, which can send a widespread and coordinated signal via its glial cells to the rest of the brain.

The pineal is named for its pinecone shape, and is the only structure in the brain that is singular. Its evolutionary origin is literally from a physical "third eye" which became

buried deep within mammalian brains, and there are still reptiles with a third eye on top of their heads. Instead of photoreceptors, the pineal contains calcium crystals. These are referred to as “brain sand” and have an unknown function. The pineal is known to be very sensitive to light and other electromagnetic fields, and was once considered vestigial, until it was discovered to be the source of melatonin, which it secretes to promote sleep. This organ has also been associated with psychic abilities by many, including Edgar Cayce, perhaps the most famous psychic of the last century.

Another intriguing structure inside the ventricles is Reissner’s fiber, a hollow thread-like structure made by the subcommissural organ. The subcommissural organ that secretes it typically regresses during infancy, but this organ has been found in a 60-year-old man. The fiber is comprised of glycoprotein, which is a protein with an attached sugar. This is the same type of molecule located on the surface of cells for the cell to cell recognition that is the basis for blood types. Glycoproteins are extremely difficult to isolate because sugars are so fragile and the chemical process used by biochemists to extract proteins often destroys them. This might be why the fiber has been so elusive. Reissner’s fiber was first discovered in 1860 by Ernst Reissner in the central canal of the lamprey and was thought to disappear after infancy in humans, but it has since been found in a 14-year-old.

The functional significance of this fiber has been a subject of debate, but several have concluded that it might be related to mystical experiences. The fiber originates in the third ventricle below the pineal gland and extends down the central canal to the terminal ventricle at the base of the spine. Like the kundalini energy described in Eastern wisdom traditions, it lies there, coiled like a snake. Dimitri Tretjakov dubbed the system surrounding the fiber as “the central sense organ” in 1913. Vasant Rele identified it with the central pathway of kundalini yoga 14 years later, and in 1994 Larry Wile proposed that it could be the silver cord described during near-death experiences.

Evidence supporting such esoteric functions for the fiber comes from research in 1963 by a North Korean scientist named Kim Bonghan. He injected radioactive phosphorus into acupuncture points on a rabbit’s abdomen to see where it ended up. The injections into the acupuncture point that corresponds to the meridian called the “governing vessel,” labeled a threadlike structure inside the central canal, suggesting to some that Reissner’s fiber might be involved in the *Chittra nadi*, or *Sushumna*, the central energetic pathway associated with enlightenment (Wile, 2018). If so, perhaps the pineal, our interior eye, detects the internal light people describe seeing during those experiences.

Conclusion

We are on the cusp of a new understanding of the brain and consciousness that suggests we have barely tapped into our full potential as humans. We appear capable of accessing nonlocal information because the subtle energy bodies surrounding us are organized holographically. These bodies are being validated scientifically and have been proposed to be torsion waves. Torsion is a fundamental force that can explain their unusual characteristics

and is closely associated with consciousness. Instead of generating consciousness, our brains could be what detects it. Our brains operate electromagnetically and have components with semiconductor features similar to those used in our computers. This enables our brains to respond to light and sound independent of our senses and outside our usual range of conscious detection.

If the Buddhists are correct when they say “Atman equals Brahmin,” Divine Consciousness resides in each of us. Perhaps the religious teaching that God knows each of our thoughts and actions means that our “I’s” and the “eyes of God” are one and the same. That could be why searching for God externally is often problematic, unless we are looking deeply into the eyes of someone we love. Biophotons might be why our eyes sparkle when we are happy. They might also be why, if we are really lucky, meditating and shifting our focus inward would literally cause us to “see the light.”

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