CAM, Religion, and Schrödinger’s One Mind

“Mind by its very nature is a singulare tantum [single only]. I should say: the overall number of minds is just one.”
— Erwin Schrödinger

Erwin Schrödinger (1887–1961), the Austrian physicist, was one of the most brilliant scientific minds of the 20th century. In 1933, he was awarded the Nobel Prize for his discovery of wave mechanics, which lie at the heart of quantum physics. Schrödinger was one of the most openly spiritual scientists of his day. He was profoundly attracted to many of the early Greek philosophers and to Vedanta, the Hindu philosophy based on the teachings of India’s ancient Upanishads.

Schrödinger was disappointed in the track record of Western religions. He regarded much of contemporary religious thought as “naively childish” and “dreadful nonsense.” In his brilliant biography of Schrödinger, Walter Moore describes how Schrödinger believed that the churches, “guardians of the most holy treasures of mankind,” had wasted their spiritual resources. As Schrödinger put it, “The middle classes . . . recognize the Churches only as political parties and morality as an irksome restriction.”

Schrödinger’s lament, observes Moore, is “a cry of spiritual pain of a soul torn between the need for religious belief and the inability to accept such belief without treason to his intellectual standards.”

“WALKING AWAY FROM CHURCH”

Although Schrödinger’s criticism of religions as political parties was written in the first half of the 20th century, it has a contemporary ring, as churches throughout America have taken muscular, politicized stands on nearly every major issue in modern life, including marriage, sex, birth control, guns, war, taxation, immigration, conservation, healthcare, stem cells, death, education, criminal justice, evolution, and climate change. Politicians employ pretzel logic in crafting public stances on various issues, so as not to violate the acid tests of some perceived “moral majority” or “values coalition.” As a result, the separation between church and state, in many instances, has become perilously thin. Some religious leaders seem to want this constitutional provision abolished altogether in favor of some form of Christian theocracy. This is the attitude Schrödinger excoriated as a vulgar squandering of spiritual resources.

For many people, religion in America is no longer associated with the Golden Rule, caring for the sick and poor, and loving your neighbors and your enemies, but with homophobia, xenophobia, Islamophobia, Obamaphobia, paranoid distrust of governmental institutions, and profound ignorance of science. Many religious sects have seized the mantle of faux patriotism through which they confuse bigotry, intolerance, and militant triumphalism with love of country. It is all very wearisome. As a result, many individuals, like Schrödinger in his day, have become disgusted with the politicization of the traditional religions and how they minimize, dilute, distort, or simply ignore their once-lofty spiritual teachings. This despiritualization is largely why millions have deserted conventional religion in favor of a more private and intensely personal approach to the transcendent.

The politicization of religion in America began in earnest in the 1980s, as religious activists such as Jerry Falwell and Ralph Read began to expand their activities into electoral politics, focusing on issues such as abortion and homosexuality. While large numbers of middle-aged and older Americans have continued to embrace this fusion of politics and religion, rapidly increasing numbers of young people are rejecting it. “They have been alienated from organized religion by its increasingly conservative politics,” say Robert D. Putnam and David E. Campbell, the authors of American Grace: How Religion Divides and Unites Us. Putnam, a professor of public policy at Harvard University, and Campbell, a professor of political science at the University of Notre Dame, find that the most rapidly growing religious category today is the “nones,” those Americans who say they have no religious affiliation. In 1990, only 7% of Americans claimed no religious affiliation; now, 17% claim such, made up mainly by young people who came of age in the 1990s and who were then forming their views about religion. Putnam and Campbell were originally skeptical that large numbers of young people would adjust their religion to fit their politics. But their research reveals that “Increasingly, young people saw
RELIGIONS VERSUS CREEDS

Schrödinger’s criticism of the politicization of modern religions was shared by another intellectual giant who was his contemporary, the Swiss psychiatrist Carl G. Jung (1875-1961), the founder of analytical psychology. Jung believed that the human psyche is by nature religious. Religion, he contended, creates a valuable balance in the psyche by honoring the transcendent, metaphysical, irrational side of human experience. This focus, said Jung, builds up “a reserve, as it were, against the obvious and inevitable force of circumstances to which everyone is exposed who lives only in the outer world and has no other ground under his feet except the pavement.”\(^6(p29)\)

But when religions become excessively concerned with the everyday sociopolitical world, Jung said, they degenerate into “creeds . . . a confession of faith intended chiefly for the world at large.”\(^5,6(p31)\) Creeds, Jung said, are “compromises with mundane reality . . . [that] undertake a progressive codification of their views, doctrines and customs and in so doing [externalize] themselves to such an extent that the authentic religious element in them . . . [is] thrust into the background.”\(^6(p31)\) When the transition to a creed occurs, Jung maintained, a religion loses its sustaining power. “To be the adherent of a creed, therefore, is not always a religious matter but more often a social one and, as such, it does nothing to give the individual any foundation.”\(^6(p32)\)

I wonder what Schrödinger and Jung would think about the tiresome religio-political jousts in current American culture. As I write, it is September 11, the ninth anniversary of the horrible terrorist attacks by Muslim jihadists that killed more than 3,000 Americans. A backlash against Islam is in full cry and passions are running high. The news has been dominated by the recent announcement by a Christian minister in Florida that he and his 50 followers plan publicly to burn the Koran in order, they say, “to expose Islam for what it is—a violent and oppressive religion that is trying to masquerade [sic] itself as a religion of peace, seeking to deceive our society.”\(^7\) President Barack Obama, Secretary of State Hillary Clinton, Secretary of Defense Robert Gates, General David Petraeus, the Vatican, military veterans, and interfaith religious organizations have agreed. One nationwide survey in late July found overwhelming opposition to the mosque, 54% to 20%.\(^11\) Never mind that the “mosque” is a domeless, minaretless 13-story building with plans for fitness facilities such as a swimming pool, gym, basketball court, a 500-seat auditorium, a multifaith chapel and prayer space, a place for seniors to congregate, a restaurant and cooking school, exhibition space, a library, art studios, childcare facilities, and a 9/11 memorial. Or that it is not at ground zero but two blocks north.\(^12\) Or that Islam was part of life in the Twin Towers before 9/11. Muslims worshiped peacefully in a prayer room on the 17th floor of the south tower, and about three dozen Muslim staff members of the Windows on the World, the restaurant atop the north tower, used a stairwell between the 106th and 107th floors for their daily prayers.\(^13\)

I know I speak for many citizens who are turned off by the extreme fundamentalist positions of many Christians and Muslims alike. It is the uncompromising God-is-on-our-side certitude of both sides that led to bloodbaths such as the Crusades, as well as to bloody internal conflicts within these religions, such as the 16th-century wars in Europe following the Protestant Reformation and the violent Shia-Sunni conflicts that still persist. This penchant for violence within both Christianity and Islam has provided fodder for recent screeds condemning both religions: Richard Dawkins (The God Delusion\(^14\)), Christopher Hitchens (God Is Not Great:
CAM, SPIRITUALITY, AND HEALING

Why does any of this merit attention in Explore? Against the tide of the crass politicization and despiritualization within contemporary religion, a link has formed between the intrinsic spiritual impulse experienced by most humans and the field of integrative medicine. One of the first individuals to identify this connection was Stanford health psychologist John A. Astin, whose findings were published in 1998 in the Journal of the American Medical Association. Astin conducted a nationwide survey to determine why individuals choose complementary and alternative medicine (CAM). He found that most people do so not because they are dissatisfied with conventional medicine, but because they find CAM-type therapies to be more congruent with their personal beliefs, values, and philosophical orientation to life. Many individuals described having undergone transformational, psychological, and spiritual experiences that changed the way they see the world. Following these experiences, they see in CAM an approach to health and illness that resonates with their worldview more keenly than does conventional medicine. Subsequent evidence suggests that these same reasons are important in why healthcare professionals choose courses in CAM during their professional training.

Along with epidemic politicization, a trend has turned many individuals away from traditional religions and toward CAM has been the uninterest within these religions in healing. For centuries, healing occupied a high place in the remit of Christianity. Jesus, the Great Physician, told his followers, “He that believeth on me, the works that I do shall he do also; and greater [works] than these shall he do . . .” (John 14:12, KV). These works presumably include so-called miraculous healings, dozens of which are recorded in the New Testament. Yet many congregations today would be utterly shocked and embarrassed if a radical healing occurred in their midst. Faith healing is viewed in many congregations as a metaphor, a fictionalization of the gullible lower classes, and a violation of the rectitude and solemnity of sincere worship. Profound, rapid, miracle-type healing is rationalized: these healings may have occurred during the biblical era, but times have changed. The real miracles today come in the form of modern drugs and surgical procedures, not through faith and prayer.

The willingness of religious groups to disavow their sacred traditions has been satirized in an apocryphal story that has been ricocheting around the Internet recently. In a small Midwestern town, the owner of a bar began construction on an addition to his business. In response, the local Baptist church began a campaign of petitions and prayers to halt the bar from expanding. Work continued, however, right up until the week before opening, when lightning struck the bar and burned it to the ground. The church folks were rather smug following this event, proclaiming the power of prayer, until the bar owner sued the church on the grounds that it was ultimately responsible for the destruction of his building and the ruination of his business. Eventually the case wound up in court, where the church vehemently denied all responsibility. At the initial hearing, the judge commented, “I don’t know how I’m going to decide this case. It appears that we have a bar owner who believes in the power of prayer, and an entire church congregation that does not.”

It is ironic that, as many congregations have become turned off by healing, CAM has been turned on by it. For more than two decades, the nature and extent of healing intentions has been a recurring theme in CAM research. Dozens of controlled trials of remote healing have been conducted, approximately half of which have yielded statistically significant results.

These experiments are generally designed to answer two fundamental questions: (1) Do the compassionate healing intentions of humans affect biological functions remotely in individuals who may be unaware of these efforts? (2) Can these effects be demonstrated in nonhuman situations, such as tumor growth and wound healing in animals, microbial growth, specific biochemical reactions, or the function of inanimate objects?

What has been accomplished? In a 2003 analysis, Jonas and Crawford found...
“over 2,200 published reports, including books, articles, dissertations, abstracts and other writings on spiritual healing, energy medicine, and mental intention effects. This included 122 laboratory studies, 80 randomized controlled trials, 128 summaries or reviews, 95 reports of observational studies and nonrandomized trials, 271 descriptive studies, case reports, and surveys, 1,286 other writings including opinions, claims, anecdotes, letters to editors, commentaries, critiques and meeting reports, and 259 selected books.”

How good are the clinical and laboratory studies? Using strict CONSORT (Consolidated Standards of Reporting Trials) criteria, Jonas and Crawford gave an “A,” the highest possible grade, to studies involving the effects of intentions on inanimate objects such as sophisticated random number generators. They gave a “B” to the intercessory prayer studies involving humans, as well as to laboratory experiments involving nonhumans such as plants, cells, and animals. Religion-and-health studies, which assess the impact of religious behaviors such as church attendance on health, were graded “D,” because nearly all of them are observational studies, with no high-quality randomized controlled trials. Many systematic and meta-analyses have been published in the peer-reviewed medical literature assessing the quality of remote healing and distant intentionality studies. Nearly all these peer-reviewed analyses have yielded positive findings, suggesting that healing effects are real and replicable.

The depth and breadth of healing research remains little known among healthcare professionals, including, unfortunately, many of those who have offered stern criticisms of it. These critiques are almost never comprehensive but often rely on philosophical and theological propositions about whether remote healing and prayer ought to work or not, and whether these experiments are heretical or blasphemous. Dossey and Hufford have evaluated the 20 most common criticisms directed toward this field, and Schwartz and Dossey have analyzed the critical factors that are involved in healing experiments.

As an example of the sophistication of recent studies, researcher Jeanne Achterberg and her colleagues recruited 11 healers from the island of Hawaii. Each healer selected a person they knew, with whom they felt an empathic, compassionate, bonded connection, to be the recipient of their healing efforts, which the researchers called distant intentionality (DI). The healers were not casually interested in healing; they had pursued their healing tradition an average of 23 years. They variously described their healing efforts as prayer, sending energy, good intentions, or simply thinking and wishing for the subjects the highest good. Each subject was isolated from all forms of sensory contact with the healer while a functional magnetic resonance imaging (fMRI) brain scan was done. The healers sent DI at two-minute random intervals that were unknown to the recipient. Significant differences between the experimental (send) and control (no-send) conditions were found in 10 of the 11 subjects. There was less than approximately one chance in 10,000 that the results could be explained by chance (in the language of science, \( P = .000127 \)). The areas of the brain that were activated during the “send” periods, indicating increased metabolic activity, included the anterior and middle cingulate areas, precuneus, and frontal areas. This study suggests that compassionate healing intentions can exert measurable physical effects on the recipient at a distance, and that an empathic connection between the healer and the recipient is a vital part of the process. Achterberg’s study does not stand alone. Several other fMRI and electroencephalographic-based studies in separated subjects show similar findings.

An intriguing study involving human tissue examined the effects of noncontact therapeutic touch (TT) on the proliferation of normal human cells in culture, compared with sham and no treatment. These researchers found that TT administered twice a week in 10-minute intervals for two weeks significantly stimulated proliferation of fibroblasts, tenocytes, and osteoblasts in culture (\( P = .04, .01, \) and .01, respectively) compared with untreated control.

I have been interested in this growing body of evidence and have written about it extensively over three decades. During the 1980s, when healing experiments first began to attract national attention, I thought the mainstream religious community in America would be pleased, because the studies appeared to validate the phenomenon of healing, which has long been a central feature of the Christian tradition. Although many did approve, I was surprised when I was deluged with mail from religious believers who objected to these experiments. Many were incensed that the healing studies included non-Christians, such as Buddhists, or pagans, such as Wiccans, and that the healing intentions of these individuals appeared to be as effective as the prayers of born-again Christians. Some insisted that there must be some mistake in the experiments, because God would never answer non-Christian prayer. The healing experiments made for strange bedfellows, as skeptical, materialistically oriented scientists who were certain that remote healing was impossible in principle found themselves aligned with complaining Christians in opposing these experiments.

**TRANSITION**

As many of America’s religious organizations have become increasingly politicized and secularized, CAM is becoming increasingly spiritualized. As Astin discovered, a spiritual vector has been shown to underlie CAM—an animating, life-changing force that strongly influences people’s worldview and the type of therapies they choose. Spirituality also influences people physically. Hundreds of studies reveal the influence of spiritual belief and practice on health and longevity. Evidence from the new field called the epidemiology of religion, founded by pioneer researcher Jeffrey S. Levin, compellingly shows that people who follow some sort of spiritual path (it does not seem to matter greatly which one they choose) live significantly longer and have a lower incidence of most major diseases. And while some congregations seem increasingly intolerant of other religions’ beliefs and lifestyles, CAM is showing the way toward religious tolerance. How? Healing studies consistently suggest that no particular religion has a monopoly on healing, and that the healing intentions and prayers of no specific religion appear to enjoy an advantage in the actual experiments.

**REENTER SCHRÖDINGER**

Many scientifically oriented individuals experience severe intellectual indigestion over the idea that spirituality is important in health. Relief for this malady can be
found in a new view of consciousness—not actually new, but an ancient view that is being newly supported through solid science. This is where the views of the physicist Schrödinger, with whom we began, become useful.

Schrödinger embraced a model of consciousness that unifies the consciousness-related phenomenon of remote healing with both science and the great wisdom traditions. In books such as What Is Life? and Mind and Matter and My View of the World, Schrödinger painstakingly built a concept of the One Mind, in which consciousness is transpersonal, universal, collective, and infinite in space and time, therefore immortal and eternal. His vision is that of nonlocal mind, a term I introduced in 1989 in my book Recovering the Soul, to indicate that consciousness is infinite, eternal, and one.

Schrödinger believed that consciousness, although experienced individually and as limited to the cranium and to the present moment, was in fact infinitely extended in space and time. This means that the mind is in some sense unbounded and unrestricted, therefore inseparable and unitary. He wrote:

To divide or multiply consciousness is something meaningless. In all the world, there is no kind of framework within which we can find consciousness in the plural; this is simply something we construct because of the spatio-temporal plurality of individuals, but it is a false construction. . . . The category of number, of whole and of parts are then simply not applicable to it; the most adequate . . . expression of the situation is this: the self-consciousness of the individual members are numerically identical with [one an]other and with that Self which they may be said to form at a higher level . . . . Mind is by its very nature a singulare tantum. I should say: the overall number of minds is just one.

In adopting a unitary view of human consciousness, Schrödinger recognized what he called the “arithmetical paradox”—that although there are millions of apparently separate minds, the view that humans have of the world is largely coherent. This is possible, he asserted, because each individual “I” is part of an indivisible whole. There is only one adequate explanation for this, he wrote, “namely the unification of minds or consciousness. Their multiplicity is only apparent, in truth there is only one mind.”

Schrödinger believed we are suffering from a consensus trance, a massive, collective delusion, about the nature of consciousness. As he put it:

We have entirely taken to thinking of the personality of a human being . . . as located in the interior of the body. To learn that it cannot really be found there is so amazing that it meets with doubt and hesitation, we are very loath to admit it. We have got used to localizing the conscious personality inside a person’s head— I should say an inch or two behind the midpoint of the eyes. . . . It is very difficult for us to take stock of the fact that the localization of the personality, of the conscious mind, inside the body is only symbolic, just an aid for practical use.

Immortality for the mind was a key feature of Schrödinger’s vision. He wrote:

I venture to call it [the mind] indestructible since it has a peculiar time-table, namely mind is always now. There is really no before and after for the mind. There is only now that includes memories and expectations. We may, or so I believe, assert that physical theory in its present stage strongly suggests the indestructibility of Mind by Time.

For many Westerners, the extent of Schrödinger’s holism can be shocking. He maintained:

[As] inconceivable as it seems to ordinary reason, you—and all other conscious beings as such—are all in all. Hence this life of yours which you are living is not merely a piece of the entire existence, but is in a certain sense the whole; only this whole is not so constituted that it can be surveyed in one single glance. This, as we know, is what the Brahmmins express in that sacred, mystic formula which is yet really so simple and clear: Tat tuvam asi, this is you. Or, again, in such words as ‘I am in the east and in the west, I am below and above, I am this whole world.”

For Schrödinger, this vision was no airy-fairy piece of philosophy, but was thoroughly practical. The fact that an individual is in some sense the whole leads to acts of selflessness and altruism. “It . . . underlies all morally valuable activity,” Schrödinger asserted. It causes individuals to risk their life for an end they believe to be good, to lay down their life to save someone else’s, and to give to relieve a stranger’s suffering even though it may increase their own. In Schrödinger’s view, to save another’s life is to save one’s own life. His vision permits a restatement of the self-oriented Golden Rule, from “Do unto others as you would have them do unto you,” to “Be kind to others because in some sense they are you.”

The practicality of his view permeated the workaday life of the scientist. For Schrödinger, doing science was a spiritual exercise. Done properly, scientific work was akin to fathoming the divine will, the mind of God. He wrote:

Science is a game. . . . The uncertainty is how many of the rules God himself has permanently ordained, and how many apparently are caused by your own mental inertia. . . . This is perhaps the most exciting thing in the game. For here you strive against the imaginary boundary between yourself and the Godhead—a boundary that perhaps does not exist.

Schrödinger found affirmations of his nonlocal vision of consciousness in the mystical writings of many cultures and religions, particularly the Vedanta philosophy of ancient India, as mentioned. To underscore this view, he quotes Aziz Nafisi, the Sufi mystic of 13th-century Persia:

On the death of any living creature this spirit returns to the spiritual world, the body to the bodily world. In this however only the bodies are subject to change. The spiritual world is one single spirit who stands like unto a light behind the bodily world and who, when any single creature comes into being, shines through it as through a window. According to the kind and size of the window less or more light enters the world. The light itself however remains unchanged.
Schroedinger acknowledged that science has its limits, dark corners of mystery that can only be illuminated by light from other sources. He observed:

Our science—Greek science—is based on objectivation whereby it has cut itself off from an adequate understanding of the Subject of Cognizance, of the mind. But I do believe that this is precisely the point where our present way of thinking does need to be amended, perhaps by a bit of blood-transfusion from Eastern thought. That will not be easy, we must be aware of blunders—blood transfusion always needs great precaution to prevent clotting. We do not wish to lose the logical precision that our scientific thought has reached, and that is unparalleled anywhere at any epoch.16,44,140

Schroedinger prized intellectual rigor. “My purpose,” he wrote, “… is to contribute perhaps to clearing the way for a future assimilation of the doctrine of identity with our own scientific world view, without having to pay for it by a loss of soberness and logical precision.” The logical precision, he believed, came from the new physics he helped create. He saw not conflict but harmony between his interpretation of quantum physics and Vedanta. As his biographer Moore explains, “In 1925, the world view of physics was a model of the universe as a great machine composed of separable interacting material particles. During the next few years, Schroedinger and Heisenberg and their followers created a universe based on the superimposed inseparable waves of probability amplitudes. This view would be entirely consistent with the vedantic concept of the All in One.”3(p173)

But not just Vedanta. Schroedinger cites with approval Aldous Huxley’s magnificent treatise The Perennial Philosophy, an anthology of mystical writings from the esoteric side of the world’s major religions.48 This suggests that Schroedinger agreed in principle with the view that “all mystics speak the same language, for they come from the same country.”49 If Vedanta had never existed, he could have found affirmation of his vision in other traditions.

CONSCIOUSNESS UNBOUND

It is becoming increasingly clear that consciousness can insert information remotely in space and time,21,50-52 as in distant healing, and also acquire information remotely in space and time, as in precognition, premonitions, presentiment, and remote viewing.33,53 The field of CAM has been centrally involved in these findings through the numerous experiments in remote healing that have been done over the past three decades.

Most critics of these developments appear locked into a local, finite, personal view of consciousness. Unable to conceive that consciousness could act nonlocally and transpersonally, they conclude that it doesn’t do so. Thus, one of the most frequent criticisms of these experiments is that they are so theoretically implausible they should be ignored, no matter what the evidence shows.35,56 Theoretical plausibility, however, is a treacherous basis on which to dismiss empirical findings; X-rays, heavier-than-air flight, meteotones, and coronary artery disease were once dismissed because they were said to be theoretically implausible. Plausibility arguments in science are sometimes valid, but they may also indicate ignorance and intolerance.57 As philosopher and parapsychology researcher John Beloff, of the University of Edinburgh, stated, “Skepticism is not necessarily a badge of tough-mindedness; it may equally be a sign of intellectual cowardice.”35,58

This is why a model of the mind that permits consciousness to manifest nonlocally is important. Such a model reveals how the world may work; it creates space for facts that don’t fit in. The fact that such a model was advanced decades ago by one of the towering figures in modern physics may go far in tempering the tendency of critics to dismiss these findings out of hand.

Erwin Schroedinger is only one among many eminent scientists who have endorsed a nonlocal view of consciousness. In my recent book The Power of Premonitions, I provided comments from many other respected scientists, including Nobelists, who also took a nonlocal view of the mind—David Bohm, George Wald, Freeman Dyson, Henry Margenau, Sir Arthur Eddington, Gregory Bateson, and others.59 Transpersonal psychologist Ken Wilber has also assembled the writings of many outstanding physicists in his book Quantum Questions: The Mystical Writings of the World’s Great Physicists.60

CAM’S FINEST MOMENT?

Will our Western religions wake up to these common touch points with science? Or will these commonalities continue to be obscured by the chorus of politicized religiosity, intolerance of dissenting views, and ignorance of science? And will the broader scientific community acknowledge, at long last, that nonlocal models of consciousness are already part of its legacy?

If this awareness achieves recognition and acceptance, it will partly be because of those courageous CAM researchers who continue to explore the nonlocal operations of consciousness in the domain of healing. I can think of no greater contribution.

—Larry Dossey, MD
Executive Editor

REFERENCES