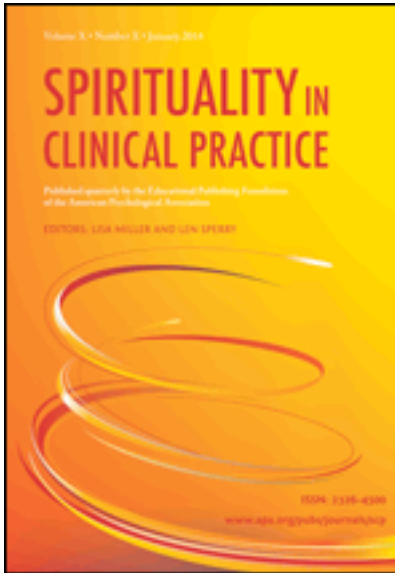


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## ***Spirituality and Nonlocal Mind: A Necessary Dyad***

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**ABSTRACT:** A growing body of empirical evidence suggests that human consciousness is nonlocal — i.e., it is not confined to specific points in space, such as brains and bodies, or specific moments in time, such as the present. Evidence for nonlocal consciousness can be found in distant cell-to-cell, organ-to-organ, and person-to-person interactions. Throughout history, what are commonly called spiritual experiences involve a similar motif of experience: the felt transcendence of space and time and a sense of unity with all there is. This paper proposes that nonlocality is a common feature of consciousness in general, and of spiritual experience in particular. Consciousness is seen as fundamental in this view, as working through the brain but not produced by the brain. Entanglement, now recognized to occur in biological systems, is proposed as a mechanism for the nonlocal interactions of conscious beings. A consequence of nonlocal consciousness is immortality, because temporal nonlocality implies infinitude in time. Because the experience of nonlocal consciousness often involves a sense of the spiritual, nonlocal consciousness and spirituality are seen as a complementary dyad.

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“I regard consciousness as fundamental. I regard matter as derivative from consciousness. We cannot get behind consciousness. Everything that we talk about, everything that we regard as existing, postulates consciousness.” (Planck, 1931)

~ Max Planck  
Nobel Prize in Physics, 1918

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“It is almost an absurd prejudice to suppose that existence can only be physical. As a matter of fact, the only form of existence of which we have immediate knowledge is psychic. We might as well say, on the contrary, that physical existence is a mere inference, since we know of matter only in so far as we perceive psychic images mediated by the senses.” (Jung, 1975, p. 12)

~ Carl G. Jung

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“If we have to decide to have only one sphere, it has got to be the psychic one, since that exists anyway.” (Schrödinger, 1960, p. 62)

~ Erwin Schrödinger  
Nobel Prize in Physics, 1933

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One of the most graceful essayists the profession of medicine produced in the twentieth century was physician Lewis Thomas. He was for many years director of research at Memorial Sloan-Kettering Cancer Center. Thomas observed that it can be a mistake to force certain terms to follow a locked-on trajectory. Sometimes their definition is best left alone. Rather, they should be allowed to float in deliberate ambiguity, displaying their meaning through usage and familiarity.

“Spirituality” may be one such term. Dictionaries don’t help much. My online dictionary defines spirituality “of, relating to, or affecting the spirit or soul as opposed to material or physical things.” But what are spirit and soul? For that matter, what is “material”? We can be excused for not knowing, in view of the uncertainty these days in physics about all that mysterious “dark matter” and “dark energy” which, we’re told, no one understands, but which comprise over 90 percent of the stuff of the universe. Why should we demand more of ourselves than we do of physicists?

But since ambiguity and fuzziness are not highly prized in academic journals, here is my offering: “Spirituality involves that which is generally considered sacred or holy. Spirituality is usually, though not universally, considered to involve a sense of connection with an absolute, immanent, or transcendent spiritual force, however named, as well as the conviction that meaning, value, direction, and purpose are valid aspects of the universe” (Dossey, 2003, pp. A10-A12). Spirituality should not

be equated with religion. Religion is “a codified and ritualized system of beliefs and conduct, usually taking place within a community of like-minded individuals” (Dossey, 2003, pp. A10-A12). An individual can be spiritual without being religious, or vice versa; one can be both spiritual and religious, or neither.

## **Nonlocal Mind**

My premise is that spiritual experience is part of a larger, encompassing mode of consciousness that I’ve called nonlocal mind. It is a mode of information acquisition and exchange that transcends the limitations of the physical senses and space and time. It is often accompanied by a sense of having touched a numinous realm that is of a wholly different significance than ordinary waking awareness, a different degree of *beingness*.

I coined the term “nonlocal mind” in 1987 in a manuscript I was writing, which was published in 1989 as the book *Recovering the Soul* (Dossey, 1989, pp. 1-11). I was unaware in 1987 of any prior use of this term in the printed English language, and I have subsequently been unable to find any earlier use. Since then, “nonlocal mind” has become widely employed. A Google search for “nonlocal mind” yields nearly 6,000 links; for “nonlocal consciousness,” almost 11,000 links; and for “nonlocal awareness,” around 3,000 results (Google searches, October 28, 2013)

The reason to hypothesize such an encompassing dimension of consciousness is straightforward: it is difficult or impossible to account for many manifestations of the mind without such.

Consciousness researcher, author, and archaeologist Stephan A. Schwartz is one of the founders of the field of remote viewing. Schwartz observes that nonlocal experiences commonly take three forms: spiritual epiphany or ecstasy; the *Ahha!* moment of creative genius; or a verifiable event involving nonlocal knowing — telepathic exchanges, clairvoyant knowing, remote viewing, precognition, presentiment. Schwartz explains, “These three enigmatic occurrences are, in fact, different manifestations of the same process, sometimes seen as spiritual, sometimes as merely strange.” He adds, “Forget about the psychic, the occult, the supernatural, and all the mindset and emotional baggage that goes with those terms, and the world they conjure up. Think instead about learning how to do something as normal as seeing color, by discovering a part of yourself you might not have known even existed...that part of you [that] exists independent of the limitations of time and space...[that] makes you look at yourself and the world differently...” (Schwartz, S. A., 2007).

## **The Relationship of Spiritual and Nonlocal Experiences**

But how can experiences involving nonlocal mind — mental functioning that bypasses sensory mediation and the confinements of space and time — connect with “the spiritual”? Nonlocal experiences reveal linkages and connections between distant individuals. But linkages between distant people are common — think cellphones and telephones — so there is nothing that is *necessarily* spiritual, transcendent, numinous, or transformational about connectedness. As Hoyt L. Edge,

Professor of Philosophy at Florida's Rollins College, says, "[Nonlocal] phenomena are no more spiritual than any other phenomena in themselves...." But that is not the whole story. "[T]here is an implication of the [nonlocal] that is profound: [these] data provide evidence for the view that there is a connectedness to all things, and that this relatedness is natural, not a result of human artifact (i.e. the telephone)....[If these occurrences] indirectly suggest that all aspects of the cosmos are intimately interrelated and I am in a significant way part of this unity, then spiritual meaning can be developed out of this view" (Edge, H., 1997, p. 153).

Professor Edge believes this larger view can transform our way of being in the world. "The point of spirituality is not to separate oneself from the natural world and from others; rather, it is to make one's own actions in the natural world and one's interactions with others sacred," he says. "[Nonlocal experience] gives evidence that supports a more relational and connected view of the world.... With this accomplished, our understanding of the natural and the spiritual becomes less disjunctive and more connected. This approach resonates with the grand religious traditions and mystical experiences which emphasize relatedness and connection, and which spiritualize the natural world and our ordinary actions in it" (Edge, H., 1997, p. 163).

One of Professor Edge's students describes his feelings in an experiment designed to produce mystical experiences. The student had a nonlocal, unmistakably spiritual experience in which he felt linked with not just other humans but with everything that exists. He said, "I was at the source of awareness, enlightenment, and existence, manifested in a form of energy linking all objects animate and inanimate....I felt morally elevated to a state of pure and simple existence flowing like a continuous current through a waterfall, going deeper and deeper within all existence while feeling more and more at peace and content....I was surrounded by meaning and freed from the despair of meaninglessness, guilt, and time" (Edge, H., 1997, p. 163)

William Braud, the late experimental psychologist and consciousness researcher, emphasized the transformational potential of these experiences. "We could, no doubt, treat one another with kindness, understanding, and compassion even if we were not profoundly and intimately interconnected in nontrivial ways," he says. "However, having direct knowledge and direct experience of our interconnections can greatly increase our love for one another and enhance our ethical behaviors toward one another" (Braud, W., 1997, p. 134).

Braud believed that we can learn from research into the nonlocal manifestations of consciousness the factors and conditions that are more or less likely to lead to such direct experiences and use this knowledge to facilitate their occurrence. He says, "It may be that our deep interconnectedness with each other and with all of Nature is *the* major conclusion that issues forth from [this research]. Perhaps this is what we are really telling ourselves by means of the myriad [nonlocal] phenomena that we allow ourselves to experience. All [nonlocal] phenomena may be impressive and sometimes elaborate indicators of an already-present connectedness. What better way to dramatize to ourselves that we are truly one than to share — especially at great distances and in defiance of powerful conventional barriers — each other's thoughts, feelings, images, sensations, and

reactions? ...[These events] may be quick yet effective and that are readily at hand...when we wish to remind ourselves of our forgotten interconnections.... [They] can be useful to those on spiritual paths as they can provide a certain degree of confidence and trust that at least some of the processes and concepts encountered are 'real' in a more traditional sense and are not delusions, projections, or misinterpretations.... [Nonlocal consciousness research] may provide confidence that there is, indeed, *something else*" (Braud, W., 1997, p. 152).

Schwartz, Edge and Braud are pointing to the potential fusion of nonlocal and spiritual experiences, and the impossibility of a clean separation between them.

Donald Evans, Professor of Philosophy at Victoria College, University of Toronto, comes to the same conclusion. Evans suggests that nonlocal experiences can help jump-start one's commitment to a more spiritual way of being in the world. For many people, Evans says, these experiences "can pave the way toward spiritually profound transformations.... [Nonlocal] experiences can provide a first stage which is helpful to many and perhaps necessary for some. Indeed, the distinction between [nonlocal] and spiritual experiences is not always clear. ...[A] pathway that initially is predominantly [nonlocal] can lead into one that is predominantly genuinely spiritual" (Evans, D., 1993, p. 150).

Another way in which nonlocal-type experiences can aid in one's spiritual growth is to shock one into a realization that the constricting worldview of conventional science, which prohibits these phenomena, is inadequate. "Sometimes the only way that such a worldview can be undermined is by a powerfully impressive [nonlocal] experience which the skeptic undergoes," says Evans. "I have seen this happen in workshops designed to evoke various [nonlocal] powers of intuition. The whole reality issue shifts....Sometimes, of course, this happens spontaneously" (Evans, D., 1993, p. 152)

Evans sees two appropriate ways we can interpret these experiences. "On the one hand, I know that I am not separated from anyone or anything because of mystical experiences in which my own spirit is connected with everyone and everything through a *cosmic spirit* that is a pervasive *medium*. On the other hand, I know that I am not separated from anyone or anything because of mystical experiences in which my own conscious soul is united with the *conscious Source* of everyone and everything, which *simultaneously* lives in us and as us" (Evans, D., 1993, p. 166).

## **Dangers**

Any lofty human experience can be hijacked by narcissism and selfishness and converted into an ego trip. For this reason, some spiritual traditions have devalued and even derided *siddhis* or paranormal powers, which not infrequently crop up in one's process of personal transformation. But surely an absolute prohibition of these experiences is improper, because they can be powerful indicators of the connectedness that underlies the world, of which we are a part. These experiences, as Evans says, can provide "the necessary though elemental basis for what can follow: the arduous process of radical transformation or transfiguration in which we gradually uncover and surrender whatever prevents

our being lived by God, resonating and channeling the divine love” (Evans, D., 1993, p. 266).

Through nonlocal experiences marinated in spiritual awareness, we can become “transparent to transcendence,” says Karlfried Graf Dürkheim, the German psychologist and Zen master, becoming a transmitter of the circuits of consciousness, life, empathy, and love (Dürkheim, K. G., 2003, p. 40).

Physicist and consciousness researcher Russell Targ, whose experiments with his colleague Harold Puthoff at Stanford Research Institute helped put the discipline of remote viewing on the scientific map, emphatically asserts the compatibility of spirituality and nonlocal experiences. As he writes in his book *The Reality of ESP: A Physicist’s Proof of Psychic Abilities*: “Western science had given us great accomplishments and shown us the far reaches of space. But it has shrunken our mental space down to the size of a coconut. I think it is past time for us to start questioning this reality and to claim the unobstructed reality that is available to us” (Targ, R., 2009, p. 248).

Targ objects to the widespread claim that the great religions have ignored or rejected nonlocal experiences. As evidence, he cites the description of telepathy and precognition in the powerful Buddhist text known as *The Flower Ornament Scripture*, which dates to 100 A.D. (Cleary, T., 1993). “This Buddhist compendium,” Targ writes, “teaches that there is no paradox in precognition or in communicating with the dead because past, present, and future are all infinite in extent and *dependently co-arising*. Thus, the future can affect the past — and, since our awareness is timeless and nonlocal, it should not be surprising that we can and do experience manifestations of the deceased or communications from the future in precognitive dreams.” We are told, says Targ, that telepathy, appearing as mind-to-mind communication, is not something anomalous or special, but part of ordinary life, of which we are usually unaware. All these forms of “super-knowledge,” Targ says, “should be expected to appear in our lives as the natural outcome of nonlocal consciousness. *The Flower Ornament Scripture* does not consider any of these abilities to be supernatural; indeed, the idea is that nothing that appears in nature is supernatural” (Targ, R., 2009, p. 246) Neither are these experiences necessarily impediments or distractions on one’s spiritual journey, if experienced through a discriminating, clear mind refined through spiritual disciplines such as meditation, contemplation, etc.

Targ shows how these same examples of “super-knowledge” are found also in Hinduism, particularly in the writings of the sages Patanjali (2<sup>nd</sup> century BCE) and Shankara (8<sup>th</sup> century CE). He concludes, “I hope that my Buddhist friends never tell me again that Buddhists aren’t interested in psychic abilities” (Targ, R., 2009, p. 248).

Sri Aurobindo (1872-1950), the Cambridge-educated Indian philosopher, guru, poet, and spiritual reformer would have agreed with Targ. He wrote, “We need not shun the siddhis [extraordinary powers] and cannot shun them....[The yogin] can no more avoid the use of the siddhis of power and knowledge than an ordinary man can avoid eating and breathing, for these things are the natural action of the consciousness to which he is rising, just as mental activity and physical motion are the natural action of man’s ordinary life. All the ancient *rishis* used these powers, all great avatars and yogins have used them, nor is there any great man...who does not

use them continually in an imperfect form, without knowing clearly what are those supreme faculties that he is enjoying” (Murphy, M., 1992, p. 173).

Nonlocal ways of knowing remain theologically suspect in some areas within the Christian tradition. Christianity suffers from a brutal hangover from centuries past, when nonlocal phenomena such as telepathy, clairvoyance, and precognition were considered the devil’s work, and when individuals professing them were regarded as the devil’s spawn and were often executed in God’s name. These suspicions no longer become our species. These abilities should in fact be encouraged, because our struggling species will likely require the full spectrum of consciousness if we are to survive and thrive.

## Clinical Examples

Elizabeth Lloyd Mayer, Ph.D., who died in 2005, was an internationally known psychoanalyst, researcher, and clinician at University of California-Berkeley. She was the author of many papers on female psychological development, the nature of science, and intuition. She believed that gut feelings, instinct, and precognition play important roles in psychotherapy. Initially skeptical of many forms of nonlocal knowing, her opinions shifted as a result of a profound personal experience involving remote viewing.

In 1991, her daughter’s rare, hand-carved, heirloom harp was stolen from backstage following a musical performance in California. The police turned up no clues so, on a friend’s advice and almost as a joke, she contacted Harold McCoy, a dowser in Arkansas who specialized in finding lost objects. Within two days and without leaving his home 1,600 miles away, he provided the exact street coordinates where the stolen harp was located. The astonished Mayer concluded, “This changes everything.” Her experience is detailed in her book *Extraordinary Knowing: Science, Skepticism, and the Inexplicable Powers of the Human Mind* (Mayer, E. L., 2007). She also describes experiences of professional colleagues that suggest an extended reach of the mind. Nearly all of them had been keeping them secret for fear of being thought crazy or credulous.

Mayer found that there occasionally seems to be no barriers between the minds of therapist and client. This is, in fact, a prediction of the model of nonlocal mind. For if minds are genuinely nonlocal, they are unbounded in space and time, implying that in some dimension they must come together and overlap. “Nonlocal” does not imply “a long way off” or “a very long time,” but *infinitude* in space and time. A limited nonlocality is a contradiction in terms. Nonlocal minds are therefore shared minds; information belonging to one mind is potentially accessible to other minds, as suggested by the following examples Mayer relates.

A psychoanalyst in Washington, D.C., reported that during her private meditation when she closed her eyes she saw an image of a toddler-aged little boy putting a plastic bag over his head. There was a sense of distress around the boy, whom she did not recognize, nor was she aware of having known about any such situation. Two hours later, a patient arrived at her office and started the session by relating a distressing situation that occurred over the weekend. He was busy preparing dinner in his kitchen when his little boy walked into the room with a

plastic bag over his head, holding it tight around his neck. When the father reached for the boy, he ran into another part of the house. The situation became chaotic, with the father yelling desperately to his wife for help. The parents managed to remove the bag in time. The child said he had been trying to eat the cotton candy off the inside surface of the bag (Mayer, E. L., 2007, p. 15).

Another example was contributed by a world-famous authority on early childhood who was also a brilliant clinician. Her patient was a four-year-old girl in the second year of her treatment. The therapist saw her on October 2, the anniversary of her brother's death; he had drowned while saving someone else. She always found herself painfully distressed every year on October 2. The little girl, while playing, suddenly turned to the therapist and said, out of the blue, "Your brother is drowning — you have to save him!" The therapist reported that the hair stood up on her neck and she responded, "No one is going to drown because we will save them" — at which point the little girl went right back to playing. The game had no relationship to drowning or being overwhelmed in any way, nor had the therapist been aware of thinking of her brother at that moment. There was no way, she said, that this child could have known about her brother's fate, or that this was his death anniversary. Only one other instance similar to this had ever happened to the therapist, involving an adult who was also a therapist (Mayer, E. L., 2007, p. 14-15).

While on book tour a few years ago, I was invited onto a live national radio talk show. Unknown to me, the host had also invited a well-known cardiologist, whose job was to debunk my book. While waiting for the show to begin, the physician turned to me and said coldly, "I must tell you that I disagree with nearly everything you've written." I took a deep breath and tried mentally to prepare myself for the onslaught.

The host, wanting to stir up disagreement as quickly as possible, immediately asked me to relate a precognitive dream I'd written about. After I finished, he turned to the cardiologist and said, "Now, Doctor \_\_\_, what do *you* think about this dream stuff?" Then he leaned away from the microphone and waited for the fireworks to begin.

Instead of attacking, however, the cardiologist lapsed into an awkward silence — "dead air" in radio terminology. I had no idea what he was thinking and neither did the host, who appeared near panic. Finally the physician said thoughtfully, "I think there may be something to Dr. Dossey's dream." The host nearly fainted; this was not what he had in mind. After another long pause, the cardiologist said meekly, "I'd like to relate a dream of my own." Then he said, almost tenderly, "I've never told this to anyone before."

While the host wiped the sweat from his brow, the cardiologist described how he once had an elderly female patient in the hospital who required a cardiac catheterization. The night prior to the procedure the doctor dreamed that while he was performing the cath the patient became speechless, paralyzed on one side, and unconscious — a severe stroke. On waking, he was rattled and wondered whether he should cancel the test in view of the nightmare. Assuring himself that dreams mean nothing, he decided to go ahead. Later that day, during the actual catheterization, the woman experienced a stroke in precisely the same pattern he



dreamed the night before. Although the woman recovered totally, the experience shook him profoundly. Following the event, he said that his “world changed.”

For the rest of the radio program, the cardiologist and I found nothing on which we disagreed. We had a delightful chat, to the chagrin of our host.

It was a moving experience for me and for the cardiologist as well. When I returned home, I received a couple of e-mail messages from him that dealt with additional experiences he’d had. “Nice touch,” I teased him, “waiting until you had a national radio audience before going public! Great sense of timing!”

I wondered why he did it. Why not continue to keep these experiences buried? I believe he needed to unburden himself by sharing this highly meaningful event, and he felt safe in doing so with me, a professional colleague. He knew I wouldn’t shame him, but would support him in his revelation. How many people, I wondered, long to do the same? The answer, I believe, is thousands.

### **How Could It Be That Way?**

The skeptical response is to dismiss examples such as these as anecdotes, coincidences, misinterpretations, or fraud. In any case, they are hardly the sort of framework on which to build a nonlocal, extended model of consciousness.

In recent years, however, a growing body of empirical research points toward nonlocal connectedness in a variety of living systems that defies separation in space and time. Among these studies are the following.

Cell-to-cell connections. In 2009, a team of Italian researchers led by neuroscientist Rita Pizzi demonstrated that when one group of human neurons was stimulated by a laser beam, a distant group of neurons registered similar changes, although the two were completely shielded from each other. Pizzi observed, “[O]ur experimental data seem to strongly suggest that biological systems present non-local properties not explainable by classical models” (Pizzi, R., Fantasia, A., Gelain, F., Rossetti, D., & Vescovi, A., 2004).

In 2013, a group of researchers led by Victor V. Chaban of the Geffen School of Medicine, University of California-Los Angeles, demonstrated that cancer cells could communicate with nearby normal cells without being physically connected with them. All groups of cells were shielded, preventing any known type of physical communication (Chaban, V. V., Cho, T., Reid, C. B., & Norris, K. C., 2013, pp. 69-79).

Brain-to-brain connections. In the 1960s, pioneer psychologist Charles Tart at the University of California-Davis and researchers Duane and Berendt demonstrated correlated patterns in the EEGs of distant individuals. The latter research involved identical twins. In order to test anecdotal reports that twins share feelings and physical sensations at a distance, even when far apart, they altered the EEG pattern of one twin and observed the effect on the other. In two of fifteen pairs of twins tested, eye closure in one twin produced not only an immediate alpha rhythm in his own brain, but also in the brain of the other twin, even though he kept his eyes open and sat in a lighted room (Duane, T. D., & Behrendt, T., 1965, p 367).

The publication of this study in the prestigious journal *Science* evoked enormous interest. Ten attempted replications soon followed, by eight different

research groups around the world. Of the ten studies, eight reported positive findings.

In the late 1980s and 1990s, a team headed by psychophysicologist Jacobo Grinberg-Zylberbaum at the University of Mexico published experiments that, like most of the previous studies, demonstrated correlations in the EEGs of separated pairs of individuals who had no sensory contact with each other. (Grinberg-Zylberbaum, J., & Ramos, J., 1987, pp. 41-53), (Grinberg-Zylberbaum, J., Delaflor, M., & Attie, L., 1994, pp. 422-428), (Grinberg-Zylberbaum, J., Delaflor, M., Sanchez, M. E., & Guevara, M. S., 1993, pp. 25-43).

Experiments in this field became increasingly sophisticated. In 2003 Wackerman, an EEG expert from Germany's University of Freiberg, attempted to eliminate all possible weaknesses in earlier studies and applied a refined method of analysis. Following his successful experiment he concluded, "We are facing a phenomenon which is neither easy to dismiss as a methodological failure or a technical artifact nor understood as to its nature. No biophysical mechanism is presently known that could be responsible for the observed correlations between EEGs of two separated subjects" (Wackerman, J., Seiter, C., Keibel, H., & Walach, H. 2003, pp. 60-64).

As fMRI brain-scanning techniques matured, these began to be employed, with intriguing results. Psychologist Leanna Standish at Seattle's Bastyr University found that when one individual in one room was visually stimulated by a flickering light, there was a significant increase in brain activity in a person in a distant room (Standish, L., Johnson, L. C., Richards, T., & Kozak, L., 2003, pp. 122-128)

In 2004, three new independent EEG replications were reported, all successful—from Standish's group at Bastyr University (Standish, L., Kozak, L., Johnson, L. C., & Richards, T., 2004, pp. 307-314), from the University of Edinburgh (Kittennis, M., Caryl, P., & Stevens, P., 2004, pp. 67-76), and from researcher Dean Radin and his team at the Institute of Noetic Sciences (Radin, D., 2004, pp. 315-323).

Person-to-person connections. Researcher Jeanne Achterberg, a pioneer in the use of imagery and visualization in medicine, and her colleagues performed a study to assess whether healers could influence the physiology of distant subjects. They recruited eleven indigenous healers from the island of Hawaii. Each healer was asked to recruit a person they knew, with whom they felt an empathic, compassionate connection, to be the recipient of their healing efforts, which the researchers roundly referred to as distant intentionality (DI). The healers were not casually interested in healing; they had pursued their healing work an average of 23 years. They described their healing efforts in a variety of ways—as sending energy, prayer, or good intentions, or as simply thinking of the individual subject and wishing for them the highest good. No sensory contact between healer and subject was possible. Each subject underwent an fMRI brain scan while the healers sent their individual form of DI at randomized, two-minute intervals that could not have been anticipated by the recipient. Significant differences in the subjects' fMRI patterns between the experimental ("send") and control ("no-send") conditions were found in ten of the eleven subjects. The areas of the brain that were activated during the send periods included the anterior and middle cingulate areas, the precuneus, and the frontal areas. There was less than approximately one chance in

10,000 that the results could be explained by chance. This study suggests that compassionate healing intentions can exert distant, measurable effects on the recipient that can be detected via fMRI, and, that an empathic connection between the healer and the recipient is a vital part of the process (Achterberg, J., Cooke, K., Richards, T., Standish, L., Kozak, L., & Lake, J., 2005, pp. 965-971).

Evidence that our thoughts, emotions, and behaviors may influence someone remotely has surfaced in recent analyses of social networks. James H. Fowler, a political scientist at the University of California-San Diego, and Nicholas A. Christakis, a physician and social scientist at Harvard Medical School, published a provocative article in 2008 in the *British Medical Journal*, "Dynamic Spread of Happiness in a Large Social Network" (Fowler, J. H. & Christakis, N. A., 2008, pp. a2338). Christakis states, "[H]appiness is more contagious than previously thought.... Your happiness depends not just on your choices and actions, but also on the choices and actions of people you don't even know who are one, two and three degrees removed from you. ... Emotions have a collective existence — they are not just an individual phenomenon" (Belluck, P., 2008)

From 1983 to 2003, Fowler and Christakis collected information from 4,739 people enrolled in the well-known Framingham Heart Study and from several thousand other individuals with whom they were connected — spouses, relatives, close friends, neighbors and co-workers. They found, says Fowler, that, "[I]f your friend's friend's friend becomes happy, that has a bigger impact on you being happy than putting an extra \$5,000 in your pocket." The idea that the emotional state of your friend's friend's friend could profoundly affect your psyche created a sensation in the popular media. As a *Washington Post* journalist put it, "[E]motion can ripple through clusters of people who may not even know each other" (Stein, R., 2009).

It's not just happiness that gets around. The team also found that depression, sadness, obesity, drinking and smoking habits, ill-health, the inclination to turn out and vote in elections, a taste for certain music or food, a preference for online privacy, and the tendency to think about suicide are also contagious (Bond, M., 2009, pp. 24-27), Christakis, N. A. & Fowler, J. H., 2009).

Christakis and Fowler published their findings about the spread of obesity in large social networks in the elite *New England Journal of Medicine*. They showed that obesity in people you don't know and have never heard of could ricochet through you. They attributed the contagiousness of obesity to a "social network phenomenon" without proposing any specific physiological or psychological mechanism (Christakis, N. A. & Fowler, J. H., 2007, pp. 370-379). To label something, however, is not to explain it, and to merely call this sort of thing a "social network phenomenon" has all the explanatory value of saying "what happens happens." In the commentary that accompanied their *NEJM* article, the experts who weighed in took the same tack. They discussed the genetic factors that influence obesity and the connections within and between cells in an individual that may contribute to overweight, but they too were mute about how distant humans might influence one another when they are beyond sensory contact.

Some suggest that the ripples work through the action of mirror neurons, which are brain cells believed to fire both when we perform an action ourselves and when we watch someone else doing it. But when people are remote from each other,

there is no one to watch, and therefore no stimulus for the mirror neurons to fire. Others suggest that the spread is through mimicry, as when people unconsciously copy the facial expressions, body language, posture, and speech of those around them. There is a hint of desperation in these attempts to find some sneaky physical factor that mediates changes between distant individuals. But when all is said and done, Fowler and Christakis say they don't really know how happiness, obesity, etc. spread (Kaplan, K., 2008).

Conventional explanations for the spread of social network phenomena may eventually be identified, but so far none have been established. As a consequence, the fact that your friend's friend's friend, someone you've neither seen nor heard of, is affecting your health has begun to rattle many of the gatekeepers in medicine. This field may be a bomb with a delayed fuse that is getting ready to explode in the very heart of materialistic medicine. A few medical insiders are raising the possibility that something heretofore unthinkable may be going on, such as a nonlocal, collective aspect of consciousness that links distant individuals. Among them is Dr. Robert S. Bobrow, a courageous clinical associate professor in the Department of Family Medicine at New York's Stony Brook University. In discussing the spread of obesity in his article "Evidence for a Communal Consciousness," he says, "Frankly, obesity that develops from social connection, without face-to-face interaction, suggests emotional telepathy" (Bobrow, R. S., 2011, pp. 246-248).

## **Entanglement**

Many hypotheses have been advanced that might assist our understanding of the above phenomena. Perhaps the most promising candidates involve a concept in modern physics called "entanglement." The term "entanglement" was advanced by physicist Erwin Schrödinger, who was awarded the Nobel Prize in Physics in 1933 for his wave equations, which lie at the heart of modern quantum mechanics.

Entanglement is said to exist if it is impossible to fully describe one event without taking into account one or more other events. Entangled events are linked by nonlocal connections, which have three features: They are *unmediated* (by any known energetic signal); they are *unmitigated* (by increasing spatial separation); and they are *immediate* (instantaneous) (Herbert, N., 1987, p. 214).

Until recently scientists believed entanglement was limited to the invisible micro-world of atoms and subatomic particles. However, entanglement has been proved to be a feature of the biology of living creatures, including ourselves (Vedral, V., 2011, pp. 38-43), (Thaheld, F. H., 2003, pp. 35-41), (Thaheld, F. H., 2004, pp. 205-216).

Standard physics textbooks haven't caught up. They describe how the mid-sized world of bricks, brains, and beasts, and the colossal world of planets, stars, and galaxies are the domain of classical physics and are described by Newton's laws and Einstein's theories of relativity. As we descend in scale to subatomic particles and atoms, however, we cross an invisible boundary where classical physics no longer applies, and the strangeness of quantum behavior takes charge. The framework provided by quantum mechanics governs this microscopic, invisible level. The

workings of our bodies and our experiences in our meso- or middle world are off limits to quantum effects. So it has been said.

How things change! The June 2011 cover of the journal *Scientific American* displays a human head made of tiny particles and the caption “Living in a quantum world: small-scale physics has a ‘spooky’ power over the world at large.” In his lead article, Oxford physicist Vlatko Vedral explains what this fuss is all about: “Quantum mechanics is not just about teeny particles. It applies to things of all sizes: birds, plants, maybe even people....Quantum mechanics is commonly said to be a theory of microscopic things: molecules, atoms, subatomic particles.... [T]his convenient partitioning of the world is a myth....It is but a useful approximation of a world that is quantum at all scales....Over the past several years experimentalists have seen quantum effects in a growing number of macroscopic systems. *The quintessential quantum effect, entanglement, can occur in large systems as well as warm ones — including living organisms — even though molecular jiggling might be expected to disrupt entanglement....* Until the past decade, experimentalists had not confirmed that quantum behavior persists on a macroscopic scale. Today, however, they routinely do. These effects are more pervasive than anyone ever suspected. They may operate in the cells of our body.... We can’t simply write [quantum effects] off as mere details that matter only on the very smallest scales....The entanglements are primary” [emphasis added] (Vedral, V., 2011, pp. 38-43).

Schrödinger believed in an unlimited, all-encompassing connectivity that went beyond the subatomic world to embrace all of human activity. He observed, “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” (Schrödinger, E., 1983, pp. 21-22).

## **Extraordinary Evidence**

In assessing nonlocal experiences, several clichés should be laid to rest. These include the old saw that “there is no evidence for any of this stuff” and the wise but abused assertion that “extraordinary claims require extraordinary evidence.” The evidence for nonlocal experiences is both abundant as well as extraordinary. It is time that science, including psychology, took off the blinders.

As consciousness researcher Stephan A. Schwartz, and psychologist Patrizio Tressoldi of Italy’s University of Padova have recently described, there are six areas of research involving nonlocal awareness and nonlocal intentionality that have been replicated in laboratories around the world, each giving odds against chance of around a billion to one. When the statistical odds from all six areas are combined, the overall odds against chance are astronomical, at  $10^{54}$  to one. Although space does not permit a detailed discussion of these six areas of research, they are remote viewing, the influence of intention on the behavior of random event generators, the Global Consciousness Project, presentiment, precognition, and ganzfeld studies. By comparison, the odds favoring the existence of the Higgs boson at CERN (the European Organization for Nuclear Research) in 2012 was “only” 300 million to one (Schwartz, S. A., 2013), (Tressoldi, P. E., 2011, p. 117).

## Immortality

There is an aspect of nonlocal mind that connects it with spirituality, which may be the most significant link of all: the implication of immortality.

A mind that is local—confined to the brain, the body, and the here-and-now—is incapable of the activities demonstrated in the above experiments. Only nonlocal mind, mind that is unlimited in space and time, can behave this way.

Therein lies the rub. In contemporary neuropsychiatry, consciousness is equated with the workings of the brain—a thoroughly local, finite view. This implies that when the brain dies consciousness is annihilated; nothing survives death. In the graphic words of philosopher Michael Grosso, “According to [this] official view, consciousness peeps out momentarily, a flickering phosphorescence of nerve tissue, and is destined to vanish forever after death” (Grosso, M., 2004a, p. xiv) In striking contrast, the premise of nonlocal mind affirms ancient concepts such as “soul” and “spirit” that designate an ongoing something that survives the death of the physical body. In short, if something about the mind is nonlocal, as evidence suggests, immortality is mandated. Why mandated? A limited nonlocality is a contradiction in terms. As mentioned, temporal nonlocality does not imply “for quite a while” or “a long time,” but *infinitude* in time: eternity or immortality.

The possibility of immortality has been ridiculed in science in the twentieth century, and the results, many observers believe, have been disastrous. As author George Orwell put it, “The major problem of our time is the decay of belief in personal immortality” (Banville, J., 2003, p. 62-65). Swiss psychologist C. G. Jung thought similarly, saying, “The decisive question for man is: Is he related to something infinite or not? That is the telling question of his life (Jung, C. G., 1965, p. 325). Here is how he, as a clinician, dealt with this “decisive question”: “As a doctor, I make every effort to strengthen the belief in immortality” (Yates, 1999, p. 3).

However, the dilemma posed by a failed belief in immortality, which has helped sustain human hope for perhaps the entire span of human history, is not admitted within science. The public stance of many scientists is to keep a stiff upper lip, flex one’s intellectual muscle, and deny any desire or need for such a belief. Even addressing the topic of immortality can be considered a sign of intellectual weakness or of “going mystic.” Yet the old channels within the psyche run deep, and merely declaring immortality dead and worthless does not make it so.

The fear of death is humanity’s Great Disease, the terror that has caused more suffering throughout history than all the physical diseases combined. As Ernest Becker said in his Pulitzer Prize-winning book *The Denial of Death*, “[T]he idea of death, the fear of it, haunts the human animal like nothing else; it is the mainspring of human activity—activity designed largely to avoid the fatality of death, to overcome it by denying in some way that it is the final destiny for man” (Grosso, M., 2004b, p. 279).

Nonlocal mind is the Great Cure for this Great Disease, because it suggests that the most essential aspect of who we are cannot die, even though the physical body perishes.<sup>74</sup> Evidence suggesting survival is extraordinarily varied and abundant. Too extensive to be reviewed here, it has been chronicled by University of Virginia psychiatrist Edward F. Kelly *et alia* in their landmark book *Irreducible Mind*:

*Toward a Psychology for the 21<sup>st</sup> Century* (Kelly, E. F., Kelly, E.W., Crabtree, A., Gauld, A., Grosso, M., & Greyson, B., 2007), philosopher Chris Carter's *Science and the Near-Death Experience* (Carter, C. 2010), philosopher Robert Almeder's *Death & Personal Survival: The Evidence for Life After Death* (Almeder, R., 1992), consciousness researcher Charles T. Tart's *The End of Materialism* (Tart, C. T., 2009), psychiatrist Jim B. Tucker's *Life Before Life: Children's Memories of Previous Lives* (Tucker, J. B., 2005), philosopher Stephen E. Braude's *Immortal Remains: The Evidence for Life After Death* (Braude, S. E., 2003). philosopher Michael Grosso's *Experiencing the Next World Now* (Grosso, M., 2004a), cardiologist Pim van Lommel's *Consciousness Beyond Life* (Van Lommel, P., 2010), astrophysicist David Darling's *Soul Search: A Scientist Explores the Afterlife* (Darling, D. (1995), philosopher Carl B. Becker's *Paranormal Experience and Survival of Death* (Becker, C.B. ,1993) psychiatrist Raymond Moody's *Life After Life* (Moody, R.A., 2001), social historian Julia Assante's *The Last Frontier: Exploring the Afterlife and Transforming Our Fear of Death* (Assante, J., 2012), neuropsychiatrist Vernon Neppe and physicist-mathematician Edward Close's *Reality Begins with Consciousness* (Neppe, V. & Close, E., 2012) neurosurgeon Eben Alexander's *Proof of Heaven: A Neurosurgeon's Journey Into the Afterlife* (Alexander. E. (2012), neuropsychiatrist Peter Fenwick and Elizabeth Fenwick's *Truth in the Light* (Fenwick, P. & Fenwick, E., 2012) and many, many others.

## **Whither?**

As yet, the empirical evidence pointing toward a nonlocal aspect of consciousness is not widely known in academic science. As philosopher David R. Griffin of the School of Theology at Claremont and Claremont Graduate School observes, “[P]robably not one intellectual in a thousand, including college and university professors, is conversant with [these] kinds of evidence” (Griffin, D. R., 1997, p. 264).

However, the opposition within science toward this evidence may be overstated. In one survey (although three decades distant) of more than 1,100 college professors in the United States, 55 percent of natural scientists, 66 percent of social scientists (not including psychologists) and 77 percent of academics in the arts, humanities, and education, said they believe that nonlocal events referred to as paranormal phenomena are either an established fact or a likely possibility. Psychologists, it seems, are still largely holdouts. The comparable figure for them was only 34 percent. Moreover, the same percentage of psychologists — 34 percent — declared the paranormal to be a frank impossibility, a view shared by only two percent of all other college professors (Wagner, M. W. & Monnet, M., 1979, pp. 7-17), (Bem, D. J. & Honorton, C., 1994, pp. 4-8), (Dossey, L., 2010, pp. 197-214). So the concept of nonlocal mind and its linkage to spirituality may continue to be a heavy lift for some psychologists.

During the 20<sup>th</sup> century we took the mind apart, dividing it into the pre-conscious, the subconscious, the unconscious, the collective conscious, and the collective unconscious. In the 21<sup>st</sup> century we are putting the mind back together with models that are nonlocal, in which boundaries and separations are not

fundamental. The essential facts are clear. The brain is a local structure, confined to the body and to the present moment. The mind is a nonlocal phenomenon, for reasons we've seen. Nonlocal minds can behave in ways that local brains cannot. This means that the claim of old-style, nineteenth-century materialists, that the mind can essentially be equated with the brain, is simply wrong, and that the old materialist monopoly has been broken.

An agreement of sorts between spiritual visionaries and the architects of the new view is coming into view. As the spiritual teacher Paul Brunton put it, "The brain does not generate thought... any more than the wire generates electric current" (Brunton, P., 1987, p. 18). Or as philosopher and historian of religions Huston Smith states, "Mechanists consider mind to be a part of the body, but this is a mistake. The brain is a part of the body, but mind and brain are not identical. The brain breathes mind like the lungs breathe air" (Smith, H., 2012, p. 187).

No one is denying a key role for the brain in the daily operations of consciousness, but the brain's role is being increasingly viewed as a *transmissive* and not a *productive* function. In a transmissive view, consciousness operates through the brain, but is not produced by it. A transmissive view of brain function is hardly new; it has that has been endorsed by psychologist William James, philosophers Henri Bergson and F. C. S. Schiller, British biologist Rupert Sheldrake, British neuropsychiatrist Peter Fenwick, and many others.

Dethroning the brain from a productive role, in which it generates consciousness, is not as heretical as some might think, because almost nothing is known about how — or whether — the brain *could* produce consciousness. Brain-based models of consciousness are in serious trouble. As philosopher Jerry Fodor soberly states, "Nobody has the slightest idea how anything material [such as the brain] could be conscious. Nobody even knows what it would be like to have the slightest idea about how anything material could be consciousness. So much for the philosophy of consciousness" (Fodor, J. A., 1992, pp. 5-7). Theoretical biologist and complex systems theorist Stuart Kauffman agrees: "Nobody has the faintest idea what consciousness is.... I don't have any idea. Nor does anybody else, including the philosophers of mind" (Kauffman, S., 2008). Cognitive scientist Donald Hoffman of University of California-Irvine: "The scientific study of consciousness is in the embarrassing position of having no scientific theory of consciousness" (Hoffman, D., 2008, pp. 87-121). On how the material brain might produce consciousness, Steven Pinker, the Harvard University experimental psychologist, writes, "Beats the heck out of me. I have some prejudices, but no idea of how to begin to look for a defensible answer. And neither does anyone else" (Pinker, S., 1997, p. 146).

One of the enduring spiritual images of consciousness throughout human history is its unitary nature, through which all humans are linked with one another and with the larger cosmos. Today we can remove this image from the realm of myth and fantasy and plant it solidly in the scientific domain. This is possible because of the nonlocal vision of consciousness that is emerging from empirical evidence, and which is anchored in an increasingly solid theoretical foundation.

We are at a threshold. We can cling to the local, materialistic versions of consciousness that have recently prevailed, or we may cross the threshold to a



nonlocal and *more scientific* and simultaneously spiritual view of who we are, one which comports with Shakespeare's vision in *Hamlet*: "What a piece of work is man, how noble in reason, how infinite in faculties, in form and moving how express and admirable, in action how like an angel, in apprehension how like a god."

~ Larry Dossey, MD

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