

CHAPTER 4

Spirituality and Science: Today's Modern Dilemma

If human-made institutions in part cause the problems facing the world today, and if human beings are complex cultural beings who bring their values and belief systems to the problem-solving process, then we cannot ignore the important functions that spirituality and religion can play in moving us toward more sustainable worldviews. This chapter will identify new ideas that connect science and spirit at macro and micro levels.

First, let's define religion and spirituality. The dictionary does not help us much in defining spirituality. David Steindl-Rast, a Benedictine monk and scholar, defines *spirituality* as "an encounter with mystery" and as "religion, translated into everyday living" (Capra & Steindl-Rast, 1991, p. 13). Spirituality can be viewed as "the dynamic way that a person creates purpose and meaning in life" (Hutchison, 1998, p. 57). For purposes of our discussion, I define *religion* as a religion; that is, a "complex of systems, organized or unorganized, by which people relate to deity and to their own existence with spiritual and moral values concerning personal life, work and other people" (Day, 2000, p. 33). In general, religions provide a communal organization or institution offering an organized set of beliefs and values, ritual and worship, a moral code by which to gauge one's behavior, and support and mutual aid to individuals and families and the raising of children.

Social work historically is closely connected to the values of religious traditions. In the Middle Ages, help for the poor and sick depended on the charity of the church. As the U.S. colonies were populated, they turned to the Protestant traditions of England, which were based on early Judaic teachings of social justice, love, and charity. The connection between religion and social work continued with the development of the Charity Organization Society, temperance and social gospel movements of the nineteenth

century, and the civil rights movement of the twentieth century (Day, 2000). The connection between the church and nonprofit community-based organizations has become even more critical in the life of U.S. communities over the past two decades, as the direct social welfare role of the government has diminished (Cnaan, Sinha, & McGrew, 2004).

Religions have done and can do much good in the world. They provide ideas and inspiration for peace, charity, social justice, and good stewardship of the earth. Local efforts such as those of interfaith councils have developed resources such as housing, food banks, and programs for the homeless. National organizations such as the Association of Community Organizations for Reform Now (better known as ACORN), with local state chapters, have combined efforts of unions, churches, and other community-based organizations to advocate for myriad social justice issues from voters' rights to farmworkers' conditions and justice for janitors. For many of us, religions have at their core a vital message: all humans are connected to one another and affect one another's fate and the fate of the world, and people must find within themselves a moral compass that will help orient them and their environments (Ornstein & Erlich, 1989).

But there is a darker side of religion. At a religion's worst it can help provide a rationale for destruction, war, and terrorism. John Mack (2003), the recently deceased Pulitzer Prize-winning professor of psychiatry of Harvard University, explores the role of worldviews in terrorism. He discusses immediate causes, such as hatred of people who are willing to sacrifice their own lives to destroy their enemies, and proximate causes, such as the history and economics of the Middle East. He then identifies the more fundamental or deeper causes, which he claims may involve dysfunctional worldviews that are reflected in our thinking and the institutions we create to solve problems.

For example, patriotism or nationalism is also often connected to religion. It can manifest itself in generosity, courage, and loyalty, but it also can give way to extreme chauvinism and hatred of the "other." People in the United States are religious and patriotic (Putnam, 2000; Rifkin, 2004a). Americans' religious beliefs often affect their political views. For example, 48% of Americans believe that the United States has special protection from God (Pew Research Center, 2002). Six of ten Americans believe that "our people are not perfect, but our culture is superior to

others" (Pew Research Center, 2002). The 1990 World Values Survey asked respondents in different countries to choose which of two views of morality best reflect their own values: "There are absolutely clear guidelines about what is good and evil. These apply to everyone, whatever the circumstances," or "There can never be absolutely clear guidelines about what is good and evil. What is good and evil depends entirely upon the circumstances of our time." Most Europeans, Canadians, and Japanese chose the second, while Americans were more likely to choose the first. Connected to chauvinism is the reality that religions and religious institutions can polarize and instigate violence or unite others to rise above it. There are, for example, passages in the Bible and the Koran that promote universal love and lasting peace; there are also passages that promote exclusion, division, and holy wars. It is a matter of what you select, how you interpret it, and how you use it in your actions.

Rifkin (2004a), in his comparison of attitudes of Europeans and Americans, remarks that it will be difficult for Americans to adjust to a world with increasingly connected webs, networks of relationships where people and countries are interdependent on one another for their global well-being. "What happens to the American sense of being special, of being a chosen people, in a world where exclusivity is steadily giving way to inclusivity?" (Rifkin, 2004a, p. 23).

But another concept identified by Mack may be the most problematic to long-term survival: dualistic thinking. The "mind divides the world into conflicting polarities—good and evil, God and the Devil, for or against, friend or enemy, deserving or undeserving." Acknowledging that the polar mind may be a necessity in instinctive survival mode, he points out that it is also the mind of revenge and war: "This is a war of good against the evildoers," or "We must destroy America, the Great Satan." This dualism "must be transcended if we are to survive, as a species" (Mack, 2003, pp. 13–14).

Another danger in dualism is its dominance and disconnection. The great chain of being, a classical conception of the order of the universe that sustained into the Renaissance, was based on the premise that every living thing existed in a divinely planned hierarchical order. At the top was God, followed by angels, humans, animals, plants, and finally the inanimate objects of earth, water, fire, and air. Though they are interconnected in the sense that

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phenomena at one level may mirror those at another, the dominance of each realm over the next maintains order. Furthermore, as modern science developed in the Age of Reason, this hierarchy was maintained, with the debatable spirit world somewhere out there and above the real world, mankind below, and finally the rest of the natural world (Brooklyn College, 2006).

For most of civilization, this dominator model extended down from mankind ruling nature to men ruling women (Eisler, 1995). Scholarship points to a period before the fifth century BCE, when older Neolithic cultures existed with greater egalitarian relationships and a predominance of goddess religions, wherein people and nature lived in harmony and the goddess represented Mother Nature. When invaders from the north began to conquer these societies, a wave of male supremacy began, accompanied by male-dominated religions. It is Eisler's (1995) contention that this dominator model of society is prevalent in the world and supports both the continued oppression of women globally and the degradation of a natural environment that we perceive ourselves as disconnected from, to rule over, and to use or abuse for our benefit alone.

DOES MODERN SCIENCE FALL SHORT?

Modern science began in the sixteenth and seventeenth centuries when philosophers and scientists began to reject metaphysics, mysticism, revelation, and faith in the understanding of their world. They sought to verify reality through empirical observation and experimental prediction, and they developed a process of hypothesis testing to confirm their observations. These methods led to breakthroughs in physics, astronomy, chemistry, and biology, and eventually in the nineteenth and twentieth centuries, to social and behavioral sciences (Kurtz, 2003). The assumptions of logical empiricism, upon which modern science rest, are three. Objectivism holds that the scientist or observer can hold the objective world at a distance and study it apart and separate from him- or herself. Positivism asserts that everything in the real world must be physically measurable. Reductionism aims to understand the whole world or system by examining the behavior of its elemental parts or fundamental particles (Harman, 1994).

In modern society, there is no single worldview or way of understanding the world that all agree upon. We could say that we

have two competing worldviews: one of the humanities and religions that focuses on values, morals, and spirituality, and a scientific one in which these are irrelevant. Thus, if science is the only recognized definer of truth, important realms of human experience are invalidated. But as we enter the twenty-first century, is science enough? Can we adequately assess the pros and cons of communications technology and the way it has altered our human experience of space and time simply through the study of the nanosecond? Today's warnings of global warming come to us primarily from the scientific community. Why, then, are religious leaders claiming this issue as part of their domain on which to speak out? Why is one-third of the American population turning to alternative health care, including methods such as meditation and spiritual healers (Ray, 1996)?

Because the global forces of the 1980s and 1990s have shrunk the world, we find ourselves reexamining the metaphysical nature of our universe. Harman (1994) suggests that our conception of it has changed, and that much evidence from the natural and social sciences leads us toward what he calls a complementary holistic science, in which the physical world and consciousness have a complementary relationship. But can we really hold religion and science in the same hand?

SCIENCE AND RELIGION: ARE THEY COMPATIBLE?

Science without religion is lame; religion without science is blind.

—Albert Einstein, *“Science, Philosophy and Religion: A Symposium”*

In 1914, the sociologist James H. Leuba surveyed scientists and asked them about their beliefs in God. Of respondents, 42% believed in a personal God, which was less than the general public at that time. In 1996, the same instrument was readministered to a group of scientists. Researchers found no real change in the number of believers, which was greater than 39% (Larson & Witham, 1997). So, why the great divide?

Chet Raymo (2003) helps us to understand the debate. He points out that traditional religious faiths have three components: a shared cosmology (story of the universe), spirituality (personal responses to one's place in the universe), and liturgy (public expres-

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sions of gratitude, ritual, rites of passage). The antagonism, of course, is almost entirely in the cosmology, the age-old battle between evolution and creationism or the more current intelligent design. The battle of whose story is the real story. Can we reconcile this?

Many scientists say we can. Eugenie Scott (2003), a physical anthropologist, suggests that there are four ways that religion and science have interacted historically:

1. The warfare model: "Either religion trumps science or science trumps religion"; there is no place for both in the world.
2. The separate realms model: "Science explains the natural world; religion the world of the spirit."
3. The accommodation model: Science and religion are directly engaged. Evolution is accepted and reframed, but it is more of a one-way street on which science is the source for the reinterpretation of religion, rather than the reverse.
4. The engagement model: Science and religion interact with the idea that both epistemologies will contribute to a fuller understanding of both the natural world and the supernatural world.

The first two perspectives support this separation of the two. Scott concludes, however, that most scholars who study science and its place with religion identify with the latter two schools.

Fritjof Capra and David Steindl-Rast have published a remarkable dialogue about the compatibility of science and religion in the spirit of the engagement model. Capra, a physicist, and Steindl-Rast, a monk and scholar of modern religions, have collaborated in the comparison of the application of these principles to science and religion, which results in remarkably compatible scientific and religious worldviews. In *Belonging to the Universe: Explorations on the Frontiers of Science and Spirituality* (1991), in an attempt to formulate a more holistic way of looking at the universe, they provide an example of new-paradigm thinking that seekers of truth regarding the nature of both life and spirit can perhaps embrace. Essentially, they are saying that if we value the religions of the world, the contributions of science, and the debt we owe to both, it would behoove us to recognize and consider possible common ground between the two. In this consideration, Capra and Steindl-Rast apply the five shifts of thinking about systems we explored previously in the web of life to similar shifts in theological thinking.

In the first shift from part to whole, science views the understanding of the whole system, be it a tree or a person, as primary to understanding the relationships among its parts. Similarly, while the old theology focused on the sum total of dogmas that add up to reveal the truth, the new theology shifts its attention and starts with revelation as a whole. Individual dogmas can only be understood by starting with the dynamic interrelatedness of the cosmos, God, and humans.

The second shift in the scientific worldview is from structure as paramount to process. Natural phenomena such as mountains, or social phenomena such as communities, are understood not from what appears to be a static structure, but from examining the underlying constantly changing dynamics of these entities. Similarly, in theology, the shift is from a static and timeless set of supernatural truths to a dynamic and nonlinear process of revelation, revealed historically but intrinsically ever changing over time.

The process of knowing the real world, both physical and spiritual, shifts from a positivist or objective view as the only way of knowing to nonconceptual ways of knowing in science and in theology. Science and faith are social processes, constructed by those who experience them. This allows for the intuitive, the affective, and the mystical in both scientific and theological discoveries.

The fourth shift from knowledge as building blocks to knowledge as networks means that the laws of science and theology are only temporary states. In theology, the old paradigm places God as architect, apart from humans who are discovering the elements of the building blocks. The new paradigm of theology suggests that theology is an interconnectedness of different perspectives on transcendental reality. Thus, through dialogue, theology is constantly being rebuilt not as an edifice, but as a web of networks of constantly changing beliefs, experiences, relationships, and connections among faiths.

Finally, theology, like science, can never provide a complete and definitive understanding of all the mysteries of the universe. Rather, in new-paradigm thinking, both provide approximate descriptions of reality. Theological truth lies not in dogma, but in an ongoing exploration of God, the universe, and humans' relationship to them.

One can see in the above comparison how the principles posited in the web of life of interconnectedness, an intercultural and interdisciplinary approach, and approximate realities are

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made evident in this science-spirit connection. This connection asserts that the world can be understood from both a material and metaphysical perspective, and that each religious tradition sees the world through a different prism. No one way is the only way. This is evidenced, for example, in how the world's peoples mark time. Most of the alternatives to the Gregorian calendar used in the Western world come from different religions and reflect past traditions. In 2006, Jews started the year on September 26, Hindus on October 21, and Muslims on January 31. People accept with little rancor these differences in how religions mark time. However, we continue our boisterous battles, particularly here in the West, between the evolutionists and the creationists in their attempts to assert the real creation story.

The idea of perennial wisdom could be a uniting force in the traditions and beliefs of religions (Huxley, 1945). Perennial wisdom comprises universal ideas that have existed in every religion, such as that nature is directed from within by a higher intelligence or mind; that mental or physical rituals can sometimes affect what they symbolize or set the certain processes or conditions in motion for the desired events or results to occur; prayers, thoughts, or mental projections might directly aid in the healing of ill people; and all individuals have a strong motivation to discover and identify with a high self, which in turn connects them to some kind of universal force or mind (Harman, 1994).

In the spirit of this tradition of perennial wisdom, Chet Raymo (2003) offers a new story, a story of the world that attempts to unify cosmology. The story begins with seeds and hydrogen and stars and a planet that accommodate species, human consciousness, and invisible spirits who light up the sky. It is a universal story that emphasizes the connectedness of all people and all things, "a cosmic unfolding of space and time" that "teaches our biological affinity to all humanity" (p. 340). We are responsible for our lives and the future, but we may accept the "Unnamable One" (p. 341). In short, it is an evolving story that accepts creativity and observation; it is a story that will never be finished. "When the story fails we change it" (p. 340).

But what is the human mechanism that enables us to connect these two worlds and these two stories? It is what makes us unique, so far as we know, in all species. It is our consciousness. Let us consider for a moment how this can happen.

CONSCIOUSNESS: BRIDGE BETWEEN THE TWO

For centuries first philosophers and then behavioral scientists have grappled with the notion of the mind. What is it? How do we measure it? Is it just the brain? What about emotions? What follows is not a thorough review of the literature on consciousness, as it is broad and vast. The Institute of Noetic Sciences is a useful resource for a more in-depth view of some of the efforts to understand consciousness and its relationship with the natural world. However, the work of Ken Wilber is worth mentioning, as it has great merit in making sense out of the material-spiritual and mind-body-spirit connections.

Ken Wilber's contribution to a postmodern worldview of consciousness is truly remarkable. It is difficult to summarize succinctly, as his collected works, much of his life's work thus far, comprise eight volumes (Wilber, 2000). In short, Wilber attempts to integrate the physical, mental, and spiritual worlds. To begin with, in a vein familiar to us by now, he makes a case that science needs to include the subjective or interior domains of experience. His main achievement is to have brought together our two great orienting generalizations of evolution and spirit—the former a relatively recent discovery in science, the latter an “ancient, and perennial, discovery of religion and mysticism” (De Quincey 2001, p. 11).

I will attempt to elaborate on a few of Wilber's ideas in the hope that it further stimulates exploration of this fascinating work. Wilber's approach is to reconcile spiritual knowledge in the great chain of being or the great wisdom traditions from Taoism to Vedanta, Zen to Sufism, neo-Platonism to Confucianism (Lovejoy, 1936), with scientific materialism; in other words, to bring together premodern religion and modern science. He does this by broadening our conceptualization of knowledge of the universe into four quadrants: the interior or subjective quadrants are individual consciousness and collective consciousness; the exterior or objective quadrants are the individual world and the collective or social world (Wilber, 2000). Individual consciousness is intermeshed with each other quadrant: the objective organism and brain; nature, social systems, and environment; and cultural settings, communal values, and worldviews. Wilber (2000) also illustrates where scientists and their theories fit into each quadrant.

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To understand Wilber's theory from the brief explanation I have offered is not possible. I offer it, however, to give you a hint at some efforts that attempt to connect our subjective inner world of consciousness with our perceptions of the outer world of society and culture. Notwithstanding that Wilber is considered one of the most widely read and influential philosophers of our time, his writings are prolific and extremely dense and complex. But the significance of his work is his attempts to link inner, outer, and spiritual worlds and to bring to the attention of Western minds the ancient psychologies of the East. This has resulted in an important theoretical paradigm that takes consciousness beyond ego and incorporates legitimate spiritual and mystical experiences as attributes of healthy people (Cowley, 1993).

In summary, Wilber's contributions to our understanding of the connections among mind, body, and spirit are his attempts to depict a full spectrum of human consciousness in human behavior. He has revealed that the interior life of individual and collective subjectivity is as complex, differentiated, and interrelated as are the immensely complex physical worlds that physical sciences reveal. His works have engaged multiple disciplines—including philosophy, metaphysics, natural science, and spirituality—toward a greater, more inclusive understanding of the evolution of human consciousness. They have also been translated into therapeutic practice, which we will discuss later in this chapter.

Thus far, scholars in fields other than social work have examined the worlds of science and spirit. Let's take a look at the work of our fellow colleagues in bridging the gap between the material and the spiritual.

**SOCIAL WORK SCHOLARSHIP,
POSTMODERNISM, AND THE GREAT DIVIDE**

Toward the end of the twentieth century, social work scholars began to take another look at postmodernism and the challenges and opportunities it offers social work. A postmodern view, from a social work perspective, "rejects objectivism and absolutism and stresses pluralism, relativism, and flexibility" (Laird, 1993, p. 2). As early as 1987, Ann Weick espoused the need for a more holistic conception of social work. She traces our thinking from the medieval to the modern mathematical mind, and then looks at

quantum principles as a bridge to the postmodern holistic world. She suggests that changes in modern physics have led us to view the world as an interconnected whole rather than a collection of parts. Drawing, in part, from Capra's work, Weick asserts that the metaphor of the universe has moved from "the great clock, whose workings can be tested and toyed with by an army of white-coated mechanics . . . to a universe where all matter is involved in an elaborate, unchoreographed dance . . . with action, uncertainty, color, illusion, humor, passion" (Weick, 1987, p. 43).

In this holistic worldview, the knower is connected to the known in an act of cocreation; thus, a new epistemology is born. The major implications for social work are that (1) an understanding of the world where everything is connected cannot occur without seeing every phenomenon within its larger context, and (2) if knowledge involves participation, then intuition is acknowledged as an element in knowing.

In the 1990s, the postmodern debate continued. Meinert, Pardeck, and Murphy (1998, pp. 17–18) lay out the core ideas of the postmodern perspective, with a focus on acknowledging clients' multiple worldviews:

- "Reality must be treated as socially constructed through language use."
- "The methods used to gather information, the knowledge base for clinical decision making, should be attuned to the different language games that are operative in society."
- "The interventions that are chosen should reflect . . . the 'interpretive community' in question."
- "The ethical principle that should guide intervention is to protect the integrity of the client's worldview."

The debate on how we come to know the world continues from the perspective of postmodern critical theory. We will return to critical theory a little later, but essentially critical theory posits that we can never be free of our own values when we are observing and researching the world around us. Thus, religion and our belief systems come into play in terms of how we experience and explain the world.

One challenge for social work, especially with respect to its code of ethics, is to try to acknowledge relative cultural and religious worldviews with some understanding of universal human

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values. Can we explore new paradigms without compromising social work ideals of human rights and social justice? One way to consider this postmodern challenge is to not succumb, again, to the false dichotomy of abandoning one worldview to embrace another. The important thing is to focus on the process of thinking and to “stress the importance of openness and uncertainty, responsiveness to context, resistance to imposed agendas and values and rejection of arrogant professionalism which privileges expert knowledge over lived experience” (Pease & Fook, 1999, p. 228). This is relevant in any context, working with peers, clients, students, or other groups.

As students and teachers of social work, then, we should expand our research frames to include paradigms that accommodate and give credence to postmodern holistic and interdisciplinary worldviews. This means a shift from reliance on a more positivist research approach to the paradigms of critical theory and constructivism. A critical theory research framework assumes that there is no such thing as objective reality; instead, the ideologies of the researcher are made manifest and guide the research problem and subsequent actions that may result from the research. Constructivism assumes a subjective reality, which is discovered in partnership with research participants; in the process, joint constructions of reality evolve unique to the time and place of research (Morris, 2006).

WHAT PRACTICE THEORIES DO SOCIAL WORKERS USE TO RECONCILE THE MATERIAL AND SPIRITUAL WORLDS?

In chapter 2, we expanded our notion of person-in-environment to include the natural environment and the imperative of environmental sustainability. In that discussion, we noted the contribution of deep ecology to the understanding of our connection to the natural world. Deep ecology is only one of many eco-theories that not only broadens our view of systems but also bridges the gaps in our biological, psychological, social, and spiritual well-being. Multiple ecological disciplines have led us to consider our relationship with Mother Earth, and social ecology, eco-feminism, eco-justice, and eco-psychology have linked traditional social work

issues of the oppression of people with the oppression of the environment (Derezotes, 2005).

Social workers also use the postmodern critical theories of feminism and Afrocentrism in their practice to bridge the physical and spiritual gap. Feminist theory and feminist practice models embrace the relationship between the physical and metaphysical worlds. Specifically, Van Den Bergh and Cooper (1986) offer five principles that apply to both research and practice and are congruent with much of our discussion thus far: (1) the elimination of false dichotomies, (2) reconceptualizing power, (3) equal valuation of process and power, (4) the validity of renaming, and (5) the personal as political. We can see how valuing process with product and connecting the personal with the political reflect the interconnectedness we have been exploring. However, the first principle is most relevant to our current discussion on bridging the gap between science and spirituality. Eliminating the false dichotomy between science and spirit allows us to validate the role of spirit and religion in our understanding of individuals, groups, and larger social systems. Thus, we see the whole person or system as encompassing a spiritual aspect, which we cannot separate from the organism in our study and our work.

Afrocentrism makes similar connections between the spiritual and the material worlds. This paradigm asserts three major assumptions about human beings: (1) human identity is collective, (2) the spiritual (or nonmaterial) component of human beings is just as important and valid as is the material world, and (3) the affective (or intuitive) approach to knowledge is valid. Afrocentrism embraces the spiritual nature of human beings; it finds God reflected in all elements of the universe. It sees the soul, mind, and body as interdependent and interrelated, and spiritual alienation as the cause of many of the world's problems (Schiele, 1996). Thus, we must examine the extent to which the individuals and communities of African descent with whom we work see their worlds from an Afrocentric paradigm and approach our work in a holistic manner.

The willingness to consider a postmodern view of the world and a place for spirituality and religion is critical to social work as a profession. Social work is a value-based calling to make change for the better in individuals and society. Social work is work with human systems. If we acknowledge intuition, the client's interpretation of

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reality, or the various worldviews of the cultural groups that we study and work with, how can we ignore religion and spirituality? The vast majority of social workers in this country do not practice in an international arena. However, whether or not we recognize it, we practice within a globally interconnected context. Every day when we read the news, we learn of a world conflict or dilemma stemming, in part, from the struggle between civil society and religious or cultural norms. Whether it is the coexistence of Palestinians and Jews in the West Bank or the roles of women in the rebuilding of Iraq, we know that the centuries-old discord and destruction is a result, in part, of the widespread belief that there is only one way to reach the one true god. Clearly, there is no place for fundamentalism in religion or in science if we strive to live in greater harmony on a sustainable planet.

Furthermore, the social policy debates in the United States are often tied to this false dichotomy of the spiritual and material world. The purpose of the separation of church and state is, after all, religious tolerance, to ensure that no one religion becomes the state religion. The purpose is not to declare religion or spirituality dead or irrelevant to the lives of people who are struggling in so-called welfare reform programs, people who are aging and in need of social welfare support, or children in need of safe homes and communities. Clearly, Americans are religious and spiritual. But if we cannot find a way to infuse the wisdom of our forebearers, such as the psychologist and metaphysical philosopher William James, or members of the faith community, such as Martin Luther King, into our public life and to acknowledge the role their wisdom played and continues to play in the form of social responses to human problems, we deny our human history.

I would also submit that if we cannot find a way to explore spirituality and religion as part of the human condition in educating our future citizens, we are denying the multicultural reality of our citizenry and are, in fact, making the absence of spirituality and religion the de facto state position. It is now time to challenge our creativity by introducing a new way of thinking about the connections between the material and spiritual worlds. As advocates for children, elderly people, people with chronic disabilities, individuals with chemical dependency, or victims of domestic violence, we cannot ignore the roles that spirituality and religion play in the policy context and in the communities in which these people reside. How does this affect our social work values?

With its strongly value-based code of ethics, the social work profession has perhaps found it easier than other helping professions to acknowledge that our work is both science and art. However, new systems thinking, especially in the connection between the natural and spiritual worlds, allows us to expand and revalue spirituality in human behavior as well as in our symbiotic relationship with the natural environment.

David Derezotes (2005) suggests some areas of application for social work. Americans are moving from a time of individual spiritual growth into a time of collective spiritual activism. In a country of many cultures, social workers are more openly acknowledging spirituality in, for example, rituals, forgiveness, shamanism, sacred sexuality, sacred medicines, psychedelic plants, and therapy. In this process, we may need to take a more systematic look at the revaluing of social work practice as it relates to spirituality. The following are some positions that Derezotes (2005, p. 185) suggests we might take or responses to infuse spirituality in our lives and our practice:

- Revaluing the purpose of life to align ourselves with the meanings we have created
- Taking responsibility for our own consciousness and further developing it throughout our lives
- Taking responsibility for our own sexual health in relationships and in the larger society
- Taking responsibility for the impacts (positive and negative) of religion on others' biological, psychosocial, spiritual, and environmental well-being
- Stopping violence in our personal relationships, institutions, and local and global communities
- Taking responsibility for the biological, psychosocial, spiritual and environmental development and healing of all humanity and the earth

Scholars and theologians have identified both the contributions and the threats that religions can pose to a sustainable world. Interdisciplinary studies have attempted to connect spirituality and religion with both social and physical sciences in an attempt to break the dualism of spirit and flesh, of this world and the other world. Critical theory paradigms such as eco-theory and practice approaches such as feminist practice and Afrocentrism contain elements of this science-spirituality connection.

IMPLICATIONS FOR SOCIAL WORK PRACTICE: INDIVIDUALS AND FAMILIES

How can we apply our knowledge of bridging the physical and metaphysical worlds to individual, community, and global social welfare issues? First of all, in their work with individuals and families, social workers who are concerned with physical disease and mental illness are slowly being exposed to alternatives to a medical model as they confront conditions closely related to stress, diet, drug abuse, sedentary living, and environmental pollution. The causation of these conditions is more complex than germ theory. Thus, the need arises for a new paradigm of understanding health, disease, and the human body.

One area of application of this paradigm is alternative health care, the use of which is growing in the United States. In 1990, approximately one-third of the population turned to alternative health-care solutions (Ray, 1996). There are two major reasons people are turning to this model of healing: (1) our increasing multicultural society and an understanding that illness and healing are products of the history of groups of human beings and exist within those environmental and cultural contexts, and (2) the belief that health is a state of balance in the interdependence of mind and body and acknowledgement of the influence of the surrounding environment.

Eastern health practices, for example, emphasize the whole and the interconnectedness of phenomena. In Chinese medicine, "the healthy individual and the healthy society are integral parts of a great patterned order, and illness is disharmony at the individual or societal level" (Capra, 1991, p. 313). The importance of cultural diversity in the definition of illness and health illustrates the principle of approximate descriptions of reality in understanding health problems versus an absolute definition of health.

Although alternative health practices are gaining momentum in traditional medical centers throughout the country, social workers are only just beginning to be educated in these practices (Vest & Ronnau, 1997). In the past decade, however, research and overall interest in alternative and holistic approaches to healing have increased, with particular focus on modes most appropriate to diverse cultural groups. Some examples are touch therapy with a group of Mexican Americans with diabetes and their families (Vest & Ronnau, 1997), an approach with indigenous Alaskan women

using indigenous values and spirituality, cultural symbols such as the talking stick, cultural teaching traditions such as the talking circle and storytelling (Hurdle, 1998), and the use of shamanic healing techniques such as inducing altered states of consciousness, in addiction counseling “in order to find healing, harmony, wholeness for self and others” (Rioux, 1996, p. 59). See table 1 for other nontraditional approaches.

Table 1 Alternative Health Care Used by the U.S. Population (1994)

Alternative Treatment	U.S. Pop. (%)
Chiropractic	15.73
Exercise/movement	11.58
Prayer or spiritual practice	9.85
Diet programs	8.30
Relaxation	6.95
Massage	5.69
Herbal therapies	4.25
Folk remedies	2.12
Spiritual healing	2.03

Note: Partial listing. Source: Ray, P. (1996).

Narratives have been collected acknowledging the emergence of spirituality in social work over the past fifteen years and reflecting social workers' experiences and approaches to spirituality in their work with various populations (Abels, 2000). Some of the stories reflect, for example, group work with people who are incarcerated (Sheridan, 2000), the use of Christian faith in a hospital setting (Kreutziger, 2000), Native American storytelling in the Sanish and Hidatsa nations (Lowery, 2000), and the role of faith in the construction of Kwanzaa (Karenga, 2000).

In a review of anthropological research on traditional healing in Abels's (2000) work, Alean Al-Krenawi (2000) notes that a significant number of studies point to psychotherapeutic elements in traditional healing, and that more traditional healers are becoming interested in learning about modern health care. The author notes that Western-trained mental health practitioners tend not to be as interested in traditional healing, but the main point is that there are many and deep connections between modern and traditional approaches, and that we should investigate them within the contexts of our diverse clientele. Al-Krenawi believes that we

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can bridge the gap. His concluding remarks support the importance of the mind-body-spirit connection in working with individuals, their families, and their communities: "Because social work intervention is often based on intuitive as well as empirical knowledge, traditional healing can readily be integrated into practice with people of various cultures" (Al-Krenawi, 2000, p. 26).

Finally, transpersonal psychology, another practice approach, has been referred to as the fourth force of psychology because it moves beyond the influences of the first three movements of Freudianism, behaviorism, and humanistic psychology (Robbins, Chatterjee, & Canda, 1998). Heavily influenced by Ken Wilber, the transpersonal psychology movement emerged in the 1960s and 1970s and began to take hold in the social work arena in the 1990s (see Canda & Smith, 2001; Cowley, 1996).

Clearly, we can see in clinical work how to bridge the gap between the material and the spiritual. However, given the problems that this gap has caused us, globally and over time, what can we do to help societies and countries find common ground?

LARGE SYSTEMS: NEED FOR A GLOBAL DIALOGUE

As mentioned previously, the study of the connection between the mind and body, and the physical and spiritual worlds has been the focus of the Institute of Noetic Sciences, in Sausalito, California, since 1971. Efforts to apply this connection in larger societal and global realms are not new. Many movements illustrate this trend, including the recognition that intuitive powers, sometimes thought of as psychic abilities, are not necessarily pathological but can be used for understanding and transformation; individuals' increasing commitment to individual and group experiential modes of spiritual practice; the increasing recognition of the power of extraordinary experiences such as near-death experience to expand our identity and open us to empathy and relationship; and the emergence of new sociopolitical forms such as nongovernmental organizations at the UN, which enable a wider range of citizens to take part in international relationships in spiritual exploration (Mack, 2003).

A major global attempt was made, in 1991, to create a bridge between scientists and religious leaders concerning the crises

threatening the earth. As reported in *Nature* on February 1, 1990, under the heading “Global Change”:

Astronomer Carl Sagan and 22 other well-known researchers chose Moscow as the unlikely venue for an appeal to world religious leaders to join scientists in protecting the environment. The appeal came at a recent conference on the environment and economic development which attracted over a thousand religious, political and scientific leaders from 83 nations. . . . The conference was sponsored by both the USSR Academy of Sciences and the Russian Orthodox Church.

The appeal states that “efforts to safeguard and cherish the environment need to be infused with a vision of the sacred. Among those who have given their backing are physicist Hans Berthe, biologist Stephen Jay Gould and former MIT President Jerome Weisner. . . .

The appeal reached a global audience. Parts of the conference were televised and reached an estimated audience of 2,000 million in 129 countries. Later, at the conference, more than one hundred religious leaders joined to hail the scientists’ appeal as a “unique moment and opportunity in the relationship of science and religion.” (Shulman, 1990, p. 398)

In 1997, ten Nobel laureates, five heads of state, and “a galaxy of moral authorities” (Marquand, 1997), including the Dalai Lama and Václav Havel, met in Prague for four days to discuss the health of civilization and crises of values, and to try to agree upon common moral imperatives. In that same year, the American Association for the Advancement of Science hosted a conference in Chicago, titled “The Epic of Evolution,” to promote a dialogue between science and religion. At the conference, physical, biological, and social scientists teamed with theologians to discuss the implications for evolution (Scott, 2003). These gatherings are not new, but they have been more frequent since the end of the cold war. In November 2005, the Dalai Lama was invited to inaugurate the Society for Neuroscience meeting in Washington; he gave a lecture on the neuroscience of meditation. Causing quite a stir in the context of today’s intelligent design controversy, the Nobel laureate is attempting to join science and spirituality for the “betterment of humanity” (Schmidt, 2005, p. B11).

In February 2006, another interesting meeting of science and religion occurred. Eighty-five evangelical Christian leaders proclaimed their support for legislation to combat global warming that the White House had opposed. In response to renewed consideration of the Climate Stewardship Act, first introduced in 2003

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by Senators John McCain and Joseph Lieberman, pastors, religious broadcasters, and presidents of Christian colleges sponsored a full-page advertisement in the *New York Times*. The campaign included national television spots as well, with the message "With God's help we can stop global warming for our kids, our world and our Lord" (Eisner, 2006, p. 1).

WHAT IS OUR ROLE IN THIS DIALOGUE?

As one of the only professions charged with environmental as well as individual change, social work should take a lead in these kinds of dialogues at the community, national, and global levels. We have expertise, in both micro and macro systems, in bringing various interest groups to the table to confront problems and, through dialogues and consensus, to design a strategy to address them. There are a number of arenas in which we could catalyze dialogue, including interfaith alliances, church social-action committees, peace groups, nonprofit groups, city governments, environmental action groups, neighborhood associations, and other groups that witness such problems in their neighborhoods as discrimination, economic and spiritual alienation, and gang warfare.

The result of such organizing could be a conference, a dialogue, or a community symposium on the role of the church and religion in addressing these problems. Where there are no interfaith alliances, we could help build them. Where there are no courses in the intersection of religion and science, we could advocate and develop them. Many communities have no human relations commissions or advisory groups to deal with intercultural clashes. We could help initiate them. If we assume that all organizations can be learning organizations, we can create forums for cross-cultural, cross-religion, or science-religion dialogues in hospitals, community centers, schools of social work, universities, state capitols, or any number of international venues.

Education, of course, is the best long-term strategy for consciousness raising, cross-cultural exploration, and tolerance. Michael Lerner, whose work we will visit in a later chapter, is a rabbi and a scholar who has suggested activities in educational settings to achieve these ends that social workers involved in education at any level should consider. Asserting that high school sophomores are

capable of hearing alternative views and making their own judgments, Lerner (1997) offers some suggestions in an approach to teaching about religion in high school.

First, he suggests that U.S. high schools should teach all religious traditions, except for any that specifically acknowledge a belief that certain groups are fundamentally inferior to others (groups that explicitly teach racist or sexist ideas). In this process, he asserts that schools should give major religious communities the opportunity to present their material on videotape in the spirit of education and not proselytization. Others should also be able to present their approaches to spirituality, including advocates for philosophical and spiritual ideas not represented in major religious traditions. Finally, Lerner suggests that local school districts be free from using the religious advocacy series but prohibited from teaching religion in a one-sided manner that offends members of minority religions (Lerner, 1997).

Imagine the possible long-term effects of educating high school students about the vast richness of perennial wisdom. The prohibition of religious ideas that discriminate is not an easy task to consider. But would we not benefit from having our high school students explore various world religions, in an attempt to understand the worldviews of our global neighbors? In fact, should we not begin this development of knowledge and understanding about diversity in primary school?

To summarize, our examination of spirit and science has revealed some shortcomings of attempts to make one or the other the sole container of truth. There are dangers of dualism and fundamentalism in religion; there are also dangers in putting science on the pedestal, particularly logical positivism, as the sole source of truth in a world where human beings hunger for meaning and purpose in life.

In our exploration of this web-of-life worldview, religion, spirit, and the environment are closely connected. We have discussed some of the threats to a sustainable future if we continue to devalue Mother Earth. We have also discussed how some degree of reconciliation of the material and spiritual worlds may be necessary if we are to continue to evolve as human beings, in harmony with our planet. Let us now turn to our human-made institutions of economy, systems of governance, and technology. For if systems are interconnected, to what extent do our current institutions reflect a sustainable world?

ADDITIONAL THINGS TO THINK ABOUT

For the following questions, consider how you have learned some new ways of looking at spirituality and religion and their relationships to science that challenge the separation of the physical and metaphysical worlds within both small and larger systems.

1. What are your thoughts about the nature of the relationship between science and spirituality? Between science and religion?
2. Social work has been called a science and an art. What makes it an art? How does this relate to the dualism of science and spirituality?
3. Where do you get the knowledge you rely on to understand the world? Are intuition and metaphysical or spiritual experiences valid ways of understanding individual human behaviors and problems? Larger social systems and the problems therein?
4. Many people believe that their god is the true god, and all religions have false gods. Some people view this as the root of violence and conflict. Can this belief be reconciled with living peacefully in a multicultural, multifaith world?
5. Most people do not think of *spiritual* as a word to describe politics. Do you believe that there can or should be more of a connection among spirituality, morality, and politics? If not, why not? If so, how can that come about?
6. Consider Derezotes's suggestions. Do you think that these are relevant to social work intervention? Do they help bridge the divide between the spiritual and the material worlds of our clients?
7. What has been your exposure to eco-theories, feminist practice theories, or Afrocentrism?
8. Refer back to table 1. Have you used any of these methods of alternative care? Have your clients reported using any of these? What has been your experience?

MAIN POINTS

1. Religion can be a polarizing force in our society if it fosters dualistic thinking such as patriotism or nationalism and conflictual, violent solutions to problems.

2. New connections are being made between science and religion that suggest that neither science nor theology are absolute but processes of knowing, with different perspectives on reality.
3. Objectivism, positivism, and reductionism of modern science may not adequately reflect reality, given our new understanding of interconnectedness of self and our physical world.
4. Postmodern thinking can help social workers bridge science and spirituality by acknowledging multiple worldviews.
5. Science and spirituality are bridged via the construct of consciousness.
6. The bridging of science and religion or spirituality has implications for social work research approaches, values, and practice at micro and macro levels.
7. Eco-theories, feminist practice, and Afrocentrism offer approaches to social work that can bridge the gaps among the environment, spirit, and science.

For Further Reading

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