

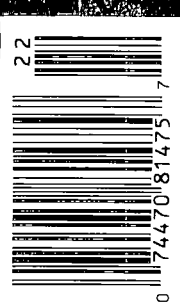
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THE PRAGUE CONFERENCE
Science, Spirituality, and the Global Crisis
Part II

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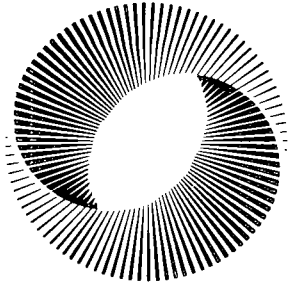
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The Prague Conference Science, Spirituality, and the Global Crisis Part II

Richard Tarnas, Editor
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The Western Mind at the Threshold

RICHARD TARNAS

All of us present at this great event in Prague have long been aware that a profound paradigm shift has been taking place in the Western mind. Many here have probably been aware of that fact almost since the moment Thomas Kuhn gave us the language to say it, exactly thirty years ago this year, in his great work *The Structure of Scientific Revolutions*. (In retrospect, I think we can say that Kuhn's work both prepared the way for, and was itself a powerful expression of, this larger paradigm shift in the Western world view.) It is appropriate that this conference in which that paradigm shift is so vibrantly represented, this splendid gathering of minds and spirits, is taking place in the very city where, almost four hundred years ago, Johannes Kepler brought forth what turned out to be the pivotal breakthrough in the Copernican revolution. For it was that revolution that began the last great paradigm shift in the Western mind whose global, all-encompassing character bears comparison to the change we are witnessing in our own era.

Kepler was himself a pivotal man, a bridge between two worlds—both a rigorous empirical scientist of the modern type and an ecstatic Platonic mystic from a more ancient tradition.

It was his magnificent achievement here in Prague to have solved at last the great problem of the planets and their complex motions which Plato had set forth two thousand years earlier, and in so doing, to provide the mathematical foundation for Copernicus's heliocentric hypothesis. In Kepler's vision, his discovery revealed the numinous glory of the cosmic spheres, "the moving image of eternity," as Plato put it, before which the human being served at the high altar. For Kepler, the stunning mathematical harmonies and aesthetic perfection of the new universe revealed the workings of a transcendent intelligence of unimaginable power and splendor.

But it was the irony of fate that this very discovery eventually led, through a complex coalescing of a multitude of factors, to the disenchanting universe of modern science—a universe devoid of spiritual purpose, wherein the human being became a peripheral accident, drifting aimlessly in a vast, meaningless, indifferent, and ultimately hostile world: to use Max Weber's language, from an enchanted universe to an iron cage. So it is also historically significant that the city of Prague in which we are gathered today happens also to be the city of another paradigmatic figure, Franz Kafka, who articulated with such genius, such sensitivity

and rigor, the existential situation of the late modern soul, entrapped in a radically unintelligible, alien, and alienating world.

But we have learned that the road from Kepler to Kafka is not the whole story, that the evolution of a civilization's world view, like the evolution of a human soul, is a mystery that can unfold in astonishing ways. So it is that this city of Prague also gave birth to the life and work of yet another paradigmatic figure, one Stanislav Grof, who gazed long and hard through his powerful telescope into the inner universe of the human psyche, to discover not only the psyche's boundless spiritual depths but also its intimate relationship to, its embeddedness in, the cosmos itself. Though he began his life's project working fully within the conventional mechanistic world view of Freud's psychoanalysis, in the end, with the inestimably valuable aid of Dr. Hofmann's great discovery of the synthesis of the powerful psychedelic LSD-25, and with the equally essential aid of countless courageous subjects, Grof was able radically to extend and transform the boundaries and concepts of depth psychology to bring about a profound meeting of science and spirituality, of practical psychotherapy and sacred mystery. In so doing, he was able to fulfill that

deep spiritual potentiality that was certainly already present in Freud: for if Freud was the Darwin of the modern mind, he was also the Moses of the modern soul.

Thus the spirit of twentieth-century depth psychology, this marvelously seminal creation of central Europe, evolved and deepened, moving from Freud's Vienna to Jung's Zurich to Grof's Prague, as if in a spiral of awakening, pointing the way toward a transcendence of that iron cage of the dualistic modern world view. In the words of the early twentieth-century Polish writer Bruno Schulz,

So it comes to pass that, when we pursue an inquiry beyond a certain depth, we step out of the field of psychological categories and enter the sphere of the ultimate mysteries of life. The floorboards of the soul, to which we try to penetrate, fan open and reveal the starry firmament.

Through Grof's work, we have begun to see and understand a larger archetypal pattern in human experience—a pattern at once biographical and mythic in character, at once biological and spiritual—a profound, elemental pattern that is contained and expressed in the universal experience of birth itself: a powerful dialectical sequence that begins in an initial state of undifferentiated unity with the womb of being; that moves through stages of growth and differentiation to an increasingly problematic state of constriction, conflict, and contradiction, with an accompanying sense of separation, duality, and alienation; and that culminates finally in the dark agony of ego death and annihilation followed by an unexpected redemptive liberation that both overcomes and fulfills the intervening alienated state, that brings the luminous spiritual rebirth of a larger and deeper self reunited with the universe and the divine.

It would be difficult to exaggerate the significance of Grof's discovery of the perinatal sequence, its specific stages, the clinically precise architecture of human experience and psychopathology associated with it, or its unparalleled power as a therapeutic threshold. But Grof's discoveries are

relevant not only to understanding the underlying structures of the individual psyche. As Robert Schwartz once put it, Grof's research provides answers to questions we didn't even know we had. For as we begin to grasp the many ramifications of this extraordinary body of work, and as we turn our attention to that larger evolution of the *collective* human psyche, we can perhaps at last begin to understand the deeper archetypal and spiritual logic that has impelled the great historical development of our entire civilization's world view: from the ancient and primordial mystical world vision, through the West's historic religious and scientific developments into an increasingly objectivistic world view, in which human self and material universe are gradually differentiated and then radically separated, bringing an ever-deepening sense of both autonomy and alienation, then to an increasingly fragmented, chaotic, deconstructive period of incoherence and seemingly irresolvable contradiction—and now, perhaps, to the unfolding of something else.

This brings us to yet one more paradigmatic figure from Prague, its most recent citizen to enter the world stage, Vaclav Havel—a leader whose emergence in global politics has made many Americans, anticipating this election year of 1992, long for someone of genuine moral vision and character in their own leadership. For some time now, it has been evident that we are living through an extraordinary transition in human history, and in the last three years this impression has been reinforced dramatically. In the summer of that *annus mirabilis* of 1989, just before the Velvet Revolution and while he was still a dissident, Havel wrote a remarkable speech, which he gave in his acceptance of the German Booksellers Peace Prize. Havel wrote this:

As we approach the end of the second millennium, the world . . . finds itself at a peculiar crossroads. It is a long time since there were so many grounds for hoping that everything will turn out well. At the same time, there have never been so many reasons for us to fear that if everything went wrong the catastrophe would be final.

What Havel recognizes here is something I think we all have come to see in the course of our lifetime: namely, that seldom have the ideas and actions of thoughtful men and women counted for more in the history of our species. The critical condition of modern societies throughout the nations of the West, the collapse of communism in the nations of the East, the extreme distress of the nations of the South, the inexorably growing ecological crisis of the entire planet: all these have made unavoidably evident the need for a new vision, a new world view that could bring light and coherence to the contemporary human mind. In the absence of such a vision, the old assumptions remain blunderingly in force, dangerously inadequate to the challenges we all face. If humankind has ever needed an illuminating world view, it is now.

If we examine many of the major intellectual and cultural debates of our time, particularly near the epicenter of the paradigm wars today, it is possible to see looming behind them two fundamental interpretations, two great stories or myths, concerning the evolution of human consciousness and particularly concerning the history of the Western mind. These two views are diametrically opposed. One, familiar to all of us from our education, describes this evolution as a story of extraordinary progress, a long, heroic journey from a primitive world of dark ignorance, suffering, and limitation to a modern world of ever-increasing knowledge, freedom, and well-being. This great trajectory of progress is seen as having been made possible by the sustained development of human reason, and above all by the emergence of the modern mind. We see this view whenever we encounter a book or program whose title is something like "The Ascent of Man" or "The Discoverers" or "Man's Conquest of Space," and so forth. The direction of history is seen as onward and upward. Humanity is typically personified as "man," and imaged, at least implicitly, as a masculine hero: restless, bold, innova-

tive, ceaselessly pressing forward, breaking out of the structures and limitations of the past, forever seeking greater freedom and new horizons. The apex of human achievement is seen as modern science and individualistic democracy. The view of history is one of progressive emancipation and empowerment. It is a vision that emerged fully in the course of the European Enlightenment, though its roots are as old as Western civilization itself.

The other view, which has come into its own in our cultural discussion only in very recent years, though it was al-

produced by the oppressive hegemony of modern industrial societies empowered by Western science and technology. The nadir of this fall is the present time of planetary ecological disaster, which is the direct consequence of human hubris as embodied above, all in the spirit and structure of the modern Western mind and ego. Here the historical perspective is one that reveals a progressive impoverishment of human life and the human spirit, a fragmentation of original unities, a ruinous destruction of the sacred community of being.

The historical perspective is one that reveals a progressive impoverishment of human life and the human spirit, a ruinous destruction of the sacred community of being.

ways present to one extent or another as a countercurrent to the progressive view, describes this story in quite opposite terms. Here, the evolution of human consciousness and the history of the Western mind are seen as the tragic story of a radical fall and separation from an original state of oneness with nature and with being. In its primordial condition, humankind had possessed an instinctive knowledge of the profound sacred unity and interconnectedness of the world, but under the influence of the Western mind, and especially of the modern mind, the course of history brought about a deep schism between humankind and nature, and a desacralization of the world. This development coincided with an increasingly destructive human exploitation of nature, the devastation of traditional cultures, and an increasingly unhappy state of the human soul, ever more isolated, shallow, and unfulfilled. In this perspective, both humanity and nature are seen as having suffered grievously under a long patriarchal domination of thought and society, with the worst consequences being

Something like these two interpretations or paradigms of the history of human consciousness, which I have described here in rather oversimplified terms for the sake of easy recognition, can be seen to inform many of the more specific issues of our age. In a sense, one might say that these opposing perspectives, with their many variations and compromise formations, constitute the most fundamental argument of our time: Whither humanity? Upward or downward? How are we to view Western civilization, the Western intellectual and spiritual tradition, its canon of great works? How are we to view modern science, the modern era? How are we to view "man"? Is it progress or is it tragedy?

John Stuart Mill once made an observation that I have always considered to be very shrewd and perceptive, even wise. He pointed out that both sides in intellectual controversies tend to be right in what they affirm and wrong in what they deny. And I believe that this insight applies with particular aptness to the conflict

of historical visions I have just described. I would like to suggest that both parties to this dispute have grasped an essential aspect of the picture, that both visions are in a sense correct, each with compelling arguments within its own context, but that they are both intensely *partial* visions, as a result of which they both misread the larger story. And I believe that this larger story is one in which the two opposite interpretations are exactly intertwined to form a complex but integrated whole. I believe the way these two historical interpretations coalesce, while appearing to exclude each other, resembles those gestalt-experiment illustrations that can be perceived in two different, equally cogent ways, such as the precisely ambiguous figure that can be seen either as a white vase or as two black profiles. By means of a gestalt switch in perception, the observer can move back and forth between the two images, though the figure itself remains unchanged.

What is difficult, of course, is to see both images simultaneously. But this may be the task we must engage if we wish to gain a deeper understanding of the evolution of human consciousness and the history of the Western mind: to see that long spiritual and intellectual journey, through stages of increasing differentiation and complexity, as having *perfectly ambiguously* brought about both a progressive ascent to autonomy, and a tragic fall from unity—and as, perhaps, having prepared the way for a synthesis on an altogether new level. For I believe that the two historical perspectives that I have described reflect opposite but equally essential aspects of an immense dialectical process, an evolutionary drama that has been unfolding for thousands of years and that now appears to be reaching an extremely crucial moment.

Yet for us, today, it is not just a matter of intellectual understanding of this coincidence of opposites in our historical evolution. Rather, it is a matter of experiencing, suffering through, the struggle of opposites within our consciousness. We must in a sense undergo a kind of crucifix-

ion to become a vessel through which the consciousness of our era, and of the future, works out its contradictions within our minds and spirits, our bodies and souls. As Marie-Louise von Franz once put it, in the spirit of Jung and Hegel, by suffering to the absolute extreme under the great problem of opposites—by fully accepting the activity of this dialectic within us—we can sometimes become a place in which the divine opposites spontaneously come together.

This brings us to that one drama of opposites, perhaps the most primordial polarity of all, that is, perhaps, the most relevant to our moment in history.

Many generalizations could be made about the history of the Western mind and spirit, but today perhaps the most immediately obvious is that it has been from start to finish an overwhelmingly masculine phenomenon: Socrates, Plato, Aristotle, Paul, Augustine, Aquinas, Luther, Copernicus, Galileo, Bacon, Descartes, Newton, Locke, Hume, Kant, Darwin, Marx, Nietzsche, Freud. . . . The Western intellectual tradition has been produced and canonized almost entirely by men, and informed mainly by male perspectives. This masculine dominance in Western intellectual history has certainly not occurred because women are any less intelligent than men. But can it be attributed *solely* to social restriction? I think not. I believe something more profound is going on here: something archetypal. The masculinity of the Western mind has been pervasive and fundamental, in both men and women, affecting every aspect of Western thought, determining its most basic conception of the human being and the human role in the world. All the major languages within which the Western tradition has developed, from Greek and Latin on, have tended to personify the human species with words that are masculine in gender: *anthropos, homo, l'homme, el hombre, l'uomo, ten chlovyek, chelovek, der Mensch*, man. It has always been “man” this and “man” that—“the ascent of man,” “the dignity of

man,” “man’s relation to God,” “man’s place in the cosmos,” “man’s struggle with nature,” “the great achievement of modern man,” “the spiritual problem of modern man,” and so forth. The “man” of the Western tradition has been a questing masculine hero, a Promethean biological and metaphysical rebel who has constantly sought freedom and progress for himself, and who has thus constantly striven to differentiate himself from and control the matrix out of which he emerged. This masculine predisposition in the evolution of the Western mind, though largely unconscious, has not only been characteristic of that evolution, it has been essential to it.

For the evolution of the Western mind has been driven by a heroic impulse to forge an autonomous rational human self by separating it from the primordial unity with nature. The fundamental religious, scientific, and philosophical perspectives of Western culture have all been affected by this decisive masculinity—beginning four millennia ago with the great patriarchal nomadic conquests in Greece and the Levant over the ancient matrifocal cultures, and visible in the West’s patriarchal religion from Judaism, its rationalist philosophy from Greece, its objectivist science from modern Europe. All of these have served the cause of evolving the autonomous human will and intellect: the transcendent self, the independent individual ego, the self-determining human being in its uniqueness, separateness, and freedom. But to do this, the masculine mind has repressed the feminine. Whether one sees this in the ancient Greek subjugation and revision of the pre-Hellenic matrifocal mythologies, in the Judaeo-Christian denial of the Great Mother Goddess, or in the Enlightenment’s exalting of the coolly self-aware rational ego radically separate from a disenchanting external nature, the evolution of the Western mind has been founded on the repression of the feminine—on the repression of undifferentiated unitary consciousness, of the *participation mystique* with nature: a progressive denial of the *anima mundi*,

of the soul of the world, of the community of being, of the all-pervading, of mystery and ambiguity, of imagination, emotion, instinct, body, nature, woman—all that which the masculine mind has projectively identified as “other.”

But this separation necessarily calls forth a longing for a reunion with that which has been lost—especially after the masculine heroic quest has been pressed to its utmost one-sided extreme in the consciousness of the late modern mind, which in its absolute isolation has appropriated to itself all conscious intelligence in the universe (man alone is a conscious intelligent being, the cosmos is blind and mechanistic, God is dead). Then man faces the existential crisis of being a solitary and mortal conscious ego thrown into an ultimately meaningless and unknowable universe. And he faces the psychological and biological crisis of living in a world that has come to be shaped in such a way that it precisely matches his world view—that is, in a man-made environment that is increasingly mechanistic, atomized, soulless, and self-destructive. *The crisis of modern man is an essentially masculine crisis*, and I believe that its resolution is already now occurring in the tremendous emergence of the feminine in our culture: visible not only in the rise of feminism, the growing empowerment of women, and the widespread opening up to feminine values by both men and women, but also in the increasing sense of unity with the planet and all forms of nature on it, in the increasing awareness of the ecological and the growing reaction against political and corporate policies supporting the domination and exploitation of the environment, in the growing embrace of the human community, in the accelerating collapse of long-standing political and ideological barriers separating the world’s peoples, in the deepening recognition of the value and necessity of partnership, pluralism, and the interplay of many perspectives. It is visible also in the widespread urge to reconnect with the body, the emotions, the unconscious, the imagination and in-

tuition, in the new concern with the mystery of childbirth and the dignity of the maternal, in the growing recognition of an immanent intelligence in nature, in the broad popularity of the Gaia hypothesis. It can be seen in the increasing appreciation of indigenous and archaic cultural perspectives such as the Native American, African, and ancient European, in the new awareness of feminine perspectives of the divine, in the archaeological recovery of the Goddess tradition and the contemporary reemergence of Goddess worship, in the rise of Sophianic Ju-

Western intellectual and spiritual evolution. *For the deepest passion of the Western mind has been to reunite with the ground of its being.* The driving impulse of the West's masculine consciousness has been its dialectical quest not only to realize itself, to forge its own autonomy, but also, finally, to recover its connections with the whole, to come to terms with the great feminine principle in life: to differentiate itself from but then rediscover and reunite with the feminine, with the mystery of life, of nature, of soul. That reunion can now occur on

This is the great challenge of our time, the evolutionary imperative for the masculine to see through and overcome its hubris and one-sidedness, to own its unconscious shadow, to choose to enter into a fundamentally new relationship of mutuality with the feminine in all its forms. The feminine then becomes not that which must be controlled, denied, and exploited but instead fully acknowledged, respected, and responded to for itself. It is recognized: not the objectified "other" but rather source, goal, and immanent presence.

This is the great challenge, yet I believe it is one the Western mind has been slowly preparing itself to meet for its entire existence. I believe that the West's restless inner development and incessantly innovative masculine ordering of reality has been gradually leading, in an immensely long dialectical movement, toward a reconciliation with the lost feminine unity, toward a profound and many-leveled marriage of the masculine and feminine, a triumphant and healing reunion. And I consider that much of the conflict and confusion of our own era reflects the fact that this evolutionary drama may now be reaching its climactic stages. It is all an experiment, and we cannot say its outcome is inevitable. But I believe our time is struggling to bring forth something fundamentally new in human history: We seem to be witnessing, suffering, the birth labor of a new reality, a new form of human existence, a "child" that would be the fruit of this great archetypal marriage and that would bear within itself all its antecedents in a new form. I therefore would affirm those indispensable ideals contained and expressed in feminist, ecological, archaic, indigenous, and other countercultural and multicultural perspectives. But I would also wish to affirm those who have valued and sustained the central Western tradition, for I believe that this tradition—the entire trajectory from the Greek epic poets and Hebrew prophets on, the long intellectual and spiritual struggle from Socrates and Plato and Paul and Augustine to Kepler and Descartes and Kafka and Freud—that this stupen-

An epochal shift is taking place in the contemporary psyche: a sacred marriage between the long-dominant but now alienated masculine and the long-suppressed but now ascending feminine.

dao-Christian theology and the papal declaration of the *Assumptio Mariae*, in the widely noted spontaneous upsurge of feminine archetypal phenomena in individual dreams and psychotherapy. It is evident as well in the great wave of interest in esoteric disciplines, in Eastern mysticism, in the mythological perspective, in *shamanism*, in archetypal and transpersonal psychology, in hermeneutics and other nonobjectivist epistemologies, in scientific theories of the holonomic universe, morphogenetic fields, dissipative structures, chaos theory, systems theory, the ecology of mind, the participatory universe—the list could on and on. As Jung prophesied, an epochal shift is taking place in the contemporary psyche, a reconciliation between the two great polarities, a union of opposites: a *hieros gamos* (sacred marriage) between the long-dominant but now alienated masculine and the long-suppressed but now ascending feminine.

This dramatic development is not just a compensation, not just a return of the repressed, as I believe this has all along been the underlying goal of

a new and profoundly different level from that of the primordial unconscious unity because the long evolution of human consciousness has prepared it to be capable at last of embracing the ground and matrix of its own being freely and consciously. The *telos*, the inner direction and goal, of the Western mind has been to reconnect with the cosmos in a mature *participation mystique*, to surrender itself freely and consciously in the embrace of a larger unity that preserves human autonomy while also transcending human alienation.

But to achieve this reintegration of the repressed feminine, the masculine must undergo a sacrifice, an ego death. The Western mind must be willing to open itself to a reality the nature of which could shatter its most established beliefs about itself and about the world. *This* is where the real act of heroism is going to be. A threshold must now be crossed, a threshold demanding a courageous act of faith, of imagination, of trust in a larger and more complex reality; a threshold, moreover, demanding an act of unflinching self-discernment.

dous Western project should be seen as a necessary and noble part of a great dialectic and not simply rejected as an imperialist-chauvinist plot. Not only has this tradition achieved that fundamental differentiation and autonomy of the human that alone could allow the possibility of such a larger synthesis, it has also painstakingly prepared the way for its own self-transcendence. Moreover, this tradition possesses resources, left behind and cut off by its own Promethean advance, that we have scarcely begun to integrate—and that, paradoxically, only the opening to the feminine will enable us to integrate. Each perspective, masculine and feminine, is here both affirmed and transcended, recognized as part of a large

er whole; for each polarity requires the other for its fulfillment. And their synthesis leads to something beyond itself: It brings an unexpected opening to a larger reality that cannot be grasped before it arrives because this new reality is itself a creative act.

But why has the pervasive masculinity of the Western intellectual and spiritual tradition suddenly become so apparent to us today, while it remained so invisible to almost every previous generation? I believe this is occurring only now because, as Hegel suggested, a civilization cannot become conscious of itself, cannot recognize its own significance, until it is so mature that it is approaching its own death.

Today we are experiencing some-

thing that looks very much like the death of modern man, indeed that looks very much like the death of Western man. Perhaps the end of “man” himself is at hand. But man is not a goal. Man is something that must be overcome—and fulfilled, in the embrace of the feminine.

Richard Tarnas, Ph.D., is professor of philosophy and psychology at the California Institute of Integral Studies and an executive editor of *ReVision*. Formerly director of programs and education at Esalen Institute, he is the author of *The Passion of the Western Mind*, a narrative history of the Western world view from the ancient Greek to the postmodern. He lives with his wife and two children in San Francisco. © Copyright 1992 by Richard Tarnas.

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Synchronicity and the Tao: Mysticism, Metaphor, Morphic Fields, and the Quest for Meaning

JEAN SHINODA BOLEN

The word *synchronicity* was coined by C. G. Jung to describe meaningful coincidences. He first wrote about it in 1951 and 1952, when he was in his seventies, to describe what he had been observing for some thirty or forty years: inexplicable coincidences between inner world and outer reality that cannot be explained rationally.

I think that the best way to understand what Jung meant by synchronicity is by examples from his own life. In a letter to J. B. Rhine, the father of parapsychology, Jung described an incident that was a synchronicity. He said (I am paraphrasing him), "I was walking in the woods with a woman who was telling me her most significant dream. In the dream, she was in her old family home that had a large spiral staircase. In the dream, she was at the foot of the stairs watching a ghostly fox move slowly down the stairs towards her." Jung said, "At that moment a real fox stepped out of the woods and, for a time, walked ahead of us." When a real fox entered the scene, the dream image materialized. Coincidences like this are eerie. Dream and waking life overlap; it is an uncanny moment of synchronicity.

Another time, he described working with a woman patient who was closed to the mysterious realm of meaning

and metaphor. She saw him regularly, dutifully describing dreams that she did not feel deeply connected to. She related to her dreams in the way many people do; they have them and can recite them, but they are not affected, moved, or made wiser because of them. Jung said that it was a little darker inside the consulting room than it was outside, and the woman was telling him of an image from a dream. In the dream, she had been given a valuable piece of golden jewelry in the shape of a scarab. At that moment, he was disturbed by the sound of a large beetle, a flying insect, hitting itself against the window pane. He opened the window, and the flying insect came in. He caught it on the fly, looked at it in his hand and then passed it over to his patient. In his hand was a large scarab-like beetle, green and golden in color, the closest relative to the scarab in Northern Europe; when she saw what was in his hand, something shifted in the room, something entered the process that would change it. That this would happen at that very moment was a synchronicity; the scarab that entered the room as in the dream is a symbol of transformation; when it uncharacteristically hit against the window and was let in, the reality of the symbolic world also entered, as it needed to, for this woman to be affected and changed.

Another example of synchronicity that Jung described happened to him. He had traveled to a far-off city to give a lecture, and uncharacteristically was having a difficult time falling asleep. Sometime during the night, he awoke with a sense that there was someone in the room. That feeling was so strong that he jumped out of bed, turned on the lights, and tried the door (the door was locked); there was no one in the room and no way for anyone to have gotten in. Puzzled, he tried to put together the sequence of events that had disturbed his sleep. He recalled that he had awakened with a sharp pain in the middle of his forehead that now was gone; all that remained was a dull pain in the back of his head. Again this was uncharacteristic, as he rarely had headaches. The events of this strange night were a puzzle to him—a puzzle that was cleared up on his return to Zurich, when he found that a patient of his had shot himself in the forehead that very night, and the bullet had come to rest at the back of his head.

Many synchronistic events can also be described by parapsychological terms such as telepathy, the communication from one mind to another, or precognition, in which a person has a dream or premonition of something that will happen in the future. These are experiences that fall into the realm

of extrasensory perception (ESP). The difference between synchronicity and ESP is the emphasis. Proof that it was ESP is immaterial; the emotional impact and meaning of the event is what matters.

A synchronicity can be a significant mystical experience accompanied by a sense of awe, of mystery and grace. In the synchronistic moment, we feel or perceive that there is an invisible connection between us and others, between us and nature, or between us and the universe. Somehow, something inside us is connected with the

something is happening or about to happen to another person usually have a significant connection with that person. Parent-child synchronicities are common examples.

Just before I left San Francisco to come to Prague for this conference, I talked to a friend who told me of such an experience. Her daughter was in a coma in the hospital. She had come home to get some sleep, woke up at 3:00 A.M. with an intuitively felt conviction that her daughter had bled internally. She immediately called the hospital, got the nurse on duty, and in-

way that so-and-so had died because he had appeared that night in that characteristic dream.

Mystery, Mysticism, and Metaphor

For both my friend and my grandfather, it was the information they received that was important, not how the information came. Their certainty and the verification of it made it a matter-of-fact situation for them. For others, how they could know such things in this way is amazing. For me, the mystery of our interconnectedness is the most significant.

Mysticism, mystery—the words are connected. It is in the mystical experience that we experience something of what the Native American calls the Great Mystery. It is in the mystical, subjective experience that we experience what in the East has been referred to as the Tao, the oneness that underlies all things, and know that the Tao is. Every time we have an inward, subjective, mystical gnostic experience, in which inner world and outer existence come together, we get a glimpse of the universe of meaning that underlies our existence, and it always is a numinous, awe-inspiring experience in which we feel touched by grace. It is as if that information endows us with the direct experience of knowing that something is greater than ourselves. And, in that moment, we have a glimpse of the sacred, and what is sacred is something that can only be experienced subjectively.

We certainly cannot explain what the Tao is. *The Tao that can be told is not the eternal Tao. The name that can be named is not the eternal name* (the first two lines of the *Tao Te Ching*). It's as if we can experience the manifestations that come out of the mystery, but we cannot experience in its totality the mystery itself. The invisible Tao underlies and nourishes all of the manifestations, the ten thousand things that can be known, the ten thousand things that can be named.

In the moment that the person in meditation has a glimpse of the Tao, it is an experience known gnostically, that is, known inwardly and being beyond the intellect's ability to comprehend it or the *intellectual* and verbal

Every time we have a subjective, mystical gnostic experience, in which inner world and outer existence come together, we get a glimpse of the universe of meaning that underlies our existence.

outside world; reason cannot account for it. That something Jung called "synchronicity: an acausal connecting principle" (the title of his major paper on the subject).

When Jung described synchronicity, he named the phenomenon; he coined the descriptive word. He made no attempt to explain how it came about, for there is no way to explain how synchronicities happen. Unlike cause and effect, there is no reason why, no scientific explanation that says how it is we would know in the present what might happen in the future, or how it is that we *might know* something telepathically that is happening at a distance. We do know from individual anecdotal stories of synchronicities in which someone "learns" or "knows" that a person close to them is in danger, is dying, or had died—through a dream, a vision, a premonition, a body reaction, or a hallucinated voice—that there is often a deep bond between the two people. Although a psychic may be able to know about people that she or he may never have even met, ordinary people who have an inner experience that informs them that

sisted that she check her daughter for this. The nurse told her that she could not do this without a doctor's orders; besides, she noted no changes in the daughter's condition. But my friend would not take "no" for an answer because she was so sure. And her daughter had a nasogastric tube which would make it possible to easily check the contents of the stomach. My friend persisted and insisted, the nurse gave in and agreed, and, sure enough, there was blood. Now how that mother could know this, from afar, about her unconscious daughter cannot be explained—any more than how my grandfather could dream in New York City of a friend or relative in Japan and know that he or she had died because that person appeared to him in his dream, carrying a suitcase, as if to say goodbye before traveling on. At that time, news traveled much more slowly than it does now, and it certainly traveled slower than ESP can. The verifying news would arrive perhaps weeks later that, indeed, that person had died. My mother described how my grandfather would come down to breakfast and say in a matter-of-fact

ability to convey it. Consequently, the only way that we convey to each other something of the experience of the Great Mystery or the Tao is by metaphor, because only by metaphor could we even make an attempt to describe what it is we know. In that moment of gnostic knowing, the entire picture is somehow experienced, and we grasp a part of it. And yet that part of it gives us a certainty that there is a sacred dimension, a transpersonal dimension that we tap into in that moment.

I recollect having a glimpse of the Tao without having the words or the concept of it, when I was a youngster. I feel that most people have had that glimpse. For me, it came through a moment of inner clarity and wonder, when I knew that I was connected to the beauty and vastness of the universe. I was at a Girl Scout camp high in the mountains where we slept under the stars, night after night. The nighttime sky is awesome and beautiful with stars too numerous to count. Before falling asleep, I would see an occasional shooting star or recognize a familiar constellation. I was touched by the beauty and vastness of what I saw out there. One night before falling asleep, mystical knowledge, gnosis, a shift in perception that had to do with meaning, something numinous, happened: I *knew* that I was part of all the beauty and vastness of the Universe; I *knew* that, as insignificant as I was to all that I was seeing in the heavens, I mattered; I *knew* that I was part of everything out there. While I could not prove this to anyone else, it was knowledge that would affect me for the rest of my life.

Frederick Frank, in his book *The Zen of Seeing: Drawing as Meditation*, described a similar experience, but from a different perspective. In that moment of clarity and grace under the stars, I knew that I was connected to everything out there, which is an extroverted vision. His was an inward, introvert's experience. He was also about eight or nine years old. He was walking along a country road between fields of curly kale, and he noted as he walked that the snow was beginning to fall. It fell with the softest, hissing sound, and, in a moment of insight, he

knew that everything that was happening outside was inside of him. And he got the connection between himself and universe in that mystical moment. Whether I am connected to everything out there, or everything out there is a part of me, the meaning and means of knowing are gnostically known and an intuitively felt mystical reality.

Gnosticism expected the individual to know divinity directly through personal, experiential, subjective experience, rather than knowing of divinity through the words and authority of others. I think about the word *gnostic*, which begins with a *G*; to know something gnostically is to *gnow* something. It is related to the contemporary word *noetic*, as in the Institute of Noetic Sciences that was founded by Edgar Mitchell, the astronaut, out of his gnostic or noetic experience of looking at the Earth from outer space, which spiritually transformed him, as it did Rusty Schweikert. The astronauts saw the Earth from outer space and brought humanity an image that would change our perspective forever.

An astronaut who gazed at the beauty of the earth from outer space was changed by what he saw and experienced, as was a Girl Scout looking at the beauty of outer space from the Earth. Transformative experience is available to all of us. It is likely that all of us attending a conference on transpersonal psychology and spirituality have had a numinous experience of God, of the Tao, of the Goddess, of what Jung called the Self, the Self with a large *S*, a generic word for something beyond the ego's ability to grasp fully, the archetype of meaning in the psyche.

Richard Wilhelm, the Chinese scholar who translated the *I Ching* and *The Secret of the Golden Flower* from Chinese into English, translated the word *Tao* into "meaning." There are versions of the New Testament in Chinese that translate John 1:1 "In the beginning was the Word" into "In the beginning was the Tao." If Tao means meaning, then in the beginning was Meaning—in the beginning was the Mystery, out of which everything is born, is nourished and grows. It is that moment in which we experience the

Mystery, glimpse the Tao, or have an insight into the archetype of meaning, the Self, that we know that there is meaning to life and meaning to being here, that we have something to do and something to learn in being human. I think of us all as being spiritual beings on a human path, rather than human beings on a spiritual path who, from time to time, dip into that Mystery, or that Tao, or that larger Self, and have an experience, a moment of knowing that there is a sacred dimension to our lives, in which we simultaneously feel connected to the universe, to the Earth, and to all living things.

The ecstatic meditator, the mystic who experiences divinity, does not need to explain the experience or justify the experience to anyone else. But in our contemporary world, where the left brain predominates in our educational experience, where rationalism and the scientific method, and cause and effect, are considered the major ways of knowing anything real, people (especially young people) often feel defensive about their mystical experiences and defensive about explaining it. They can be disheartened and undermined by intellectual, rational, authoritarian people who have a need to control and put their view of reality on others. A young soul who has had a direct experience of the Tao, or divinity, or the great Mystery may discount what he perceived and cut himself off from the truth and meaning he intuitively felt, which is very unfortunate.

It is only through mystical experience that we "get it," that we know that there is a meaning to our personal lives and a meaning to existence; it is a felt-connection to the Tao or Mystery, a conduit between the material world of manifestation, of the ten thousand things and that invisible world that is perceived inwardly. As a Jungian analyst and a psychiatrist, I have worked for over twenty-five years with people's dreams and feelings. Over the years, I have realized how much more significant and real the invisible world is to us as souls than is the visible world. As souls, we intuitively grasp synchronistic connections, although we may have difficulty finding the

words to express what it is we *know*. The acausal connecting principle is the Tao. It is the Tao that links inner experience and outer events, bringing about meaningful coincidences that can feel miraculous or as if guardian angels were at work.

To put synchronicity and the Tao into words, when it is beyond words, makes explanations difficult, which is why the young soul who has the experience falters and has difficulty explaining himself or herself to scientific, rational minds, to the skeptics with degrees, the reputable author-

siderable time had passed, the rainmaker came. He was a wizened old man, who asked to be given a little house where he could be left alone. He went into this little house and closed the door behind him. Everybody waited. One day went by, and then another. On the third day, the skies opened up and it began to rain. Wilhelm wondered what on earth the rainmaker had done. So he went to talk to the rainmaker, and asked in a straightforward Western way, 'What did you do to make it rain?' The old man said, 'I didn't do anything.' Puzzled by his

tween a metaphor and life, just as it takes intuitive feeling to see a connection between an inner experience and an outer event. Without intuition, there are no connections. Without metaphor, we cannot describe the intuitive connections we make.

We can intuitively know but cannot prove a mystical experience, a sense of God, a conviction that our life has meaning, feelings that human beings are spiritual beings on a human path, or that we are one with the universe, connected invisibly with all inanimate and animate life. Mystical experiences, intuitively felt connections, the love we perceive others have for us and feel ourselves for others are all beyond rational proof. And yet, these are what we need to base our lives upon, in order to live meaningful lives.

Morphic Fields and Mystical Experiences

Rupert Sheldrake described morphic fields as a source of cumulative memory based upon experiences of that species in the past. The human morphic field is what we tap into and are resonating with and influenced by when we respond as members of the human race, doing what humans have done. From prehistoric to contemporary times, humans have apparently held spiritual beliefs, observed rituals, had places of worship, and related to divinity. Whatever the particular practice or place, whatever spiritual or mystical experience humans have had are in some way contained within the morphic fields of our species, the contents of which span time and distance. Sheldrake's morphic resonance theory (as applied to humans) and Jung's concept of the collective unconscious are very similar ideas. Both theories account for collective memories, knowledge, behavior, or images that we did not acquire in our personal lives; both account for transpersonal, collective, archetypal experience.

Through meditation or dreams, while in a mystical or ecstatic state, a person who taps into the collective unconscious or a morphic field has gained access to transpersonal experience where time and distance are immaterial. Sheldrake's analogy is that our

Through meditation or dreams, a person who taps into the collective unconscious has gained access to transpersonal experience where time and distance are immaterial.

ities; there are no adequate cause and effect explanations for nonrational phenomena. Metaphor serves the experience by conveying it to others who can grasp metaphoric language. However, left-brain dominated people who think in linear terms do not get the meaning of metaphors, any more than they perceive the synchronicity or the Tao. For it is through metaphor or the poetic way of expression that we can appreciate invisible reality, the experience of it by others, and be open to such experiences ourselves.

The story of the rainmaker is a metaphor that describes the interrelationship between synchronicity, the Tao, and the individual. A story that Richard Wilhelm told Carl Jung: "There was a great drought in China. It didn't rain and it didn't rain, and it didn't rain. People set off fire crackers and it didn't rain. The Protestants prayed and it didn't rain. The Catholics said masses and it still didn't rain. Finally the people said, 'We will have to fetch the rainmaker.' It took a while for the delegation to travel to wherever the rainmaker was, and a while to bring the rainmaker back. After con-

answer, Wilhelm tried another question, 'What have you done since you've been here?' The old man explained that he came from a land, a place, where people are in Tao, or in harmony with the universe, while this was a disordered country, that was out of the Tao, and out of harmony. When he arrived here, he was for a time out of harmony as well. So he went into his little house, and got back in Tao. Then, naturally the rain came."

The message of the rainmaker is like the biblical metaphor about "the lilies of the field," which counsels us to seek first the kingdom of God and everything will be provided us, everything we truly need. It is the promise of synchronicity that there is a connection between inner harmony and outer world. These are metaphors that describe what is known gnostically or mystically about the connection between the inner world of the soul and the external reality of the natural world. Only when we already grasp the connection does the metaphorical story make sense. It takes intuitive understanding to see the connection be-

DNA is analogous to a television receiver that enables us to pick up transmissions; we “tune into” programs in the morphic field. Jung’s collective unconscious has much the same implications: archetypal images, associated feelings, and patterns of behavior are the contents of the collective unconscious (or the field) of which we are unaware until they are activated and brought into consciousness. Plato was describing another variation on this same theme when he said that there existed a pure form to which everything that was like it was related, such as a perfect triangle. Aristotle described every entity as having a soul, and that the body was contained in the soul, rather than the soul in the body. This would be a “field” that would influence and be influenced by the body; it has similarities to Sheldrake’s theory that we resonate with the morphic field, influencing it and in turn being influenced by it.

That which we know gnostically may be knowledge received through tapping into a spiritual aspect of the morphic field and experiencing it as the Tao. Taking the analogy of the television receiver further, the part of the psyche we are identified with or are “in” may determine the “channel” we tune into. The existence of an invisible “transmission” field suggests this possibility. If such is the case, then predictably, if we are in our “soul” or in touch with the Self (rather than identified with the ego or the persona or a complex), we would be open to receiving spiritual or soulful experiences.

Morphic Fields, Women’s Spirituality, Pilgrimage

Since morphic fields span time, they contain everything that has been important to human experience. History may forget, and there may be only faint traces of a matriarchal time when a Goddess was worshipped. But if morphic fields exist, images and rituals that have not been recalled for thousands of years will be accessible to people who turn again toward a goddess spirituality. If such is the case, then spontaneous rituals to the goddess done by contemporary women are not invented but “remembered.”

Tapping into a morphic field at a sacred site, a pilgrim may receive intuitively a “truer” sense of what went on there than would a scholar with limited sources from later though still relatively ancient times. Researchers dismiss the use of intuition, especially by women, as critics of archeologist Marija Gimbutas have done, because she made intuitive speculations about the meaning of the shards and artifacts that were found at goddess sites. If morphic fields exist, and if she tapped into one, her conclusions would be correct.

There is a grassroots women’s spirituality movement that is worldwide yet unorganized: women are gathering together in small groups or are acting individually, observing seasons and important transitions, doing rituals, making altars, finding symbols that express important spiritual and psychological themes and feelings. There is very little tradition to follow, and so women follow intuition and do what feels spontaneously right. After four to six thousand years of patriarchy and patriarchal gods in the passing of spiritual traditions in a mother-line from mother to daughter awareness of priestesses, healers, wisewomen, female divinity, or a mother goddess are lost from memory. In the spontaneous arising of a women’s spirituality movement, however, “re-membering” may be occurring. In sacred places, where the goddess once was worshipped or venerated, women enact rituals. In circles, women celebrate the seasons. Might it be that women are resonating with a morphic field as they bring the Goddess back into human consciousness? Might contemporary ritual reflect what has gone on before and be adding to it? Tapping into a morphic field that holds the energy or pattern of the collective human experience of divinity would be awesome; it may contribute to the numinosity of all religious experience.

Then there is the current phenomenon of pilgrimage. In the last ten or so years, increasing numbers of people without a pilgrimage tradition are visiting sacred sites. They are going to places in Western Europe, the British Isles, and Ireland that were once god-

dess sites, druidic sites, as well as Christian ones; in the Americas and Australia, people are going to places that indigenous people consider holy; in the ruins of ancient cultures, on mountain tops, in canyons, travelers are enacting rituals that they feel moved to do. They feel affected by the energy of these places. Perhaps they are activating dormant energy fields that are there. Morphic fields could account for the images, dreams, and rituals that come to pilgrims in such places.

People go on pilgrimage to sacred sites in order to “quicken the divinity,” to have an experience that they could not have had by staying at home, to visit a place “where divinity dwells,” and be affected by it. I know that I have been changed by my own experience of pilgrimage; at sacred sites, I felt the energy of the place in my body as a palpable experience. I felt warmth, pressure, vibratory feelings in the center of my chest, in the heart chakra area of my body at places of pilgrimage. The sacredness of the body, of the Earth, and the interconnectedness of all life was something I now know as a result.

The indigenous people of North America have traditions that honor their sense of participating in and connecting with the great Mystery. The invisibility, oneness, interconnectedness with all life, and sense of the Mystery being beyond what can be known is like the Tao. The Tao seems to be the more philosophical and detached, the great Mystery the more earthy and related. Put into practice, a view of being part of the great Mystery influences how we treat the Earth and all life on it. The indigenous hunter, for example, acknowledges his kinship, appreciation, and connection with the animal he both reveres and hunts; in rituals, the connection between human symbolic acts and outer outcome is assumed. Synchronicity is taken for granted. The indigenous mystic is a shaman, and there seems to be a particular morphic field that an initiate into shamanic practice enters. There is reverence and awe in feeling part of the Mystery.

Intellectual approaches to mystical knowledge, synchronistic experiences,

and the perspective gained as a result help the rational left brain to accept what it cannot understand, to step aside, be quiet, and not discount or *fear the realms* of nonordinary reality. Jung and Sheldrake have made major contributions to this perspective. While what we know gnostically or the ineffability of mystical experience cannot be conveyed by words, words that name the category of the experience such as *synchronicity* or *morphic fields* nonetheless help us to keep these experiences in our consciousness. R. H. Blyth, the haiku scholar, described how the intellect is capable of understanding any part of anything, but it cannot understand the whole of which the part is only a part; he went on to say that the intellect can understand everything that God is not. For this we need intuition, inner vision, soul.

Quest for Meaning

We are a meaning-seeking species. Perhaps this is a function that we have to develop further, especially at this particular time. When we are in touch with meaning, we have no difficulty understanding that we are connected with all life, with the planet, with the universe; we know we have a place and that, in some fundamental way, we matter. Without this connection to meaning, Mystery, Tao, Self, divinity in whatever form we experience it, individuals feel very lonely and often very unsafe. To use Jungian terms, when the ego is identified with the persona, that person feels a need for power, security, and status that often takes the form of seeking power over others. The persona is the image we present to the world. It is what we clothe ourselves in and how we appear to others. Persona is not only what we put on our body; it is our social position, our economic class, our academic degrees, our publications, whatever makes us look substantial and important to others. They are the acquisitions that we think will make us secure when we are focused upon the outer world and looking for a place in it. Although a position in this world does matter, it does not make us feel that we matter.

What truly lets us know that we

matter is a sense of affiliation, of knowing that we are loved, by having a sense of purpose, and feeling that we have a place in an invisible, meaningful universe. For this, the ego must be in relationship to what Jung described as the Self with a capital S, the archetype of meaning. When the ego is in touch with the Self, it is infused and nourished by it. When we think psychologically, the mind almost invariably limits psyche to the brain, as existing within the bones of our cranium; the Self must be in there somewhere. But the Self as an archetype is part of a

choice even in unchosen circumstances of how we are going to react at so many important junctures in our life. The suffering and the choices can diminish us, or they can open us to the experience of the larger Self and the great Mystery. We cannot choose what happens to us. Life happens to us. Although it may be that we made a choice to come into this world, while we are here that memory is beyond our recall. The circumstances and limitations we encounter provide us with opportunities or lessons to become larger souls or smaller, embittered personalities.

When we are in touch with meaning, we have no difficulty understanding that we are connected with all life, with the planet, with the universe; we know that, in some fundamental way, we matter.

collective unconscious that can be considered a morphic field. The self is the Tao and the great Mystery; it can be experienced as God or Goddesses, as divinity in any form we imagine or know.

The point that I make in *Ring of Power* is that we all come into this world hoping, expecting to be loved. When we are not loved, we settle for power. We strive to achieve what others find attractive in order to be accepted and hope to find love. But when a person's ego is invested in persona, there is no place for open-hearted, unconditional love. We can neither give nor receive fully without a connection with the Self.

When we are in touch with the Self, we know that we matter, and we know that life has meaning. What it is we may have come to do or to learn is ours to discover. Once we feel that the limited human life we are living is a soul path or a spiritual path, we intuitively know that we came into this life for something. Certainly we came into a world in which suffering is definitely a part, and yet we do learn that we can make a difference and that we have the

I was greatly influenced by the words of Viktor Frankl, who wrote in *Man's Search for Meaning* about what he experienced and learned about choice as a prisoner in German concentration camps. Every member of his family was killed in the gas ovens. He had no autonomy, no choice about where he would be, what he would eat, if he would eat, and no assumption of being alive the next day. He might be in a work party or sent to the gas chamber. He had no control over what happened to him. Yet even here, there was still the opportunity to make a significant choice: that significant choice was how to react in this situation. He noted that some people just gave up, grew apathetic, weak, and died. Then there were those who identified with the aggressor, those who curried favor with the guards, bullied others, took food from weaker people, got an extra crust of bread and the illusion of power. In this terrible place, he also saw that some people shared what they had: love, emotional support, minimal food, warmth, courage to endure. Individuals who under the worst of conditions responded with the highest hu-

man qualities. Frankl's perspective is true; under the worst of situations, we can still decide how we will respond, and how we respond affects the soul. Life presents us with difficulties, losses, and limitations, as well as with opportunities for growth and joy. There are soul consequences to what we choose.

The field I am in, psychology, comes from the Greek word *psyche*, which does not refer to the mind or intellect. It means soul. Psyche is also the Greek name for butterfly, which is a symbol of transformation. When we are in touch with the archetype of meaning, we know that we have a soul and are connected to a universe that is both visible and invisible.

In a synchronistic moment, we can have an experience of meaningful coincidence in which we feel the connection between us and this visible and invisible universe. We can have an experience that gnostically informs us that we are connected, and that we matter.

At the end of a lecture that I once gave on synchronicity, a man in the audience spoke to me of such a synchronistic experience that he had had at least two decades before. He was only eighteen or nineteen at the time and was one of the few black men in the air force accepted for pilot training. He was away from home for the first time, and it was Christmas eve. He had been sent to a base in the deep south near Biloxi, Mississippi. On his first and only visit to town, he had been shocked by the depth of racial prejudice he encountered in a demeaning and ugly incident. So he decided that he would not leave the base. He was lonely and had been taking a walk on the base, when he went by the chapel where the choir was practicing for a service that would happen later that day. He sat in the back of the chapel and listened to them practice

Christmas carols. As he sat there, he thought about his family at home and about his grandfather who loved him and brought him to church. He thought of his grandfather's favorite song. Then he had a premonition. He had an internal conviction that the choir was going to sing his grandfather's favorite hymn. Then his logical mind said, of course not. They are practicing Christmas carols. This is not a Christmas carol. While he was in that space between internal conviction and cognitive doubt, the choir began to sing his grandfather's favorite song, which was "I come to the garden alone when the dew is still on the flowers, and he walks with me, and he talks with me, and he tells me I am his own. . . . He tells me I'm not alone." He said when that song began, he felt the deepest sense of peace that he had ever experienced in his life. In that moment of deep peace, which was a synchronistic moment, he knew that he mattered and was not alone.

In a synchronistic moment, it is possible to glimpse the Tao, to know that there is an underlying oneness, a universe to which we are connected, a great Mystery of which we are a part. This gnosis may reside in the collective unconscious or in a morphic field. To the mystic in us all, what matters is the experience itself and the certainty it imparts: we are not alone, and we have a place in a meaningful universe.

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The Spiritual Mission of America

ROBERT A. McDERMOTT

So shall we keep the unity of the spirit in the bond of peace. The Lord will be our God and delight to dwell among us as His own people. He will command a blessing on us in our ways, so that we shall see much more of His wisdom, power, goodness, and truth than we have formerly known. We shall find that the God of Israel is among us, and ten of us shall be able to resist a thousand of our enemies. The Lord make our name a praise and glory, so that men shall say of succeeding plantations: "The Lord make it like that of New England." For we must consider that we shall be as a City upon a Hill; the eyes of all people are on us.

—John Winthrop, "A Model of Christian Charity" (1630)¹

Indeed, if we cast up the account and lay all things together, God hath been doing the same thing here that is prophesied of Jacob's remnant. . . . And we may conclude that he intended some great thing when he planted these [American] heavens, and laid the foundations of this [American] earth. And what should that be if not a scripture-pattern that shall in due time be accomplished the world throughout?

—Cotton Mather, *Magnalia Christi Americana* (1702)²

The Future is endowed with such a life, that it lives to us even in anticipation. . . . [Thus] in many things we Americans are driven to a rejection of the maxims of the Past, seeing that, ere long, the van of the nations must, of right, belong to ourselves. . . . Escaped from the house of bondage, Israel of old did not follow after the Egyptians; to her were given new things under the sun. And we Americans are the peculiar, chosen people—the Israel of our time; we bear the ark of the liberties of the world. . . . God has predestined, mankind expects, great things from our race; and great things we feel in our souls. . . . Long enough have we been skeptics with regard to ourselves, and doubted whether, indeed, the political Messiah had come. But he has come in us.

—Herman Melville, *White Jacket* (1850)³

This land was placed here by some divine plan. It was placed here to be found by a special kind of people, a new breed of humans called an American . . . [destined] to begin the world over again . . . [and to] build a land here that will be for all mankind a shining city on a hill.

—Ronald Reagan, debate with Jimmy Carter (1980)⁴

In his lecture on the modern mind at the threshold, Richard Tarnas summarized competing interpretations of the course of Western thought and culture. According to the dominant story, the West continues on an ascent, on the well-established curve of progress made possible by rationality and scientific thinking; according to the other, more recent story, the West is a tragedy brought on by the myth of progress and the disastrous effects of alienation, technology, and gender imbalance. An audience at a conference on "Science and Spirituality" sponsored by the International Transpersonal Association is presumably ready to agree that neither adequately describes the present situation. To achieve a more complete and balanced interpretation of the contemporary West—and particularly the phase dominated by American culture—we would do well to affirm and extend the framework introduced by Richard Tarnas in his *Passion of the Western Mind*.⁵ This lecture/essay places these stories in a more explicit account of the evolution of consciousness with particular reference to the mission of America and attempts to read this evolutionary process by means of transpersonal disciplines and capacities.

America and the Evolution of Consciousness

This interpretation of the spiritual mission of America is intended as an exploration to be guided by various transpersonal ideas and ideals.⁶ Transpersonal assumptions, skills, and aspirations can now be brought to bear on the culture within which transpersonalism has emerged—and in essential relation with which it will undoubtedly develop. Transpersonalism will be needed increasingly if we are to understand and redirect a culture that has much more power than wisdom. There is overwhelming evidence that America—by which I mean the United States—is greatly lacking in wisdom, out of balance, and approaching self-destruction concerning the ecosystem, gender, generations, health, education, and its sense of justice.

What, if anything, can one say that is redeeming of this culture? The “American way of life,” which appears mostly to do with goods and services, continues to increase its domination throughout the world. Wherever it is imitated, American economic energy brings with it American shortsightedness, rapaciousness, neglect of healthy daily rhythms, and an alienation from the inner life. Both at home and in its influence abroad, American culture shows itself to be at an adolescent stage of development: it looks ahead with idealism, passion and confidence, but with inadequate insight and foresight.

Cultures that are increasingly influenced by America will need to discern whether its superficiality and materialism represent the substance of the American psyche, or whether it also has a deeper tradition and deeper capacities. I am affirming America’s appalling selfishness and violence, and affirming as well its profound psychic or karmic task on behalf of a true individualism, one that celebrates the individual in relation to salvific communities. This ideal of the individual-in-relation is not only consistent with service to the community and the Earth, it actually fosters such service. America’s recent egregious failings can and should be evaluated and cor-

rected in light of this transformative ideal that it carries on behalf of evolving humanity.

To understand America in this context, we need to penetrate its exterior, its surface, to its inner life, its psyche and spiritual mission. We need to move past its limited sight to its vision. To do this, we ourselves will need to exercise vision as well as sight. From the start of this culture with the arrival of European settlers on the east coast in the early seventeenth century and their genocidal impact on indigenous peoples, this vision has been in jeopardy. Yet the vision and potentiality endure: however dimly perceived in daily life, and however imperiled, this ideal of the individual nevertheless remains America’s sacred task and the essential contribution that it is attempting to make to the evolution of human consciousness.

Because our understanding of America’s karmic task presupposes that we understand the destiny of other cultures, a few comparisons might prove helpful. The Indo-Buddhist karmic task, for example, concerns the ideals of selflessness and enlightenment, or simply selfless enlightenment. It is because the exemplars of the Asian spiritual tradition have long proven successful at realizing this ideal that spiritual seekers in the West are increasingly convinced of the efficacy of Asian spiritual teachings and practices. Hebraic consciousness is characterized by dialogue with the providential God, Yahweh. It is this dialogical relationship with the Creator and Judge of all human beings that is the shared core of Judaism, Christianity, and Islam. One of the karmic tasks of ancient Greek culture was the development of a different kind of thinking. The Greeks took it to be their solemn duty to think with such dedication that they regarded thinking as the highest human achievement. In addition to creating logic, a discipline for the laws of thinking, they developed the concept of contemplative thinking; that is, thinking that, by its own activity, leads the human being to the highest state of happiness.

Christian consciousness has concerned the relationship between imma-

nence, or the divine within, and transcendence, or the divine beyond. At the core of that religious and cultural tradition is the concept and experience of the Logos, or Christos, a divine being whose incarnation brought about the possible transformation of the whole of humanity. Through the ages, Christians have had difficulty articulating and experiencing this ideal polarity of divine immanence and transcendence.

Modern Western thought and culture has had the distinctive karmic task of establishing the laws governing nature and the material world. At the core of the effort to understand and control nature—and control characterizes scientific thinking—the modern Western genius expounded a bifurcation of mind and matter. American culture has inherited this dualism, and its major thinkers have sought to overcome it. Transpersonalism can perhaps best be understood as continuous with the attempt of the classical American philosophical tradition—from Emerson to Dewey, or from the 1830s to 1930s—to reunite the mental and the physical.

In contemporary American culture, individualism is associated with anti-community values, with the conventional male ideal of the solitary hero. The popular idea of individualism, like the prevalent idea of freedom, is tied to wanting one’s own—one’s own way, one’s own space, one’s own style, one’s own income and security, one’s own control of family and relationships. There is a strong tradition, from Jonathan Edwards to contemporary transpersonalism, however, that espouses an individualism of context and relation. *Whether the* ideals are transcendentalist or transpersonalist, the Founding Fathers’ or the civil rights movement’s, the deepest and most distinctive American ideal of the individual is one that affirms the universal and the community as sources and goals of individual development.

Whereas the popular conception has celebrated the independent, the classical view celebrates the interdependent. The new paradigm view of the human being is significantly closer to the classical view than to the popular view.

This new paradigm ideal of the individual would be strengthened if its exponents recognized their philosophical assumptions to be similar to distinctively American images of the individual. The individualism of both transcendentalism and transpersonalism concerns the self in the context of progressively larger contexts—ultimately, in relation to a universal reality. Whereas the ideal of freedom in popular rhetoric aims at license to fulfill the needs of personality, the ideal of freedom in Emerson and Martin Luther King, Jr., and in transpersonalism, is

tance of economic injustice, American capitalism also deadens the spirit. To the extent that capitalist individualism will continue to favor the economy over ecology, education, culture, and creativity, it will continue to undermine America and its imitators.

The mission of America serves as an example, or an exhibit, within the vast and controversial process here referred to as the evolution of consciousness. This interpretive framework is controversial not merely in its particulars but concerning the degree to which evolution of consciousness, as such, is an in-

will eventually reverse its present course in time to make the contribution expected of it. To meet its responsibility to its karmic mission—and, indeed, to save itself and the planet from its rapacious exploitation of the Earth's natural resources—America will first have to come to terms with the extent of its karmic debt to the groups it has exploited in the process of establishing its material success and the negative influence it is exercising throughout the world.

It might appear tasteless, or even bizarre, to bring a positive case for the mission of America to this thousand-year-old city of extraordinary culture—in Charles University, founded in 1348 here in this city, represented symbolically throughout the world by Vaclav Havel, a leader of acclaimed moral sensibility. But perhaps America will be seen positively, as it apparently is by Vaclav Havel, if we look past the exported American culture, past its willful ignorance of ecological values, of the cultures and languages of other peoples, of its own increasingly disposable, trivialized value system, to its roots and its larger, if still unsuccessful, insight and mission.

It is ironic as well as tragic that America is far advanced in the process of violating its own land. When European settlers came to the shores of the so-called New World and created colonies in the midst of an ancient and highly evolved indigenous civilization, they brought with them passionate and sophisticated ideals, but what they found most significantly was land. It was this seemingly unlimited expanse of natural wonder that they trekked, chronicled in diaries, depicted in correspondence to loved ones in Europe, painted, and, of course, inhabited. In the process, they broke the land to their will. In the past one hundred years, Americans have exploited and defiled the land that had exercised so formative an influence on their ideals of freedom and individualism.

Although these colonists and Europeans referred to this land as the New World, it was not at all new: the land had been settled and cultivated by inhabitants of a civilization many thousands of years old. It takes a special

To the extent that capitalist individualism will continue to favor the economy over ecology, education, culture, and creativity, it will continue to undermine America and its imitators.

rooted in the freedom that the individual can create only in and through an altered sense of self, one that lifts the personality to an intimate bond with a transpersonal state.

The primary obstacle to a genuine ideal of individualism and freedom is not a competing idea of community but rather a materialistic idea of both the individual and the community. Materialism in this context refers to the increasingly definitive American penchant for having, controlling, and moving through the fullest possible supply of goods and services. In this culture, *having* increasingly threatens to replace *being* as the preeminent human motive. The alarming number of religious leaders and groups that use God and creed in the service of imperialism, intolerance of pluralism, and unquestioning embrace of technological manipulation confirms the depth of the American commitment to materialism. Contemporary American culture is presently pleased with itself for having prevailed in the Cold War combat with communism, but by its celebration of materialism, passion for competition, and its passive accep-

telligible and effective construct. In contrast to the history of ideas, which is an academically established discipline, the evolution of consciousness framework can probably not be fully established without the aid of a transpersonal epistemology.

As a working assumption, the evolution of consciousness asserts that deep in our historical life, including the life of the planet and the life of humanity, there are appropriate tasks that beckon. Great figures in every culture have recognized (what better criterion of "great" might there be?) the nature and urgency of such karmic works. This is not to suggest that the tasks that a people take as their own are necessarily completed successfully. Until recently, histories have been a compilation of successes, but it would be revealing to list the karmic tasks that a culture has failed to perform—whether because it lost its way, its balance, or its nerve. America seems to have the task of developing an individualism that can serve as a basis for community life and for the critical relationship between humanity and the Earth. It is not clear whether America

kind of *chutzpah* to refer officially to an invasion as a discovery. This world, newly invaded and occupied, was also not new in that its most recent settlers brought with them a highly articulated culture, one based on the Bible, on new social and political ideals, and one that supported their belief in the importance of their mission. They brought ideas and they generated new ones. America may be unique in that it was founded on ideas, and it has been committed to the conviction that the human being is the creator of new and better ideas. This ideal is easily missed in the face of contemporary American mindlessness and passivity. But the mission has been constant, even when ill-served, to create a society in which individual human beings, like the Creator in whose image they believe themselves created, should experience themselves as creators. According to the American mission (whether considered to be vision, dream, myth, or realizable project), the human being is the creator of new ideas, and thereby of a new world.

The Europeans who settled the American colonies in the seventeenth century consciously set about creating—or co-creating with the land and the divine—a new culture, a new destiny, a New World. The tools for this creation included their belief in the Bible and the providential God revealed thereby and their love of freedom from political oppression. At the core of this grand and complex experiment was a desperate longing for religious and civic freedom. Within one and one-half century, they created a political system, a polity, that combined the most advanced ideas of freedom and the dignity of the individual in dramatic and tragic competition with slavery, virtual genocide of the Indian inhabitants, oppression of women, and an attitude of exploitation that would subsequently constitute its shadow. The light and dark dimensions of the American saga are best understood when seen as polarities of the same complex mission—the creation of a new individualism, one rooted in a radical pluralism of values, lifestyles, and communities.

It is essential that the dark side of

the American story be candidly acknowledged, and if humanity—and, more urgently, the Earth—is to survive, that it be accepted and overcome. The bright side, however, must also be acknowledged—and advanced. America as an ideal, as the representative of the free individual, has raised, and continues to symbolize, the most influential articulation of new and extremely demanding criteria for the human community. The accepted or nearly accepted criteria for human rights, legal protection, and access to power and information, as well as standards of integrity and propriety, are all far advanced over any previous age. This culture is making unprecedented demands on its leaders, as well as on parents and other care givers. Admittedly, the need for such protection may be greater in some respects, but the attempt to reach group consensus on rights and responsibilities governing education, health, and the ecosystem is a new level of achievement.

America is in the forefront of trying to reconcile the liberty and prosperity of competing individuals and groups. A partial list of such polar tensions awaiting reconciliation includes an unprecedented array of rights—psychological, financial, physical (including health and sexual orientation), aesthetic, and religious. I take it to be the spiritual mission of America to sustain the polarity as harmoniously and equitably as possible, between freedom for individuals and groups, and a workable polity of laws and rights. For the polarity to survive, the entire American project will need to recover and deepen its own self-consciousness.

America will need to confront the character flaw that lies deep in its psyche, at the core of its karmic destiny. From its origin to the present, the diverse peoples of America have lived too comfortably with a double bifurcation of high and low ideals, as well as high and low practice. For nearly four centuries, they have striven to create a freer and more just society—as well as to exploit and conquer. The settlers who came to America did not necessarily, or uniformly, set out to kill Indians. In fact, however, when it came time to claim land that was oc-

cupied, the mental and moral values of many settlers enabled them to believe that they had a right to do so.⁷

In this decade immediately following the quincentenary of the invasion of the Americas by Christian countries of western Europe, it might at last be possible to require that we Euro-Americans look at, and listen to, the killing of hundreds of thousands of indigenous peoples who walked wisely on this land. The responsibility for this incalculable crime remains at the shadow level of the American psyche. With respect to the native Americans—even more than with respect to the Blacks—we live in self-deception. We who partake of America's privilege live with this lie in varying degrees of discomfort. The long-accepted use of the term *discovery* for the invasion of land that had been inhabited for thousands of years and the use of the term *settled* for the extermination of the Indian civilization are more powerful than lies because it allows these deeds to remain buried in the unconscious.

The second atrocity, one that is more in the common frame of reference in American life, is the one and one-half century of slavery followed by more than a century of racism, resulting in an intolerable and dangerous situation commonly referred to as two nations, separate and unequal.⁸ Even Thomas Jefferson, a Virginia landowner who, of course, owned slaves, nevertheless expressed worry in his diaries concerning the long-range effect of this moral evil on American culture and destiny.⁹ America's third great failing consists in its systemic class- and gender-based injustices. As early American economic life was significantly built on slavery and the savage destruction of a vast network of indigenous cultures, it also presupposed violence and injustice in the treatment of women and the poor. It is only in this century that this withholding and violation of the rights of women has come to be recognized for the tragedy that it is. It is also painfully obvious that the largest group of poor who are victims of American exploitation and prejudice are the Central and South American peoples. America's three massive systemic in-

justices constitute a historical—and karmic—legacy that stands in the way of America realizing its spiritual mission. The karma of a culture or a people, like the karma of an individual, represents the spiritual predispositions and tasks of a lifetime; a culture, at least as much as an individual, must come to terms with its essential deeds and their value consequences. A full participation in the American experiment would ideally include a commitment to its future mission—the realization of an enlightened, contextualized, free individualism—and, equally, a sense of responsibility for the full, conscious transformation of America's three major crimes against humanity: slavery, virtual genocide of indigenous peoples, and systemic injustice against women and the poor. Although each individual is not directly responsible for the crimes of “dead white men” (and women accomplices), by virtue of the national-cultural destiny that each individual American has either chosen or been assigned (by higher beings, or parents, or both), these vast historical facts would seem to constitute the framework and actual content of our spiritual destiny as decisively as our gender, talents, beliefs and other life-defining influences and tasks.

The seeds of America's failure were planted at the beginning of the national project by the mind-twisting rationalizations that supported the enslavement of Blacks and the killing of Indians. As much as the deeds, the rationalizations have created the basis for the violence endemic in American society. Jefferson's concern as to how the Republic would survive slavery proved prescient; almost a century later, Lincoln knew the answer:

A house divided against itself cannot stand. I believe this government cannot endure permanently half slave and half free.¹⁰

More than a century after Lincoln, Martin Luther King, Jr., showed that the Republic has survived as two socio-economic nations. Karma is stubborn.

The negative effects of a false, primarily materialistic individualism and conception of freedom allow America

to rationalize not only systemic violence but also opposition to any group or idea which strikes it as “other.” Because of an increasingly strong habit of behaving at the level of appearances, Americans are prone at a minimum to devalue, and more often to oppose, other languages, other races, other ethnic groups, other generations—in the case of males, almost invariably the other gender. This capacity for othering is rooted in a false individualism—the one that denies or neglects the universal ideal through which we can each transform our individual personality by transpersonal ideals and experiences.

Unfortunately, from their origin to the present, American ideals have been limited and distorted by their commitment in theory and deed to a paradigm of power, domination, and exploitation. America's power and preeminence are inseparable from its high-energy domination of natural resources and symbolic images—including stereotypical images of women, minorities, and the poor. Fortunately, America also has at its disposal, and has had throughout its history, more than ample expressions of ideals and methodologies by which it can overcome its tragic past and create a future worthy of its founding and its influence on world events.

Heralds of the American Vision

Just as American thought and culture is celebrated for its practical knowledge rather than its philosophical speculation, its vision is not so much a seeing of a distant or future ideal as it is a seeing of the next few practical steps. In both its knowing and seeing, it tends toward the practical: it is concerned with knowing-how and seeing-how. Its philosophers and scientists, and other intellectuals and academics committed to knowledge, generally have one eye on the practical implications of their knowing. Those prized for vision tend to be those proven right with respect to the great challenges of the time. Pragmatism—the philosophical method which focuses on ends and consequences—should be understood as the distinctively American way of doing philosophy, and social and political fig-

ures, such as Benjamin Franklin, Thomas Jefferson, Abraham Lincoln, and Martin Luther King, Jr., are seen in this tradition as teachers or sages of American philosophy, no less than James and Dewey. It is precisely because both James and Dewey were thoroughly pragmatic and contemporaneous concerning the great problems of their time that they tend to be ignored by academic philosophers worldwide; both philosophers in other traditions and academic philosophy in America tend to prize knowledge rather than know-how. A deep and effective know-how is precisely what American thinkers and teachers—from Edwards to Martin Luther King—have expounded and embodied.

Jonathan Edwards was born in Connecticut in 1703. At age eleven he published in an English journal a four-page essay based on his observation, for forty-eight straight hours, of a spider building a web. At fourteen he went to Yale College, where he was thrilled by his reading of John Locke's *An Essay Concerning Human Understanding* (1690), particularly Locke's exposition of the origin of ideas:

The greatest lesson Locke had taught him was that the “true nature of things” could be part of his own experience, not through effort or strain, but through his own experience. He need not struggle; he would receive it through a wise passivity. Untutored as he yet was in philosophical thinking, he could grasp Locke's concept of objective reality coming to him in the form of ideas.¹¹

As a pastor, Edwards applied Locke's empiricism to religious experience—his own and his parishioners'. Edwards was convinced that religion is neither belief in a creed nor decent living, but “an inner individual experience.”¹² By his passionate and profoundly psychological sermons, he emerged as the leading theological and spiritual voice of “The Great Awakening” (1740-42).

In his *Treatise Concerning Religious Affections* (1746), Edwards sought to establish criteria by which to discern which members of Christian congregations, including his own, had in fact experienced the saving grace of Jesus Christ and thereby were entitled to the social as well as spiritual benefits of

parish life. When he attempted to discern the spirit among his own parishioners according to his lights, those whom he judged not to be saved responded by judging pastor Edwards to be excessively conscientious in the exercise of his duties and thereupon sent him to perform missionary work among the Indians surrounding his parish in Northampton, Massachusetts.

From 1751 until he was appointed president of what is now Princeton University in 1757, Edwards ministered to the Indians and wrote a profound and influential treatise on freedom of

as astonishing and as enduring as that of the group of political thinkers that guided the founding of the nation. As Jefferson towered over the group that articulated American polity, Emerson set the terms and the standard for the individuals who would articulate the American imagination. Most prominent in this literary movement, in addition to Emerson, who was the most senior, were Whitman, Melville, Hawthorne, and Thoreau. All these figures were large souls of extraordinary intellectual power and high artistry, who were able to take in the broad, multi-

thinking and democracy. Emerson teaches that all individuals in this democratic culture can think their own thoughts and can thereby participate in the American ideal of democracy. Emerson created a democratic epistemology, according to which a free-thinking person can create a new world, a world that is worthy of coming generations. In a way that anticipates James and Dewey, both of whom consciously built on him, Emerson understood that democracy and individual original thinking are really the same. "Why should not we also enjoy an original relation to the universe?"¹³ Emerson's writings answer that this is not only a possibility, but in a culture committed to the democratic ideal, it is a necessity.

Why should not we have a poetry and philosophy of insight and not of tradition, and a religion by revelation to us, and not the history of theirs? . . . There are new lands, new men, new thoughts. Let us demand our own works and laws and worship.¹⁴

This is, of course, a declaration of American intellectual and religious freedom of thought, freedom of expression, freedom to trust one's own experience.

Emerson's great task, and insight, had to do with the relationship between personality and the transcendent self, which is universal and infinite. Gertrude Reif Hughes offers this summary of Emerson's advice:

Noting that many people feel defeated by circumstances, he recommended that they counter their melancholy by remembering their own infinitude. "As fast as you can," he urged, "break off your association with your personality and identify yourself with the Universe." Why does such self-transcendence make one both freer and more oneself, rather than less so? Because—and this is the paradox of "the infinitude of the private man"—"I could not be, but that absolute life circulated in me, and I could not think this without being that absolute life."¹⁵

Such is the essence of Transcendentalism: the self that I am is comprised of my double membership in the world of personality and in the world of the Absolute and Infinite. We are at once the creator of our truth and meaning, and yet we are that because we are, in

The influential thinkers of the nineteenth century continued the process of replacing orthodox Christian institutions and dogmas by various nonsectarian spiritual perspectives.

the will. He argued that because the will is identical with the soul's prevailing inclinations, God rightly holds individuals responsible for the moral quality of their actions as expressions of their desires and intentions.

Edwards proved to be the last major American thinker who worked primarily out of a Calvinist framework; one generation later, the writers of the Declaration of Independence and the Constitution were influenced by the European Enlightenment, particularly the political philosophies of Locke and Rousseau. The Founding Fathers, deeply learned and amazingly articulate, committed the new nation to a broad vision with ideals worthy to serve as the basis of a polity for the next two centuries and beyond.

The influential thinkers of the nineteenth century continued the process of replacing orthodox Christian institutions and dogmas by various nonsectarian spiritual perspectives. The remarkable emergence of imaginative thought in the middle decades of the nineteenth century—from Emerson's essays in the 1830s to the final edition of Whitman's *Leaves of Grass* in the 1880s—proved

leveled ideals and aspirations of the highly energetic New World culture.

In Emerson, who was born in 1803, we observe a figure who is schooled in history, literature, and thought. By the time he was ordained a Unitarian minister in 1829 at age twenty-six, the Calvinist theology of Jonathan Edwards had lost favor, but the emphasis on individual religious experience remained central to the evolving conception of religion and human nature. Emerson wrote two major declarations of cultural and epistemological independence: *Nature* (1836) and *The American Scholar* (1837). His definitive task was to convince his American listeners to overcome dependency on tradition, dogmas, religious institutions, and the thought of others. Emerson taught that it is better to think one's own thoughts poorly than borrow from the wisdom of sages. Prophet and critic of the new culture, he expressed most of the ideals that the others subsequently developed.

Although Emerson is identified with transcendentalism, an entirely correct and perhaps the surest *entré* to Emerson's thought is to focus on the relationship that he establishes between

a prior and fundamental way, the absolute-infinity that circulates in each of us, and without which we could not think or be a person at all.

Admittedly, during the one and one-half century since Emerson developed his theory of individualism, American culture has not shown itself to be a faithful example of the Emersonian ideal. Yet, to the surprise of its observers, American thought and culture returns repeatedly to a transcendentalist ideal remarkably like Emerson's. In the present generation, in response to the poverty of the behaviorist, and even the humanist, images of the human being, transpersonalism represents an updated version of the archetypal American individualism.

Emerson is thoroughly transpersonalist in that he, too, talks about a kind of altered state, not one suddenly induced, but one that is nevertheless significantly different from our ordinary thinking. According to Emerson's epistemology, we think in harmony with, from, and by means of a deep soul or spirit, a universal life. To the extent that I think a true thought, that thought comes out of my relationship to that universal and absolute life. It is a tiny step from Emerson's transcendentalist epistemology to William James's transpersonalist concept of "Something More" through which saving experiences come.

William James was born in 1842, in New York City, where he was visited by none other than Ralph Waldo Emerson, a friend of his father, Henry James, Sr. James studied painting, biology (and went on a profoundly influential year-long trip to the Amazon with Louis Agassiz), and then he became, successively, a physician, a psychologist, and a philosopher. He spent thirty years conducting parapsychological research. He traveled throughout New England with the nineteenth-century equivalent of a videopac in search of "one white crow," who could safely be believed to be delivering messages from "the other side."¹⁶ James wrote on psychical research every year until his death in 1910; it was his single most consuming intellectual passion. Even during the current revival of interest in his

thought, however, James's contribution to psychical research remains the part of his writings that has been almost universally ignored by philosophers and psychologists.

James remains the quintessential American personality and thinker: equally psychologist by virtue of his seminal book *Principles of Psychology* (1890), religious thinker by virtue of his original and enduring classic study *The Varieties of Religious Experience* (1902), and philosopher by virtue of his major philosophical works: *Pragmatism* (1907), *Pluralistic Universe* (1909), and *Essay in Radical Empiricism* (1912). In all of these works, James shows himself the carrier of the American impetus toward the individual-in-relation: in his study of religious experience, for example, he focuses entirely on individual experience of the Beyond, the divine by whatever name. He explained the experience of the so-called sick-soul, conversion, saintliness, and mysticism as examples of individualism in the sphere of religion. Temperamentally and philosophically a pluralist, James pronounced the religious experience of each individual to constitute additional evidence that human experience is resistant to a single summary.

John Dewey is continuous with his Emersonian-Jamesian tradition; he argued that his fellow citizens would be more democratic and independent to the extent that they replaced religious belief with scientific intelligence. Dewey's position in this regard is well justified by the vitriolic attacks and distortions generated against him by educators and religious believers. Throughout his career, Dewey was vilified, particularly with respect to his attempt to introduce a more individualistic and experiential component in education.

That John Dewey's philosophy of social humanism, metaphysical naturalism, and pragmatic intelligence should have been the dominant intellectual influence in America throughout the second quarter of the present century is a clear indication that the transcendental in any form had been eclipsed. Without necessarily knowing it, it is partly against the scientific nat-

uralism with which Dewey was identified that transpersonalism is building its alternative image of the human being, of knowledge, and of culture. Yet Dewey unquestionably had hold of one of the deepest passions in the American psyche—an individualism rooted in, deepened by, and in service to an ever-enlarging community. Dewey's ideal of the community is built on individuals and is much closer to the ideal of individualism than to communalism or collectivism. In Dewey's ideal of the individual, the community serves a function similar to the universal and absolute in Emerson.

Dewey would have benefited from the research of contemporary transpersonalism in that he would have recognized the democratic value of a psychology committed to each person's story, wherever it leads. The "wherever" is the critical part here because transpersonalist literature typically leads to dramatic transformations and disclosures. Because Dewey was a great champion of the variety of experience, and benefited significantly from the physical therapy which he underwent with F. M. Alexander, he would undoubtedly have been sympathetic to transpersonalist empiricism—particularly with respect to research in somatics.

While it might appear that the line from Edwards to Dewey should be read as a steady loss of religious motivations and ideals, it is truer to say that the Founding Fathers and Dewey are at one end of the American religious spectrum, with Edwards and Martin Luther King, Jr. at the other. America continues to use Biblical references as framework and substantial reference points. Admittedly, there is not agreement on the meanings of the texts quoted, and quotations are, as often as not, used for self-serving ends. But the line of Christian activists from the Puritans of the eighteenth century to the Abolitionists of the nineteenth century to the Civil Rights activists of the twentieth century all show the socio-political and mythico-psychological power of Biblical symbols and their essential role in America's self-definition. In his essay "The Biblical Basis of the American Myth,"

Sacvan Bercovitch summarizes the ways in which the Bible continues to provide the symbolic and mythic language necessary for a united people. According to his account, the ideals and phrases of the Puritans echo in the words of both Abraham Lincoln, the conscience of nineteenth-century America, and Martin Luther King, Jr., the conscience of the second half of twentieth-century America.

In [their] obsessive verbal rituals the Puritans sought and found the answer to the problem of authority in a strange New World. Their solution was as simple as it was sweeping. They sanctified their society by the Bible's figures and types. That is, they vindicated the political and economic structures of the Massachusetts Bay Company, Incorporated, by the rule of scripture, as scripture brought to life. Consider John Winthrop's famous definition of the colony as a "city upon a hill." The direct reference is to the fifth chapter of Matthew, which speaks of the individual believer, the pilgrimage (by grace) of the redeemed soul. Winthrop retains this meaning, but he enlarges its application to include a grand prophetic design. His "city upon a hill" is also a community, a company in covenant, summoned by God to a historic mission. What he means in this sense is that the colony at large is a *figura* in sacred time. The wayfaring saint, at every stage in his journey, foreshadows the saint in glory he is to be. New England, as a city upon a hill, looks forward to the New Jerusalem that is to descend upon Mount Zion. In Winthrop's discourse, these two levels of meaning, personal and historical, are more than analogous or parallel. They are reciprocal, intertwined—the verbal paradigm of a community of saints, "knit together by the bonds of love, as one man in Christ," and by "special commission" engaged upon an errand to the end of time.¹⁷

Garry Wills shows that Lincoln led the country into its time of testing with essentially the same vision. The "fathers" in Lincoln's Gettysburg Address are those who articulated the sacred American credo: "We hold these truths to be self-evident, that all men are created equal." In a speech in 1857, Lincoln explained to his audience that although they were not blood relations of the "fathers" who wrote the Declaration of Independence, they are nevertheless connected to them by the "moral sentiment" which binds all Americans and freedom-loving people.

If they look back through this history to trace their connection with those days by blood, they find they have none, they cannot carry themselves back into that epoch and make themselves feel that they are part of us, but when they look through that old Declaration of Independence they find that those old men say that "We hold these truths to be self-evident, that all men are created equal," and then they feel that that moral sentiment taught in that day evidences their relation to those men, that it is the father of all moral principles in them, that they have a right to claim it as though they were blood of the blood, and flesh of the flesh of the men who wrote that Declaration, and so they are. That is the electric cord in that Declaration that links the hearts of patriotic and liberty-loving men together.¹⁸

Lincoln's affirmation of individual rights and freedom is synonymous with his understanding of America—that it was begotten by the fathers of this moral principle. Wills explains:

Lincoln talked of Americans in his day as morally begotten. But even the fathers brought forth their country from America's virgin land by the impregnation of an idea. By the speaking of the Declaration's word—as at the angel's annunciation to Mary—the country's parthenogenesis took place. This is the basic image of the Gettysburg Address: "Forescore and seven years ago our fathers brought forth on this continent a new nation, conceived in liberty, and dedicated to the proposition that all men are created equal."¹⁹

One hundred years after Lincoln's Gettysburg Address and his signing of the Emancipation Proclamation, Martin Luther King, Jr. explained that he could never adjust to segregation or discrimination, and complimented Lincoln on having been similarly "maladjusted" to slavery. He urged his audiences to be as maladjusted as Amos who, in the face of injustice, cried out: "Let judgment run down like waters and righteousness like a mighty stream." He urged his audience, and through them, all Americans to be similarly maladjusted.

As maladjusted as Abraham Lincoln who had the vision to see that this nation could not exist half slave and half free. As maladjusted as Jefferson, who in the midst of an age amazingly adjusted to slavery could cry out, "All men are created equal and are endowed by their Creator with certain inalienable rights and that among

these are life, liberty and the pursuit of happiness." As maladjusted as Jesus of Nazareth who dreamed a dream of the fatherhood of God and the brotherhood of man. God grant that we will be so maladjusted that we will be able to go out and change our world and our civilization. And then we will be able to move from the bleak and desolate midnight of man's inhumanity to man to the bright and glittering daybreak of freedom and justice.²⁰

King is part of the tradition of American religious and social reformers—and American martyrs—committed to the realization of the American mission on behalf of individual freedom and social justice. The first two points in the citation of the Presidential Medal of Freedom, posthumously awarded to King, signal the identity of his lifework and the mission of America:

Martin Luther King, Jr., was the conscience of his generation. A southerner, a black man, he gazed on the great wall of segregation and saw that the power of love could bring it down. From the pain and exhaustion of his fight to free all people from the bondage of separation and injustice, he wrung his eloquent statement of his dream of what American could be.²¹

King, who described himself as a "drum major for righteousness," represents the fusion in the American conscience of providential justice, prophetic righteousness, and social reform. All of his writings and lectures, as well as his courageous actions, issued from and served the American ideal of the individual as a moral force in service of the community. King was, of course, influenced by the tradition sketched thus far in this lecture—Puritans and Edwards, Emerson, Lincoln and James, as well as Gandhi, all of whom he studied at Boston University—but the deepest source of his moral, and distinctively American, conscience was the African American church. The prophetic-messianic character of African American Christianity, combined with the wisdom and passion for justice born of the suffering of the African American people, may offer the truest version of the American ideal of freedom and justice as a goal for all humanity. For the first time in human history, nations with power to oppress are beginning to grasp what Gandhi, the civil rights

movement, and the feminist movement have been demonstrating: that acts of oppression and violence issue from fear and impotence and will ultimately fail. King believed, in the words of James Baldwin, that "black freedom will make white freedom possible."²²

Significance of Transpersonalism for the Mission of America

The nineteenth century, particularly according to Emerson and other spokespersons of the American mind, focused on the interplay of the individual and the universal spirit after a century-long

the context of, or by means of, an evolution of consciousness, we might speculate that Dewey's critique of American culture, which consisted primarily in his contention that America was failing at democracy (particularly with respect to education), was entirely consistent with Emerson's critique of a false and shallow theory of human nature, one not built on an original relation to the universe.

Dewey's humanistic religion of democracy only appears to be the opposite of Emersonian individualism: we should see transpersonal psychology

alist. This tendency, if accurately attributed, would seem to follow from the influence of Asian spiritual philosophies and practices. It would be worth exploring the possible benefits of using a distinctively American philosophical framework for future work in transpersonal philosophy and psychology.

In addition to its commonalities with classical American thinkers, transpersonalism—or, more accurately, transpersonal psychology and its implications for other disciplines—also represents a dramatic instance of new paradigm thinking. To a degree not possible even for Dewey's generation (those who wrote prior to mid-twentieth century), transpersonal literature is heir to the entire range of human culture. James's interpretive framework was prescient, but compared with contemporary documentation of states of consciousness, his data was culturally quite limited. Because it has access to the world-wide varieties of shamanism, mysticism, and other modes of altered states of consciousness, contemporary transpersonalism represents a collective statement that makes possible a paradigm for the future. If only because of its vast assembly of comparative cultural data and the force of anthropology, comparative religion, and competing philosophies and psychologies, the new paradigm has been able to show the inadequacies of the paradigm that has dominated Western thought since the seventeenth century.

Transpersonal perspectives should make possible a deeper understanding of cultural possibilities. American culture, for example, is rooted in violence and exploitation, as well as in high ideals and a profound vision for the human future. Transpersonal disciplines should show how America sustains a host of fundamentalist, colonialist, and other ideological "isms" that call forth base instincts, while at the same time it continues to advance its lofty founding vision: an unprecedented degree of individualism, religious tolerance, and cultural pluralism.

In relation to these two interpretations of the modern West—essentially the masculine/feminine interpreta-

Transpersonalism is an antidote to the excesses of a strident rationalism that combines the intellectual confidence of science with the practical powers inherent in social sciences and technology.

battle between Christian redemption theology and the Enlightenment rationality of the Founding Fathers. At the end of the twentieth century, transpersonalism is a necessary antidote to the century-long excesses of a strident rationalism—including Dewey's more polemical writings—that combines the intellectual confidence of science with the practical powers inherent in social sciences and technology.

It would seem to be important for both the mission of America and the emerging transpersonalist world view to establish their mutual affinities. At a minimum, it is worth showing that some of the tasks and battles to which the present generation of transpersonalists are committed closely resemble battles fought by Emerson and James on behalf of an individualist conception of experience. In that it represents a break with the prevalent presuppositions of humanism, transpersonal psychology would seem at least to have significant affinities with Edwards, Emerson, and James. In its opposition to a shallow conception of the individual and the community, it also shares significant values with John Dewey. Reading the American psyche in

as continuous with Dewey, as well as with Emerson and James, in their shared opposition to any view of the self that takes the given as normative or limited. Dewey did not affirm the unlimited to a degree found in the writings of Emerson, James, and transpersonal psychologists, but this might be less important than his contribution as a critic of the passive and the static. The vision of individual righteousness and social justice espoused by the Puritans and Edwards, the Founding Fathers and Lincoln, and the civil rights movement of this century all confirm the depth and resilience of the American commitment to the ideal of individualism in relation to a saving community. These thinkers all evidence a sense of the evolution of these ideals and their eventual realization by future generations.

Although Ken Wilber, the primary exponent of the writings and ideas grouped under the label "transpersonal," often writes within an evolutionist perspective, it seems accurate nevertheless to characterize the philosophical presuppositions of transpersonal psychology as essentially peren-

tions held in tension in Rick Tarnas's lecture and in his book *Passion of the Western Mind*—I am recommending that we regard transpersonalism as a middle way, or perhaps double way, with a distinctive American personality. Rick Tarnas's *Passion of the Western Mind* uses European thinkers and texts, but the entire book exhibits a distinctively American philosophical and historical sensibility and, I assume, could equally well have used Emerson, James, and Dewey for the Romantic or participatory epistemology recommended in its widely dis-

the mind's subjective contribution; but that contribution is teleologically called forth by the universe for its own self-revelation. Human thought does not and cannot mirror a ready-made objective truth in the world; rather, the world's truth achieves its existence when it comes to birth in the human mind. As the plant at a certain stage brings forth its blossom, so does the universe bring forth new stages of human knowledge. And, as Hegel emphasized, the evolution of human knowledge is the evolution of the world's self-revelation.²³

My reading of the mission of America, or of the American mind, can be seen as an echo, or example, of Rick

to the social and psychological movements of the late twentieth century. We should regard the transpersonalist movement of the late twentieth century as continuous with, and an advance upon, the deep spiritual and essentially transpersonal thought of the classic exponents of the American vision, from Edwards to Dewey, and the moral intuition of social-political leaders such as Lincoln and Martin Luther King.

These thinkers surely espouse an understanding of the individual, the uniqueness of whom is an irreducible value rooted in and able to realize, by serving as an agent of the universe's self-revelation, a transpersonal dimension. In the case of Jonathan Edwards, this dimension is rooted in the saving experience of Jesus Christ. Emerson, too, talks about a kind of altered state that is very significantly different from our ordinary thinking; he recommends we think by means of universal soul or spirit. According to James, it is an individual experience of "Something More" that brings about conversion from "sick soul" anguish to spiritual unity and health. Lincoln and King exemplify a consistent awareness of the significance for humanity of every moral deed and the bond that sustains moral commitments to other peoples and other generations; both saw this consciousness as the special task, thus far unrealized, of America.

The whole evolution of consciousness suggests that America's great task has been to bring to the highest possible expression the ideal of the individual-in-relation: the individual as an expression of the economic, the political, the religious; the individual as an expression of freedom and creativity in service of humanity and the Earth. The spiritual mission of America has been to conceptualize, manifest, and exemplify a new image of the human being as individual, as a unique agent of revelation and salvation. American hostility to ancient and traditional cultures—including particularly the African and Indian—constitutes a threat to its deepest conviction and aspiration, namely, the creation of a society of uniquely different individuals. In itself, without the polarity of the com-

The transpersonalist movement is an advance upon the deep spiritual and essentially transpersonal thought and the moral intuition of the classic exponents of the American vision.

cussed "Epilogue." My attempt to show transpersonalism as continuous with the American tradition can be seen as an affirmation, with American materials, of Tarnas's attempt to sustain a positive and critical reading of the "Western mind." The following text is central to Tarnas's *Passion* and is completely descriptive of the transpersonal epistemology, which I consider to be definitive of the psyche and spiritual mission of America.

The human spirit does not merely prescribe nature's phenomenal order; rather, the spirit of nature brings forth its own order through the human mind when that mind is employing its full complement of faculties—intellectual, volitional, emotional, sensory, imaginative, aesthetic, epiphanic. In such knowledge, the human mind "lives into" the creative activity of nature. Then the world speaks its meaning through human consciousness. Then human language itself can be recognized as rooted in a deeper reality, as reflecting the universe's unfolding meaning. Through the human intellect, in all its personal individuality, contingency, and struggle, the world's evolving thought-content achieves conscious articulation. Yes, knowledge of the world is structured by

Tarnas's conclusion that the increasingly prominent reading of the "Western mind" as a male-dominated rush to power, alienation, and ecological suicide is one of two interpretations that need to be held in tension. The Western mind and the American psyche are also properly understood as committed to an inner journey of free individuals whose unique vision and dedication represent the dynamic core, and agency, of the missions of both the Western mind and America. Tarnas's "Epilogue" and my reading of the spiritual mission of America are in agreement in tracing in these traditions—the American mind, after all, being a subset, albeit distinctive, of the Western mind—a Romantic, or participatory, epistemology and self-definition.

In sum, I am recommending to this audience of more than five hundred professionals in varying degrees of sympathy with the transpersonal world view that we view transpersonalism as a recent expression of the Romantic impulse in the American psyche, running from the Puritans of the seventeenth century through the development of the democratic ideal

munity ideal, this absolute ideal of the individual is incomplete and unhealthy—and, fortunately, unrealizable. It exists in relation to communities such as family, region, cultures, and sub-cultures (e.g., religions, arts, sciences, ethnicities), as well as, obviously and necessarily, to the Earth.

The future evolution of America is, of course, uncertain, but it does seem that if we have some sense of the American task, we can build on it. We can say to that culture: “Go back to your sources and develop, consistent with your karmic path, a true individualism, not one steeped in materialism and fear of the other, nor one rooted in control and exploitation, but one rooted in all of the creative forces of individuals-in-relation to the source through which they and the whole of America live and move and have their being.”

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NOTES

1. *The Annals of America*. Volume I: 1493–1754. (Chicago: Encyclopedia Britannica, 1976), 115.

2. Quoted in Martin E. Marty, *Pilgrims in Their Land* (New York: Viking Penguin, 1984), xiii.

3. Quoted in Sacvan Bercovitch, *The American Jeremiad* (Madison, Wis.: University of Wisconsin Press, 1978), 177. In the same place, Bercovitch comments as follows:

Only America, of all national designations, has assumed the combined force of eschatology and chauvinism. Many other societies have defended the status quo by reference to religious values; many forms of nationalism have laid

claim to a world-redeeming promise; many Christian sects have sought, in secret or open heresy, to find the sacred in the profane, and many European defenders of middle-class democracy have tried to link order and progress. But only the American Way, of all modern ideologies, has managed to circumvent the paradoxes inherent in these approaches. Of all symbols of identity, only America has united nationality and universality, civic and spiritual selfhood, secular and redemptive history, the country’s past and paradise to be, in a single synthetic ideal.

4. Quoted in Sacvan Bercovitch, “The Biblical Basis of the American Myth,” in Giles Gunn, ed., *The Bible and American Arts and Letters* (Philadelphia: Fortress Press, 1983), 224.

5. Richard Tarnas, *The Passion of the Western Mind* (New York: Harmony Books, 1991).

6. My conception of the evolution of consciousness is influenced by the writings of Rudolf Steiner (see my *Essential Steiner* (San Francisco: Harper, 1984) and Owen Barfield (see, among many other works, his *Saving the Appearances* [New York: Harcourt, Brace, Jovanovitch, 1957]).

7. See Jerry Mander, *In the Absence of the Sacred: The Failure of Technology and the Survival of the Indian Nations* (San Francisco: Sierra Club Books, 1991), and David E. Stannard, *American Holocaust: Columbus and the Conquest of the New World* (New York: Oxford University Press, 1992).

8. See Andrew Hacker, *Two Nations: Black and White, Separate, Hostile and Unequal* (New York: Ballantine Books, 1991).

9. See Nathaniel Weyl and William Marina, *American Statesmen on Slavery and the Negro* (New Rochelle, N.Y.: Arlington House, 1971).

10. Speech by Abraham Lincoln at Springfield, Ill. in 1858.

11. Ola Elizabeth Winslow, “Introduction” in *Jonathan Edwards: Basic Writings* (New York: New American Library, 1966), xi.

12. *Ibid.*, xxii.

13. “Nature” in Stephen E. Whicher, Ed., *Selections from Ralph Waldo Emerson* (Boston: Houghton Mifflin, 1960), 21.

14. *Ibid.*, 16.

15. Gertrude Reif Hughes, “Emerson’s

Epistemology with a Glance at Rudolf Steiner,” *Journal for Anthroposophy* (1987): 39; see also Hughes, *Emerson’s Demanding Optimism* (Baton Rouge, La.: Louisiana State University Press, 1984).

16. See Robert McDermott, “Introduction” in *William James, Essays in Psychological Research. The Writings of William James* (Cambridge, Mass.: Harvard University Press, 1986), xxii.

17. “The Biblical Basis of the American Myth,” 221.

18. Garry Wills, *Under God—Religion and American Politics* (New York: Simon and Schuster, 1990), 212.

19. *Ibid.*

20. “The Power of Non-violence” in James M. Washington, *A Testament of Hope: The Essential Writings and Speeches of Martin Luther King, Jr.* (San Francisco: Harper, 1986), 14–15.

21. *Ibid.*, iv.

22. *Ibid.*, xix; see James Baldwin, “Letter to the Bishop,” *New Statesman* (August 1985):9.

23. Richard Tarnas, *The Passion of the Western Mind* (New York: Harmony Books, 1991), 435.

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The UFO Abduction Phenomenon: What Might It Mean for the Evolution of Human Consciousness?

JOHN E. MACK

Each of us who work in the area of consciousness evolution seems to have a limit. Some people say “well, that parapsychology stuff is okay, but astrology, no, I can’t buy into that.” Or other people will say, “Well, I can even take astrology and parapsychology, but the UFO [Unidentified Flying Object] abduction stuff—that’s too far out. I can’t accept that.” And that was my experience as well, as I will explain.

One of the things one has to do working in this field is to disimpact certain of our words. Language is for making categories, and the categories we have do not work very well here. People ask me, for example, is that really true, or, did this literally happen to people? Is it real? But *real* and *happen* are the kinds of words that have to be looked at again from another point of view—or inside and outside. Is this something in the external world or something in the internal world? Again, those categories do not hold.

What I will do is to tell first of my own experience, how I got into this area, then give a bit of the history of the field, touching the high spots of this huge subject. Then I will present some of the phenomenology, assuming that a number of you are not that familiar with the abduction phenom-

non itself. I will speak about who the abductees are, how I use nonordinary states of consciousness in my own work, will say a little about the physical evidence, what effect being abducted has on the abductees, and, finally, how I have put together the meaning of this phenomenon.

I refer you to four books for those of you who would like to explore this subject further. One is by Ken Ring, who is with us in Prague. It is called *The Omega Project*. Another is by Keith Thompson, called *Angels and Aliens*. Budd Hopkins’s book *Intruders*, published in 1987, is a classic in this field. Finally, I recommend David Jacobs’s very recently published book, *Secret Life: Firsthand Accounts of UFO Abductions*.

My experience with the abduction phenomena is fairly recent. In 1989, Stan [Grof] gave me a paper by Keith Thompson, which was being prepared for a book Stan and Christina were editing on spiritual emergencies. Thompson’s chapter contained a Jungian interpretation of the UFO phenomenon, but I kept asking myself as I read the chapter, yes, but what are the data? What is this about? What is really going on here? Late that fall, a friend, who was a member of my holotropic breathwork class, asked me if I wanted to meet Budd Hopkins, and I said, “Who’s

Budd Hopkins?” He is, of course, a pioneer in this field. One day in January 1990, I had some time in New York. It was one of those dates that you tend to remember exactly, when something shifts in your life. January 10th. What was so powerful for me when Budd told me about his cases was the very precise similarity of the experiences that people, who had come forward with great reluctance, were reporting from all over the United States and other parts of the world. When, for example, an experiencer would be shown a picture of an alien as drawn by another abductee, the first person would react with horror because the identical image in the drawing meant someone else was having the same experience. Therefore, the possibility of the experience being just a dream was shattered. This kind of reaction struck me as something that only occurred among people when something real had happened to them. Dreams do not work like that. So I said to myself, there is something going on here that I do not understand. Little by little I was drawn into this. By the beginning of June 1992, I had worked with roughly fifty-five individuals, forty-one of whom fulfilled my strict criteria for an abduction case, that is, to recall being taken by strange humanoid creatures into an enclosure,

usually identified as a UFO, and subjected to a variety of procedures about which I will tell you shortly. My cases include children as young as two years old. The oldest person is fifty-seven.

There is an ongoing debate in the UFO abduction literature about whether this phenomenon is fundamentally different from the folkloric history of visitation by little people and fairies. There are some similarities, but what is distinct about the abduction phenomenon, which begins with the Betty and Barney Hill case in

very stable mother of three kids, told me of experiences she had had since she was seven, in which little guys would come into her home and take her through walls into a ship, and so on. Her mother would say, "Oh, you've had a nightmare," and she would say, "No, Mother. It wasn't a nightmare. It was real. It really happened to me." That kept on happening. After a while, if your mother keeps saying something to you—she is your mother, you know—you are forced to believe it. But when this young woman saw my credentials as a

as early as in the newborn period. There have been abductions of infants from hospitals.

There has been criticism of the use of hypnosis, which is important in investigating these cases, and yet we have no evidence that hypnosis has introduced an element of distortion into the abduction phenomenon. What hypnosis tends to do is to access memories that have been walled off and thus are not available to the individual because of the intense traumatic nature of the phenomenon. The experiencers feel, or experience, that the aliens have in some way ordered them, shifted their consciousness, "turned them off," so that they are not expected, or allowed, to remember what has happened. The altered state seems specifically to reverse this amnesia. The approach I have evolved in investigating the phenomenon is to use hypnosis in combination with an intense focus on the breath. I establish in an initial interview, which lasts at least an hour and one-half, that the person has had the suggestive indicators of abduction—for example, little figures around the bed or periods of missing time. Sometimes they will remember the whole abduction experience. Interestingly, individuals who have taken psychedelics at some time in their lives seem to remember their experiences without the use of a nonordinary state of consciousness to explore what has occurred.

I use a standard hypnosis approach and relaxation to get someone into a nonordinary state or trance. When the person reaches a difficult place where, for example, some intense anxiety comes up, or when there are disturbing sensations in the body, I will focus on the breath. That does two things. It deepens, or returns the person into, the trance, and thus it also helps them to move through the fear and the distressing affect that they are experiencing at the time. I want to stress what I believe is fundamental in distinguishing this phenomenon from fantasy or delusions, namely, the intense distressing affect that is associated with the recall of these experiences. Abductees literally shake with fear when they reach the

The experiencers feel that the aliens have in some way shifted their consciousness, so that they are not allowed to remember what has happened. The altered state seems to reverse this amnesia.

1961, is that these cases have been subjected to first-hand empirical study, and the experiences are not handed down through an oral tradition. As Thomas E. Bullard, who is one of the most experienced folklorists to study this subject, has written, there is a core phenomenon that is highly articulated and detailed, unlike many other folklore phenomena in the folklore literature, which has great cultural variability. Budd Hopkins described in two books, *Missing Time* (1981) and *Intruders* (1987), many of the fundamental features of the abduction phenomenon, and then David Jacobs's book, *Secret Life* (1992), has described the fundamental elements from the beginning of the abduction, through the procedures that occur on the ship, to the end of the experience.

A number of people are coming forward now to tell of their experiences who had not done so before because more "respectable" people (presumably I am more respectable, although I don't know how long that condition will prevail) are getting into this field. A thirty-year old woman, a

Harvard professor in the CBS miniseries on abductions last month she said, "If this man believes this, I'm gonna talk to him." So she came to see me, and was crestfallen and yet relieved in another sense to discover that, indeed, these were experiences that many other people have had, which I take seriously and not as an indication of psychosis.

Who are the abductees? It has struck me how ordinary these individuals are. They exhibit, as far as I can tell, relatively little psychopathology, except that which might be considered to be the understandable result of the impact of these very disturbing experiences. In my series, I have housewives, clerks, a prison guard, and a chef in a Boston restaurant. There have been numerous psychological studies of these individuals. None has discovered any psychopathology that could account for the experience. Ken Ring has talked about the possibility that there might be some kind of encounter-prone personality. But one of the difficulties is to know what is cause and what is effect because the process of being abducted may begin

memories of how they were paralyzed or saw the little aliens with the big black eyes. Their whole bodies tremble, and they may scream with terror as they recall the intrusive procedures that occurred on the ships. Any effort to simulate these experiences, like the works of Alan Lawson, fails to recreate what an abduction encounter is really like. People can talk about what an abduction *would* be like, but it is the affective power that accompanies the memories that gives authenticity to them. As a psychiatrist, it is this intense feeling that tells me that something powerful and disturbing has, in fact, happened to these people. The great mystery is, what is it that has, in fact, happened? That is what I will turn to now.

The basic abduction experience seems to occur as if almost out of nowhere. The person may have some premonitory suggestion, a hum or the perception of a strange light. They may be in their bed or a car. One woman was on a snowmobile. They may see a UFO up close. Then there is a change in consciousness. Abductees do not exactly lose consciousness, but there is a time period they may not be able to account for, a passage. Then they may become kind of confused and woozy, and two or three hours later realize that time has passed. Sometimes they will remember what happened. But the use of this nonordinary state of consciousness seems of vital importance in the memory recall. Abductees may see light filling the bedroom, or a beam of light outside the house, and the presence of small beings in their room. Then they find themselves being carried against their will upwards by the light, through a wall or window. Their first reaction as they first recall is, "This can't be." It just does not fit any laws that they or we know. Some abductees have been witnessed by their relatives to be not present, literally missing, during the abduction period. Family members may become very distressed. Mothers are upset, of course, when a child is in fact gone. That is one of the things that is most difficult to accept—that this can actually have a literal, factual basis. One

of the most difficult things is for the abductees to look directly at the beings themselves.

There has been a lot of description of the beings in the media recently, but before the last two years this was not so common. I did not myself know three years ago the basic description of the most common alien entity. They are small, have large heads, no hair, big black eyes, which are the most prominent feature, a kind of rudimentary nose—just nostril holes really—a slit of a mouth, no ears, long arms with three or four fingers, narrow shoulders and chest, and thin, tapering legs. No genitals are seen. The typical beings are about three- to four-feet tall. Sometimes there is a doctor, or leader, who is described as somewhat taller and often looks more wrinkled or older. This is the figure who seems to be in charge on the UFO. There are also sometimes larger, human figures that seem to work in association with the little alien humanoids. This is the consistent account of otherwise quite healthy, sane people who do not believe it either when they first confront their experiences with me or other investigators.

Abductees may or may not see the ship from the outside. The first thing they may remember can be seeing the inside of the ship. It is usually described as having curved walls, and the atmosphere is kind of damp and cool inside. The experiencers are most often naked, and they are subjected to a series of procedures that include taking skin samples, probes of various kinds in the nose and other places with elaborately articulated instruments, all quite consistently described by abductees who do not know each other and have not gotten this information in the media. Details of this kind are still fairly sketchy in the mass media or even in books, although some are now coming out. The most prominent aspect of the experience is the urological/gynecological probings, in which instruments are stuck into the vagina and abdomen, or on the penis. Often, women will feel they are pregnant and tell of having fetuses being removed, al-

though there is not a well-documented case of this actually having happened in ordinary physical reality. Men will tell of sperm samples taken against their wills. All this is, of course, highly distressing. There is also intense probing of the head, and sometimes the experience of a tiny object or implant being put into their bodies, felt by the abductees to be used to track them. Several of these have been recovered and are currently being analyzed. None has proved to be made of materials that could not be found on earth. At the end of the experience, the individuals are returned by a means that reverses the procedure that I mentioned. Usually, abductees are returned to the same place they were originally, but funny things happen. Their shirts or pajamas may be put back on inside out, or they may be placed down in a different place from where they started out.

There are accompanying physical dimensions to the abduction phenomenon, although these by themselves would not constitute evidence that would satisfy scientists. But in the context of the abduction itself, the physical evidence becomes highly important. Abductees may wake up with unexplained cuts, scoop marks, and other lesions, or bleeding from the nose. There is a case of Budd Hopkins's where four people were abducted simultaneously from an apartment in New York, and all woke with nosebleeds the next morning. People may notice that there is burned earth outside of the apartment where a UFO landed in association with the abduction experience. The physical evidence is sometimes subtle. One of the things that is important in terms of consciousness and our notions of reality is that the evidence for abduction has to be taken as a totality. To rely on the physical evidence by itself might not satisfy us, but in the context of the whole experience, which is so robust, it creates a pattern. We need to be attentive to subtle forms of information as we expand our epistemology.

Sometimes the physical evidence is not so subtle. There is a case that has been investigated in New York by

Budd Hopkins in which a woman under hypnosis in November 1989 was described as passing out through a window of her apartment building in the Lower East Side. Within the past two years, several witnesses have come forward who were outside the building and saw the woman, accompanied by several little beings, going into a UFO, which went into the East River. The witnesses were on the Brooklyn Bridge and in the street below, and they described exactly, from outside, what Hopkins, the hypnotist, discovered and described in the

individuals feel. Children become very reluctant to tell their parents because when they do, they are told that they are too imaginative or have been dreaming. If an adult tells of his experiences in the workplace, everybody will tell him he is crazy, or so he fears. Thus, as one abductee puts it, they go "underground." The isolation is especially painful because this is such a profound and important part of their lives, abductees know something has happened of great meaning to them, which they cannot talk about. The third dimension,

of denial that he or she has, the ability to say that this cannot be so. The fourth element of the trauma resides in the fact that the experience can recur at any time. Unlike many other traumas, it is not over when it's over.

The second important outcome I want to underscore is the element of transformation. As I work intensively with the trauma through the use of a nonordinary state of consciousness, and the abductees go fully through or experience the trauma, after two or three hypnosis sessions, something happens. They begin to feel as if the abductions have a purpose or meaning. An expansion of their consciousness occurs. They feel as if they are connecting beyond themselves, opening up to a different perspective of the universe. One man, who went through incredible terror as he had a sperm sample taken from him against his will, screamed and yelled on the bed as I worked with him in hypnosis, said afterwards, "You know, John, the physical terror is minuscule compared to the terror of acknowledging that this is real, of having to look into the eyes of the aliens." The eye contact, which is sometimes strongly resisted, is a very powerful, confirming matter to these individuals. To look into the eyes of the aliens convinces abductees that there is a reality here that must be taken in. That terror of that acknowledgment is much greater, as this man said, than the physical reality of being overwhelmed and taken on to the ship.

Another important transformational element relates to the intense dose of information abductees are given on the ship concerning the global crisis. They will be shown, for example, a wasted landscape after nuclear war or environmental destruction—images of the Earth's life dying, a polluted atmosphere and rivers. Abductees develop a powerful environmental consciousness. Some of them drop the jobs they have been doing. But this deep transformation occurs only when they work intensely with their experiences through the use of a nonordinary state of consciousness. The change seems less likely to occur spontaneously. They give up

The alien abduction phenomenon strikes at virtually every aspect of the fundamentalist dominant paradigm of Western psychology and science.

abduction experience. Sometimes you do get this very robust corroboration, but usually the physical evidence is more subtle.

Abduction experiences tend to occur in families, which adds a deeper and, in some ways, more troubling dimension to it. For example, several members of a family may be taken or the encounters may span several generations, including parents, grandparents, aunts, and uncles. Family members often have great difficulty talking to each other about the experiences for a numbers of reasons, including a desire not to be reminded of what has occurred and the inability to accept the reality of it.

The sequelae of abductions are both traumatic and transformational. First, the traumatic aspects. The trauma has four dimensions to it. The first dimension is the experience itself: to be paralyzed, taken against one's will into a strange place, and subjected to these intrusive procedures, is itself traumatic. The terror is enormous and is buried for the reasons I have mentioned. The second dimension is the isolation that these

which is of particular relevance for our discussion here, comes from the fact that the experience totally shatters the experiencer's notion of reality as, of course, it does for all of us. One woman, Claire, who was at the Massachusetts Institute of Technology conference last week, is the second of four generations of people who have been abducted. She is very troubled that she cannot protect her four-year-old granddaughter, who draws pictures of how she tries to lock herself in a box so that Mu, her name for the head alien that takes her, will not take her again. What Claire said is characteristic of what other abductees have said to me: "I would relish the idea that I'm insane. To accept that this is genuine undermines everything I've accepted as reality. I like skeptics. They give me an out." Some abductees have come to me in the hope that I will tell them they are crazy. Instead I say, "I don't understand it. It's a deep mystery to me. But I've seen many people like you, and it's not an expression of madness." This is a loss for the person because it strips away the defense

jobs that have seemed meaningless for work that is more connecting, transpersonal, perhaps. One woman is teaching environmental studies in a school; another has become a massage therapist; a third is an acupuncturist.

Intense bonding with the alien beings is likely to occur. What was a purely traumatic experience becomes an extraordinarily strong, meaningful relationship. From fear of looking into the eyes, abductees may permit themselves to look deeply into the large black eyes of the aliens, which can be an overpowering, engulfing experience. One woman described this as "fifty times more powerful than any experience I've had of connecting on earth." Abductees feel this as a mating, bonding relationship that extends beyond themselves.

Quite recently, I have begun to get cases where, in a deep trance, abductees are speaking more positively about their participation in an interspecies mating process. They may feel that this has to do with the creation of new life, relating to a larger purpose or design in the divine order. The interspecies connection appears to fulfill reciprocal needs. One young man said that the beings, with their huge heads, have been too strong on observing and weak in feeling. They look to us for feeling. We, in turn, are opened spiritually by this process. Creation of hybrid babies as a result of the interspecies mating process appears to be an important purpose in abductions, in whatever reality these creatures may reside. The aliens are very interested in watching mothers nurture these hybrid babies, whose characteristics are kind of a mixture of between human beings and the aliens. One young man speaks in terms of overcoming our heart-mind separation through the connection with the alien beings. In his words, "The heart has a mind and an agenda all its own to bring us back home," by which he meant back to God, or the evolution of our consciousness so that we can reconnect with the source of being.

Before concluding, I will say something about how I put this whole phe-

nomenon together, what I have been able to interpret about the structure of this whole realm. The aliens do not necessarily tell us what they are up to unless, as they say themselves, we are ready to hear it. First, this phenomenon shatters our notions of reality more powerfully, I think, than anything of which I am aware. One of the men who consciously recalled an abduction experience ten years earlier said, "It just opened me, and once I was opened I couldn't stand what we were doing on the Earth. It just opened me. It changed my whole perspective about our place in the universe."

An adequate theory of this phenomenon will have to account for a number of disparate matters. It will have to include the fact that these people are otherwise quite ordinary and sane, the connection with UFOs independently observed, the physical phenomena that are associated with it, the fact that it occurs in children as young as two years old, and, of course, the detailed consistency of the abduction experiences.

The way I look at it is as follows. The global crisis is the context in which this is occurring, the destruction of the environment we have been hearing about in various talks during this conference. I do not have to spell out its dimensions to you. That crisis is, at root, a product of the dominant paradigm of the Western mind, particularly the dualism and materialism of this world view. Together they represent a kind of species arrogance, leading us to act as if we were the only intelligence in the universe. We behave as if we were alone on this planet, separate from anything meaningful in the cosmos. The alien abduction phenomenon strikes at virtually every aspect of this fundamental dominant paradigm of Western psychology and science. For example, the UFOs themselves make a mockery of the technology that we are so proud of. They go on and off the radar screens. They appear. They don't appear. Nothing military has any relevance to them, although they seem in some military quarters to be a threat to us. Perhaps you know the

joke that Allen Hynek, a United States Air Force UFO debunker who switched over to become a believer, used to tell. He quotes an air force colonel who said, "Why don't we shoot one of them down and see if they're friendly?" We see the trickster at work here: UFOs exist, they don't exist. They are present in our physical reality; they disappear from our physical reality. Abduction experiences tell us that whatever illusions we have had that we are in control of our world, ourselves, and nature is totally shattered. Abductees are utterly not in control. The aliens come, and they take us when they will. They bring us up into the ship to do what they want with us. All we can do is surrender and try to open up to what is occurring.

Abductees experience the collapse of space-time during their encounters, which is often hard for them to describe. These are not, as you can imagine, usually philosophically sophisticated people. Space and time seem to fold in and disappear. The notion of the space-time universe being the only dimension possible is destroyed. Also, the idea that we are separate, disconnected from others, or from the divine source is transcended. Dualism is overcome by the bonding, the connecting with the alien beings. We realize that we are somehow literally connected in and beyond the universe as we know it.

This phenomenon also commits what seems to me the absolute cardinal sin for the Western mind. If you think about the cosmic demography, as was spelled out to a group of us recently by the Dalai Lama in India, there are three dimensions of being that are known to Eastern traditions. One is the physical, the manifesting embodied world that we know. Then there is the spirit world with form—angels and wood sprites, Shiva and all the gods, goddesses, and spirits of the native peoples. Finally, there is spirit without form. Each tradition has words for that spirit without form, like Holy Spirit in Christianity, the Great Spirit of native Americans, or the *anima mundi*. In Western cultures, we have de-

partments of religion, anthropology, and philosophy to study the second and third domains, but the only one that is officially real for us is the first, the physical, embodied domain. But in most other cultures, the second and third domains are quite real as well. We acknowledge these domains through our object/subject dualism. We say that they exist in people's minds; they are subjective, the product of fantasy. But the cardinal sin for the Western mind, the thing that will absolutely drive my colleagues nuts, and may even get me killed, is to claim that there can be traffic across the barriers between those realms, that is, that that which should stay in the spirit world can cross over and enter the physical world. But that is precisely what this phenomenon does. In other words, it breaks down, or through, the barrier between that which is supposed to belong and stay in the spirit world and the phenomena of the physical world. Now what I am coming to see—and this is a big stretch—is that the higher intelligence, or whatever is at work here, is creating a cosmic corrective, or a cosmic adjustment, in relation to the imbalance our species has created. The only language we understand in Western culture, so restricted in consciousness have we become as embodied creatures, is the language of the physical. So if any intelligence wants to reach us, it must appear or come to us in embodied forms. For the language and domain of the physical is all we can perceive. Another intelligence can

change our consciousness only by manifesting in a physical form. It may be for this reason that the UFOs and the aliens enter our world in the seemingly familiar high-tech style or form that they do.

I want to conclude with two quotes. One is from Rilke. It is from a letter, quoted in a foreword to Peter Matthieson's book, *The Snow Leopard*. Rilke said,

That is at bottom the only courage that is demanded of us. To have courage for the most strange, the most singular, and the most inexplicable that we may encounter. That mankind has in this sense been cowardly has done life endless harm. The experiences that are called visions, the whole so-called spirit world, death, and all those things that are so closely akin to us have, by daily parrying, been so crowded out of life that the senses by which we could have brought them are atrophied. To say nothing of God.

Finally, I want to give the last word to an abductee who spoke at the Massachusetts Institute of Technology conference. Her name is Lynn. She is a young mother who has been abducted with her son, and, perhaps, her husband. She has been told by the aliens that there is a place from which they come, where time does not exist. For her, this domain has become altogether real. "Truth is truth," she said. "It will still be there when science is ready to see it or equipped to validate it."

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Corrections

In Volume 15, Number 4 (Spring 1993), the correct title of Neva Walden's article is **Contributions of Transpersonal Perspectives to Understanding Sexual Abuse**.

In the same issue, the Volume 15, Number 3 index entries should have read:

Falk, R. **Politically Engaged Spirituality in an Emerging Global Civil Society**. 15(3):137-144.

Forest, J. **A Christian Perspective on Spirituality in Light of the Lives of Dorothy Day and Thomas Merton**. 15(3):115-120.

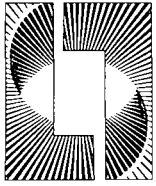
hooks, b. **a life in the spirit: reflections on faith and politics**. 15(3):99-104.

Kaza, S. **Conversations with Trees: Toward an Ecologically Engaged Spirituality**. 15(3):128-136.

Rothberg, D. **Toward a Socially Engaged Spirituality**. (An Introduction.) 15(3):98.

Rothberg, D. **The Crisis of Modernity and the Emergence of Socially Engaged Spirituality**. 15(3):105-114.

Rothberg, D. **A Thai Perspective on Socially Engaged Buddhism: A Conversation with Sulak Sivaraksa**. 15(3):121-127.



LIFEWOR

of David Bohm

River of Truth

WILLIAM KEEPIN

Last autumn, one of the world's greatest contemporary physicists passed away. David Bohm, whose work inspired many people all over the world, died in London on October 27, 1992. Although he had been recovering from a heart attack suffered the previous summer, he was feeling much better at the time, and on October 27 he felt well enough to go to work. Thus, Bohm spent the last day of his life at Birkbeck College, faithfully working with his colleague Basil Hiley, putting the finishing touches on their book that reinterprets the quantum field theory called *Undivided Universe* (soon to be published by Routledge, Kegan, and Paul). As he arrived home from work that day, Bohm had another heart attack and died.

David Bohm's contributions to science and philosophy are profound, and they have yet to be fully recognized and integrated on the grand scale that they deserve. This review attempts to summarize the fascinating contributions that emerged from Bohm's passionate quest for truth and to outline their growing impact on other fields. In what follows, it is not necessary to have a background in physics, although a basic familiarity with science will be helpful. It goes almost without saying that a brief review such as this cannot begin to do justice to the

depth, richness, and rigor of Bohm's thinking. Nevertheless, the essence, beauty, and importance of Bohm's ideas can be conveyed, which is the intent of this review.

Bohm's Early Life

David Bohm was born on December 20, 1917, in Wilkes-Barre, Pennsylvania, a small Polish and Irish mining town. His father was a Jewish furniture dealer, and David's earliest intimations about science came from reading science fiction books as a young boy. No other information about science was available to him in Wilkes-Barre, and young David was fascinated by the dazzling concepts of cosmic forces and vast expanses of space that lie beyond our understanding. He later went to college at Pennsylvania State University, where he graduated with a Bachelor of Science degree in 1939, and then began graduate work in physics at the California Institute of Technology. Later he transferred to the University of California at Berkeley, in order to work with J. Robert Oppenheimer. He completed his doctorate in physics there in 1943.

While still a graduate student in Berkeley, Bohm did pioneering work on plasmas at the Lawrence Berkeley Radiation Laboratory. He discovered that, in a high temperature gas (known

as a plasma), electrons that have been stripped away from atoms do not behave as separate individual particles but rather as part of a larger, organized whole. Vast numbers of electrons would produce effects that were highly organized, as if some organic process were orchestrating their collective behavior. Bohm later reflected that these collective movements, which today are called *Bohm-diffusion*, gave him the impression that the sea of electrons was somehow "alive." This was Bohm's first important discovery in physics, and it hints at the deeper themes of wholeness and interconnectedness that characterize his life's work.

Bohm took a position as assistant professor at Princeton University in 1947. While teaching quantum theory over the subsequent few years, he wrote a textbook entitled *Quantum Theory* (1951), which remains to this day a classic in the field. Upon completing this work, Bohm became acquainted with Albert Einstein, who was also at Princeton at the time. Einstein told Bohm that he had never seen quantum theory presented so clearly as in Bohm's new book, and the two scientists entered into a series of intensive conversations.¹ During the course of this dialogue, Bohm and Einstein discovered much common ground in their mutual appreciation of quantum

mechanics, and together they probed deeply into the theoretical interpretation and ontological significance of quantum theory. These discussions led Bohm to seriously question the prevailing interpretation of quantum mechanics set forth by Danish physicist Neils Bohr and others. Inspired with confidence from this association with Einstein, Bohm embarked upon his own inquiry into the foundations of quantum theory, which led to his unique formulations of it and eventually blossomed into his lifelong quest to understand and describe all of reality.

Around this same time, Bohm demonstrated another important aspect of his character. He had worked with J. Robert Oppenheimer at Berkeley in the early 1940s, and when Oppenheimer and others came under the scrutiny of the ominous McCarthy Committee on Un-American Activities, Bohm was called to testify in 1949. Bohm refused, pleading the Fifth Amendment, and Princeton University informed Bohm that he was never to set foot on campus again. Bohm was arrested and charged with contempt of Congress, went to trial, and was acquitted. Bohm's colleagues sought to have his position at Princeton reinstated, and Einstein reportedly wanted Bohm to serve as his assistant, but Bohm's contract with the university was not renewed. He never again taught in the United States.

Bohm moved to Brazil, where he was professor at the University of Sao Paulo until 1955. There he worked on his second book, *Causality and Chance in Modern Physics* (1957), which is also widely used today in universities. Leaving Brazil in 1955, he spent two years at the Technion in Haifa, Israel, before moving to Bristol, England, where he and a colleague made another original contribution to quantum physics. They showed that an isolated line of magnetic force is able to affect electrons that pass around it without contacting it, a phenomenon known as the *Aharonov-Bohm effect*. In 1961, Bohm took a professorship at the Birkbeck College in London, where he remained for the rest of his life.

For the next thirty years, David Bohm's work in physics focused primarily on the fundamentals of quantum theory and relativity theory and their implications in several other fields. He also searched beyond physics, maintaining a long dialogue with the Indian spiritual master, J. Krishnamurti. Bohm's scientific collaborators included Basil Hiley and David Peat, and his books include *The Special Theory of Relativity* (1966), *Wholeness and the Implicate Order* (1980), and *Science, Order and Creativity* (1987, with David Peat). Most of the important ideas in these works are presented in concise and simplified form below.

Before venturing into the rich intellectual landscape of David Bohm's ideas, it might be helpful to convey some notion of his character. The following description comes from Renée Weber (1986), who interviewed Bohm on numerous occasions and maintained an association with him for several years.

Because of Bohm's international fame, I was quite unprepared for the unusually modest and unassuming, gentle person he turned out to be. He is the paradigm of the committed searcher and researcher, intensely absorbed in his philosophy of the implicate order, on which he lectures all over the world. Bohm looks like the proverbial professor, dressed in casual tweeds and almost always wearing a sweater. He is of average height, with brown hair, hazel eyes, a rather pale face, inward and intellectual in expression, a captivating smile and a quiet, low-keyed manner except on discussing physics, when he becomes animated and almost transformed, punctuating his points with vivid gestures. . . . [He is] someone who—through science—perceived a universe of truth, beauty, meaning, even the good, and who made his perceptions come so convincingly alive to others. . . . David Bohm seemed imbued with a feeling that whatever lies behind nature is holy. (P. 24)

Bohm's Quest for Knowledge

Holomovement and the Implicate Order

Thoughts about Thinking. Before delving into Bohm's substantive contributions to science, I will touch briefly upon his ideas about language and thought. In his penchant for precision,

Bohm analyzed ways that our language deceives us about the true nature of reality. We generally consider ordinary language to be a neutral medium for communication that does not restrict our world view in any way. Yet Bohm showed that language imposes strong, subtle pressures to see the world as fragmented and static. He emphasized that thought tends to create fixed structures in the mind, which can make dynamic entities seem to be static. To illustrate with an example, we know upon reflection that all manifest objects are in a state of constant flux and change. So there is really no such thing as a thing; all objects are dynamic processes rather than static forms. To put it crudely, one could say that nouns do not really exist, only verbs exist. A noun is just a "slow" verb; that is, it refers to a process that is progressing so slowly as to appear static. For example, the paper on which this text is printed appears to have a stable existence, but we know that it is, at all times including this very moment, changing and evolving towards dust. Hence paper would more accurately be called *papering*—to emphasize that it is always and inevitably a dynamic process undergoing perpetual change. Bohm experimented with restructuring language in this dynamic mode, which he called the *rheomode*, in an effort to more accurately reflect in language the true dynamic nature of reality.

A primary tenet of Bohm's thinking is that all of reality is dynamic process. Included in this is the very process of thinking about the nature of reality. If we split thought off from reality, as we are conditioned to do, and then speak of our thought *about* reality, we have created a fragmentary view in which knowledge and reality are separate. Knowledge is then in danger of becoming static and somehow exempt from the conditions of reality. Bohm emphasizes that "a major source of fragmentation is the presupposition that the process of thought is sufficiently separate from and independent of its content, to allow us generally to carry out clear, orderly, rational thinking, which can properly judge this content as correct or incorrect, ra-

tional or irrational, fragmentary or whole, etc.” (Bohm 1980, 18). In his writing and talks, he was fond of referring to A. Korzybski’s admonition that whatever we say a thing is, it is not that. It is both different from that, and more than that (Korzybski 1950).

The artificial separation of process and content in knowledge becomes especially problematic in systems of thought that seek to encompass the totality of existence (as do grand unified theories in physics, for example). As Bohm notes (Bohm 1980), it then becomes quite easy to slip into

the trap of tacitly treating such a view as originating independently of thought, thus implying that its content *actually* is the whole of reality. From this point on, one will see, in the whole field accessible to one, no room for change in the overall order, as given by one’s notions of totality, which indeed must now seem to encompass all that is possible or even thinkable. . . . To adopt such an attitude will evidently tend to prevent that free movement of the mind needed for clarity of perception, and so will contribute to a pervasive distortion and confusion, extending into every aspect of experience. (P. 62)

Bohm goes on to suggest that the movement of thought is a kind of artistic process that yields ever-changing form and content. He intimates that “there can no more be an ultimate form of such thought that there could be an ultimate poem (that would make all further poems unnecessary)” (p. 63). Indeed, imagine a Grand Unified Symphony that encompassed all possible symphonies—past, present, and future—thereby rendering all further musical composition redundant and unnecessary. The idea is preposterous, and yet many physicists, not recognizing their theories as art forms, strive for just such an ultimate scientific theory. In truth, science is essentially a creative art form that paints dynamic portraits of the natural world, using the human intellect as its canvas and the tools of reason as its palette. Bohm was rare among physicists in recognizing this, and he exhibited commensurate humility in the interpretation and extrapolation of his theories.

Wholeness and the Holomovement.
David Bohm’s most significant contri-

bution to science is his interpretation of the nature of physical reality, which is rooted in his theoretical investigations, especially quantum theory and relativity theory. Bohm postulates that the ultimate nature of physical reality is not a collection of separate objects (as it appears to us), but rather it is an *undivided whole* that is in perpetual dynamic flux. For Bohm, the insights of quantum mechanics and relativity theory point to a universe that is undivided and in which all parts “merge and unite in one totality.” This undivided whole is not static but rather in a constant state of flow and change, a kind of invisible ether from which all things arise and into which all things eventually dissolve. Indeed, even mind and matter are united: “In this flow, mind and matter are not separate substances. Rather they are different aspects of one whole and unbroken movement” (in Hayward 1987, 25). Similarly, living and nonliving entities are not separate. As Bohm puts it, “The ability of form to be active is the most characteristic feature of mind, and we have something that is mind-like already with the electron.” Thus, matter does not exist independently from so-called empty space; matter and space are each part of the wholeness.

Bohm calls this flow the *holomovement*. The component terms *holo* and *movement* refer to two fundamental features of reality. The *movement* portion refers to the fact that reality is in a constant state of change and flux as mentioned above. The *holo* portion signifies that reality is structured in a manner that can be likened to holography. As is well known, holography is a relatively new type of photography, in which the photographic record is not an image of the object (as in normal photography) but rather a set of interference patterns made by splitting a laser beam, and then reflecting one component of the beam off the object before reuniting the two component beams at the photographic plate. When laser light is shined on the hologram, a full three-dimensional image of the object appears, as opposed to the usual two-dimensional photograph. What is especially remarkable

about a hologram is that if laser light is shined on just a small part of it, the entire image still appears, although in less refinement and detail. Thus, each small portion of the hologram contains information about the entire image, whereas in a normal photograph, each small portion of film contains a correspondingly small part of the image. As laser light is shined on successively smaller portions of the hologram, the entire image is still preserved, but it becomes progressively more “fuzzy.”

In analogy to holography but on a much grander scale, Bohm believes that each part of physical reality contains information about the whole. Thus in some sense, every part of the universe “contains” the entire universe—a very remarkable claim that at first seems, perhaps, implausible. Yet we have all experienced a glimmer of this in the following commonplace example. Imagine yourself gazing upward at the night sky on a clear night, and consider what is actually taking place. You are able to discern structures and perceive events that span vast stretches of space and time, all of which are, in some sense, contained in the movements of the light in the tiny space encompassed by your eyeball. The photons entering your pupil come from stars that are millions of light-years apart, and some of these photons embarked on their journey billions of years ago to reach their final destination, your retina. In some sense, then, your eyeball contains the entire cosmos, including its enormous expanse of space and immense history in time—although, of course, the details are not highly refined. Optical and radio telescopes have much larger apertures, or “holographic plates,” and consequently they are able to glean much greater detail and precision than the unaided eye. But the principle is clear, and it is extraordinary to contemplate.

Evidence for this kind of holographic structure in nature has emerged recently in the burgeoning field of chaos theory and its close cousin, fractal geometry. The term *chaos theory* is somewhat of a misnomer because the new discoveries are more about order

than chaos. It has been found that most nonlinear systems embody a multitude of self-similar structures that are nested within one another at different scales. A well-known example is the Mandelbrot set, which is a fractal that appears in computer representations much like a black bug, with an infinity of similar "bugs" embedded at innumerable smaller scales. Each of these "bugs" replicates the whole, in a sense, and contains information about the entire nonlinear process.

Putting the holographic structure of reality together with its perpetual dynamism, we get the holomovement: an exceedingly rich and intricate flow in which, in some sense, every portion of the flow contains the entire flow. As Bohm puts it, the holomovement refers to "the unbroken wholeness of the totality of existence as an undivided flowing movement without borders" (Bohm 1980, 172). The physical evidence that forms the basis for postulating the holomovement comes primarily from Bohm's interpretation of physics, especially quantum theory, which I will examine further.

The Implicate Order. The holomovement is, admittedly, a rather subtle concept to grasp; indeed, it is generally invisible to us. Bohm proposes that the holomovement consists of two fundamental aspects: the *explicate order* and the *implicate order*. He illustrates the concept of the implicate order by analogy to a remarkable physical phenomenon. Consider a cylindrical jar with a smaller concentric cylinder (of the same height) inside it that has a crank attached, so that the inner cylinder can be rotated while the outer cylinder remains stationary. Now fill the annular volume between the two cylinders with a highly viscous fluid such as glycerine, so that there is negligible diffusion. If a droplet of ink is placed in the fluid, and the inner cylinder is turned slowly, the ink drop will be stretched out into a fine, thread-like form that becomes increasingly thinner and fainter until it finally disappears altogether. At this point, it is tempting to conclude that the ink drop has been thoroughly mixed into

the glycerine, so that its order has been rendered chaotic and random. However, if the inner cylinder is now rotated slowly in the opposite direction, the thin ink form will reappear, retrace its steps, and eventually reconstruct itself into its original form of the drop again. Such devices have been constructed, and the effect is quite dramatic.

The lesson in this analogy is that *a hidden order may be present in what appears to be simply chance or randomness*. When the ink form disappears, its order is not destroyed but

der, and the visible droplet that is unfolded at any given moment is the explicate order.

Bohm views the nature of physical reality in analogous fashion to this example. An electron is understood to be a set of enfolded ensembles, which are generally not localized in space. At any given moment, one of these ensembles may be unfolded and localized, and the next moment, this one enfolded and is replaced by another than unfolds. If this process continues in a rapid and regular fashion in which each unfoldment is localized adjacent

The manifest objects that we regard as comprising an ordinary reality are only the unfolded projections of the much deeper, higher dimensional implicate order, which is the fundamental reality.

rather is *enfolded* in the glycerine. When the drop is reconstructed, its order is unfolded and becomes explicit. To develop this analogy further, imagine that a whole series of droplets is enfolded, as follows. The first drop is enfolded with n turns. Next, a second drop is placed in the glycerine, and it is enfolded after another n turns (the first drop is now enfolded $2n$ turns). Then a third drop is placed in the glycerine, which is enfolded after n turns (the first drop is now enfolded $3n$ turns, and the second drop $2n$ turns). Continuing in this way, a whole series of droplets is enfolded in the glycerine. When the direction of rotation is reversed, the drops unfold one at a time, and if this is done quickly enough, the effect is that of a stationary ink drop or "particle" subsisting for a time in the moving fluid. One can also imagine that each successive drop is placed at an adjacent position in the glycerine, so that when the inner cylinder is reversed, the appearance is that of a particle moving along a continuous path. In either case, the sequence of enfolded ink droplets in the glycerine constitutes the implicate or-

to the previous one, it gives the appearance of continuous motion of a particle, to which we humans have given the name *electron*. Yet there is no isolated particle, and its apparent continuous motion is an illusion generated by the rapid and regular sequence of unfoldings (much as a spinning airplane propeller gives the appearance of a solid disk). As Bohm puts it, "... fundamentally, the particle is only an abstraction that is manifest to our senses. *What is* is always a totality of ensembles, all present together, in an orderly series of stages of enfoldment and unfoldment, which intermingle and inter-penetrate each other in principle throughout the whole of space" (Bohm 1980, 183-84).

Moreover, at any stage of this process, an ensemble may suddenly unfold that is very different from the previous one, which would give the appearance in the explicate order of the electron suddenly jumping discontinuously from one state to another. This offers a new way of understanding what lies behind the well-known quantum mechanical behavior of electrons as they jump discontinuously from one quan-

tum state to another. Indeed, what we call *matter* is merely an apparent manifestation of the explicate order of the holomovement. This explicate order is the surface appearance of a much greater enfolded or implicate order, most of which is hidden. Contemporary physics and, indeed, most of science deals with explicate orders and structures only, which is why physics has encountered such great difficulty in explaining a variety of phenomena that Bohm would say arise from the implicate order.

The radical implications of Bohm's implicate order take some time to fully grasp, especially for Western minds that have been steeped in the Newtonian-Cartesian paradigm of classical physics that still dominates contemporary science. For example, it might be tempting to assume that the implicate order refers to a subtle level of reality that is secondary and subordinate to the primary explicate order, which we see manifest all around us. However, for Bohm, precisely the opposite is the case: the implicate order is the fundamental and primary reality, albeit invisible. Meanwhile, the explicate order—the vast physical universe we experience—is but a set of “ripples” on the surface of the implicate order. The manifest objects that we regard as comprising ordinary reality are only the unfolded projections of the much deeper, higher dimensional implicate order, which is the fundamental reality. The implicate and explicate orders are interpenetrating in all regions of space-time, and each region enfolds all of existence, that is, everything is enfolded into everything. As Bohm (1980) explains,

[I]n the implicate order the totality of existence is enfolded within each region of space (and time). So, whatever part, element, or aspect we may abstract in thought, this still enfolds the whole and is therefore intrinsically related to the totality from which it has been abstracted. Thus, wholeness permeates all that is being discussed, from the very outset. (P. 172)

Fullness of Empty Space. Bohm's understanding of physical reality turns the commonplace notion of “empty space” completely on its head. For

Bohm, space is not some giant vacuum through which matter moves; space is every bit as real as the matter that moves through it. Space and matter are intimately interconnected. Indeed, calculations of the quantity known as the zero-point energy suggest that *a single cubic centimeter of empty space contains more energy than all of the matter in the known universe!* From this result, Bohm (1980, 191) concludes that “space, which has so much energy, is *full* rather than empty.” For Bohm, this enormous energy inherent in “empty” space can be viewed as theoretical evidence for the existence of a vast, yet hidden realm such as the implicate order.

Causal Interpretation of Quantum Theory. The foregoing concepts of holomovement and the implicate order were originally developed by Bohm as a result of his theoretical investigations in quantum theory. Indeed, Bohm's entire life's work was largely shaped by his contributions to quantum theory, which are briefly reviewed here. When Bohm began work in quantum theory, he accepted the “Copenhagen interpretation” of it developed by Niels Bohr, Werner Heisenberg, Wolfgang Pauli, and others. The still-dominant Copenhagen interpretation says two basic things: (1) reality is identical with the totality of observed phenomena (which means reality does not exist in the absence of observation), and (2) quantum mechanics is a complete description of reality; no deeper understanding is possible. In effect, this says that observable phenomena are the whole of reality; and any speculation about a deeper underlying reality is meaningless. Bohr stated it unequivocally: “*There is no quantum world.* There is only an abstract quantum description” (in Herbert 1985, 17). In this understanding, quantum mechanics provides nothing more or less than a set of statistical rules for connecting observable phenomena.

In 1931, John von Neumann published *The Foundations of Quantum Theory*, which remains to this day the mathematical bible on that topic. In this book, von Neumann offered a mathematical proof that an ordinary

classical reality could not underlie quantum theory. For over twenty years, “von Neumann's proof” stood as a mathematical corroboration of the Copenhagen interpretation. However, in 1952, David Bohm did the impossible and uprooted this “proof” by constructing a model of the electron with classical attributes whose behavior matched the predictions of the quantum theory. In this model, the electron is viewed as an ordinary particle, with one key difference: the electron has access to information about its environment. To derive this model, Bohm began with the Schrodinger equation, which is the central mathematical formula of quantum physics. Using elegant mathematics, Bohm effectively partitioned this equation into two parts, or terms: a classical term that essentially reproduces Newtonian physics, and a nonclassical term that he calls the *quantum potential*. The classical term treats the electron as an ordinary particle, as in classical physics. The nonclassical quantum potential is a wave-like term that provides information to the electron, linking it to the rest of the universe. The quantum potential is responsible for the well-known wave-particle duality and all the other bizarre phenomena for which quantum theory has become famous. Indeed, the nonlocal character of quantum reality—as implied by Bell's theorem and empirically observed in the renowned experiments of Alain Aspect²—may be viewed as plausible evidence for the actual existence of an entity symbolized by the quantum potential.

Bohm was convinced that there is much more going on in quantum mechanics than meets either the eye, the brain, or the laboratory instruments of the physicist. He challenged the prevailing Copenhagen interpretation with his *causal interpretation*, arguing that as-yet-unknown factors (or “hidden variables”) were causing the seemingly inexplicable phenomena observed in quantum experiments. But how and where might these causal factors operate? Bohm pointed out that the smallest detectable distance in physical experiments is about 10^{-17} centimeters (cm), whereas the smallest distance beyond which space no longer has any

meaning is an extremely tiny 10^{-33} cm. This leaves an unknown realm that spans sixteen orders of magnitude in relative size, which is comparable to the size difference between our ordinary macroscopic world and the smallest detectable physical distance (10^{-17} cm). Having no empirical knowledge of this realm, we cannot dismiss the possibility that causal factors could be operative in this realm.

The key feature of the causal interpretation is the quantum potential, which is a wave-like information field that provides a kind of guidance to the electron. Bohm invokes the analogy of an airliner that changes its course in response to navigational radio signals. The radio waves do not and *cannot* provide the energy required to change course; rather they provide *active information* to which the airliner responds by changing course under its own power. The electron responds in an analogous manner to the quantum potential. This could explain the notorious mystery of the “collapse” of the wave function, which occurs as a seemingly random event in the laboratory and is taken by the Copenhagen interpretation to mean that reality does not exist until observed. The Schrodinger wave function describes an infinity of possible outcomes, and the information provided by the quantum potential could cause the electron to “choose” one outcome over all the others. Hence, information alone could cause the “collapse” of an infinity of possibilities into a single manifestation. This is reminiscent of Gregory Bateson’s (1972, 382–84) description of fertilization, in which the unfertilized frog’s egg contains an infinity of unmanifest potentialities, and the fertilizing sperm provides information that “collapses” the egg’s vast potentiality into a single manifest embryo.

Bohm rigorously demonstrated that the causal interpretation predicts physical results identical to those predicted by the Copenhagen interpretation, but with a very different understanding of the underlying deep structure. For example, he shows mathematically that the well-known Heisenberg uncertainty principle may be a crude description of the average statistical behavior of

causal variables, and that Planck’s “constant” may not be constant over very small intervals of time or space. Hence, the uncertainty principle may not be an absolute limit on the precision of measurement, as generally believed, but could rather be an expression of the incomplete degree of self-determination that characterizes all quantum mechanical entities. In other words, the uncertainty principle may be a limit that is imposed by our ignorance of causal variables.

The notion of a “potential” is commonplace in physics; for example, the gravitational potential of the Earth tells about the potential energy available at each point in the gravitational field. However, the quantum potential differs in that it has no known physical source, which is one reason that physicists object to it. Even more unacceptable, *the action of the quantum potential depends only on its form and not on its intensity*, which means that its effect does not diminish with increasing separation in space or time. The form of the quantum potential gives information that is communicated instantaneously, which appears to violate Einstein’s limit of the speed of light for travel of signals. Thus, the quantum potential could be seen as providing information from a *meta*-physical realm, in the sense that it is beyond ordinary space and time altogether. Though Bohm did not emphasize this aspect in his early work during the 1950s, it became evident later in his concept of the implicate order. Indeed, the theoretical impetus for the implicate order was the quantum potential, which is a mathematical version of the implicate order in the Schrodinger equation.

Order and Randomness

An inquiry into the nature of order was a central theme that persisted throughout David Bohm’s work. To understand why Bohm undertook a study of order, it is important to step back a moment and survey the evolution of his thinking.

Evolution of Bohm’s Thinking. Bohm began with the troubling concern that the two pillars of modern

physics—quantum mechanics and relativity theory—actually contradict each other. Moreover, this contradiction is not just in minor details but is very fundamental, because quantum mechanics requires reality to be discontinuous, noncausal, and nonlocal, whereas relativity theory requires reality to be continuous, causal, and local. This discrepancy can be patched up in a few cases using mathematical “renormalization” techniques, but this approach introduces an infinite number of arbitrary features into the theory that, Bohm points out, are reminiscent of the epicycles used to patch up the crumbling theory of Ptolemaic astronomy. Hence, contrary to widespread understanding even among scientists, the “new physics” is self-contradictory at its foundation and is far from being a finished new model of reality. Bohm was further troubled by the fact that many leading physicists did not pay sufficient attention to this discrepancy.

Seeking a resolution of this dilemma, Bohm inquired into what the two contradictory theories of modern physics have in common. What he found was undivided wholeness. Bohm was therefore led to take wholeness very seriously, and, indeed, wholeness became the foundation of his major contributions to physics, as well as his distinctive epistemological style of scientific inquiry. In this respect, Bohm’s developmental process was similar to Einstein’s in creating relativity theory: Einstein took *seriously* the experimental observation that the speed of light is the same in all reference frames. This—when coupled with the premise that the laws of physics should be the same in all reference frames—required that space and time could no longer be absolute; hence came the theory of relativity. No one before Einstein had been willing to contemplate something so radical.

Bohm’s postulate of undivided wholeness is equally radical, but for a different reason: it questions the prevailing assumptions about order and fragmentation. Just as Einstein was the first physicist to seriously question our understanding of space and time, Bohm is the first physicist to seriously

question our understanding of order. The implications are far reaching, because the very essence of science is a quest for natural laws of general applicability, and the *sine qua non* for such laws is the existence of natural order. Hence, to inquire into the nature of order is to inquire into the foundations of science itself.

In his characteristic way, Bohm went well beyond the bounds of physics in this quest. During the 1960s, he made a systematic inquiry into the nature and function of order in art, and he maintained a seven-year correspondence with American artist Charles Biederman. His correspondence with Biederman focused in particular on order in the paintings of Monet and Cezanne, and this was the seed for the insights described in the next paragraph. Bohm concluded at the time that the order in a painting is equivalent to the order in quantum theory, to which he gave the name the *implicate order*.

Topology of Order. Bohm's contributions on order are complex and sophisticated, and they are worthy of thorough study that goes quite beyond what can be included here. Nevertheless, even a cursory glimpse of his thinking is very worthwhile. Bohm proposed that through our perceptions of similarities and differences, we create categories that are the precursors to order. For example, because some creatures transport themselves through air while others do so through water, the categories of birds and fish are created. Each of these categories is refined further, based on perception of finer differences. So we create the categories of sparrows, crows, hawks, eagles, and so on, as well as the categories of minnows, trout, salmon, and sharks. Now observe that the difference between a minnow and a trout is similar to the difference between a sparrow and an eagle (being in this case the difference of relative size). This introduces a notion that Bohm calls *similar differences*, which can be used to define an order that cuts across various categories of experience. A striking example would be Helen Keller's legendary flash of insight, when

she suddenly recognized the essential *similarity* of different experiences of water. A different kind of order could be defined by considering, for example, the similarity between a young bird and a young fish, which is *different* from the similarity between an aging bird and an aging fish. This observation defines an order in terms of *different similarities*. These are simple examples of concepts that Bohm used to develop a sophisticated topology of order in physics. For example, Bohm showed that Newtonian mechanics is encompassed within the definition of order through similar differences, and Newton's legendary tale about the apple and the moon was essentially a perception that the order of similar differences in the motion of the falling apple is the same as the order of similar differences in the orbit of the moon. Hence, Newton's central insight was one of perceiving a *unity of order* underlying the outward manifestation of two seemingly unrelated dynamical systems.

In addition to the above concepts, Bohm developed a way to measure the complexity of order. To illustrate this with the simplest of examples, consider the infinite sequence of digits 2525252525. . . . This sequence is said to have order of second degree, because *two* items of information (the digits 2 and 5) are required to fully specify the sequence. By the same token, the sequence 264926492649. . . has order of fourth degree, because four digits are required to specify it (namely, 2, 6, 4, 9). Now consider the sequence 601324897. . . . What is its order? This is difficult to say. At first glance, it appears to be an arbitrary sequence of digits because there is no discernible order. However, as the sequence continues, we might discover that it is really the following sequence: 601324897601324897601324897. . . in which case it has ninth degree, because the first nine digits are repeated forever. Or, we might find out that it is a sequence of hundredth degree, or millionth degree. Or, the sequence might never exhibit any discernible order whatever, in which case we say it is a sequence of infinite degree. Such a degree we usually think of as a *random*

sequence. In any case, notice that we must know the *context* to determine the *order* of the sequence.

Randomness Dependent on Context. The foregoing example hints at a much deeper insight that Bohm developed in a very general context: randomness is not an intrinsic property of the order of a system, but rather *randomness depends on context*.³ This is a subtle but very important point, which is likely to have powerful consequences in science for decades to come. An example will illustrate the idea. Consider a "random number generator," which is a type of computer program that generates a sequence of digits that appears to be random. If such a program is left running day and night, it will generate a sequence that has an order of extremely high degree (or practically "infinite"). Such computer programs work in different ways, but they all share an important characteristic: the process used to generate the sequence is a simple deterministic process.⁴ If the program is run again with the same starting number, it will produce exactly the same sequence. Hence, the program that generates this sequence has an order of very low degree. Now comes the essential point. In the context of the computer program, the succession of numbers is determined by a simple order of low degree and, therefore, the order in the resulting numbers is also of the same low degree—which is far from random. However, in a narrower context that includes only the numbers themselves but not the computer program—that is, not the "meta" level—the numbers cannot be distinguished from a purely random sequence, and so the order of the numbers is essentially random.

From this, it follows that randomness depends on context, a result that Bohm demonstrated consistently in many examples throughout science. Randomness has played an essentially ontological role in science, being deemed intrinsic to certain natural processes. However, Bohm's findings imply that randomness may vanish whenever the context is deepened or broadened, meaning that randomness

can no longer be viewed as fundamental. Bohm's insights into randomness and order in science are summarized in the following statements (Bohm and Peat 1987).

Randomness is. . . assumed to be a fundamental but inexplicable and unanalyzable feature of nature, and indeed ultimately of all existence. . . .(P. 134)

[However,] what is randomness in one context may reveal itself as simple orders of necessity in another broader context(P. 133)

It should therefore be clear how important it is to be open to fundamentally new notions of general order, if science is not to be blind to the very important but complex and subtle orders that escape the coarse mesh of the "net" of current ways of thinking. (P. 136)

Order in Science. The implications of this are potentially very far reaching for all of science. The new field of chaos theory has rigorously demonstrated that in virtually all nonlinear deterministic systems (which characterize most scientific models of physical processes), there is a domain in which the system behaves as if it were random, even though it is actually deterministic. The epistemological implications of this are sweeping: in any discipline of science, when scientists describe the behavior of a natural system as *random*, this label may not describe the natural system at all but rather their degree of understanding of that system—which could be complete ignorance. Random empirical data provide no guarantee that the underlying natural process being investigated in *itself* random. Thus, while "randomness" may usefully characterize the empirical *observations* of the natural process, this reveals little about the actual nature of the process. Hidden orders or subtle variables may be operating at a level that is beyond the ability of current instruments or concepts to detect. The far-reaching implications of this are evident when one considers, for example, the possibility that the "random mutation" that underpins Darwin's theory of natural selection may soon have to be regarded as just one arbitrary hypothesis among many. The observed randomness of biological mutations gives no assurance that unknown subtle processes

are not operative—hidden beyond the veil of today's empirical science. Such unknown forces could include such "taboo" possibilities as teleological factors, divine design, Sheldrake's morphogenetic fields, and so on.

Bohm's conclusion about order in science is unequivocal and sweeping: the prevailing mechanistic order in science must be dropped. Mainstream physics—from Newton's laws to the most advanced contemporary quantum relativistic field theory—all utilize the same mechanistic order, symbolized by the Cartesian coordinate system.

Bohm's greatness is due in significant measure to his frequent habit of carrying his burning questions well beyond science, leaving behind everything he knew in the search for new clues and insights.

This reflects a particular mechanistic order that has characterized physics for literally centuries, and it is this order that Bohm challenges directly. Science must open itself to far more sophisticated and subtle forms of order, including what Bohm calls generative orders, which are orders that generate structure. The implicate order is perhaps the most important example of a generative order.

Dialogues with Krishnamurti

In any authentic scientific quest, obstacles of tremendous challenge are confronted periodically that make it very difficult to see how to proceed further. Indeed, if it were otherwise, great science would be much more prevalent than it is. Excruciating trials and tribulation characterize these junctures, which occur all the more frequently when working at the foundational levels of science (rather than with downstream corollaries and theorems, which occupy the time of most scientists). When Bohm encountered such obstacles, he responded in a way that is unusual for scientists, and especially rare among physicists:

Bohm carried his quest beyond not only physics but beyond the bounds of science altogether. Bohm's greatness is due in significant measure to his frequent habit of carrying his burning questions well beyond science and deep into other epistemological realms, leaving behind everything he knew in the search for new clues and insights. In so doing, Bohm exemplified his commitment to wholeness, not only in his theories, but in his epistemology.

The most significant example of this process was Bohm's extensive dia-

logues with the Indian spiritual master and mystic, J. Krishnamurti. Bohm was first exposed to Krishnamurti's teaching when his wife, Saral, brought home to him one of Krishnamurti's books from the library because she noticed that it centered on the observer/observed relationship, which is so crucial in quantum theory. Bohm and Krishnamurti eventually developed a close friendship, and they carried on an intensive dialogue over several years that entailed deep explorations of the ultimate meaning and nature of thought, insight, existence, death, truth, reality, intelligence, and so on.

Truth beyond Reality. The Bohm-Krishnamurti dialogue set a profound precedent in being one of the first enduring dialogues between a leading Western physicist and a world-renowned Eastern spiritual master. Their discussions probed deeply into various dimensions of human knowledge and experience, including in-depth discussions of the limitations of human thought, the nature of insight and intelligence beyond thought, as well as many other topics such as

truth, reality, death, existence, fragmentation, and the future of humanity. In exploring the distinction between truth and reality, for example, some of the jewels of insight that emerged may be summarized as follows (which, in the spirit of Bohm and Krishnamurti themselves, should perhaps be read slowly and contemplatively to be absorbed). There is a gulf between truth and reality; they are not the same thing. Illusion and falsehood are certainly part of reality, but they are not part of truth. Truth includes all that is; it is one. Reality is conditioned and multiple. Truth is beyond reality; it comprehends reality, but not vice versa. Reality is everything; truth is no-thingness. We need truth, but our minds are occupied with reality. We seek security in reality, but authentic security comes only in complete nothingness, that is, only in truth. The seed of truth is a mystery that thought cannot encompass; it is beyond reality.

Such insights are characteristic of Krishnamurti's teachings. Indeed, perhaps the greatest impact of these dialogues on Bohm was a cultivated understanding of the limitations of human thought, as well as a deep realization of the existence of pure awareness beyond thought, wherein lies the source of all true insight, intelligence, and creativity. Bohm also had a number of meetings with other spiritual masters, most notably the Dalai Lama. The influence of spiritual teachings are apparent in all of Bohm's later work, and, indeed, they are perhaps particularly significant in his formulation of the superimplicate order, which will be discussed shortly. Bohm's work in physics is unique in that he built a spiritual foundation into his theories that gives them a profound philosophical and metaphysical significance while rigorously preserving their empirical and scientific basis.

On Dialogue. A highly fruitful outcome of these dialogues was the cultivation of dialogue itself as a path to greater wisdom and learning. Bohm refined dialogue to a creative art, and his teachings have been published in book entitled *On Dialogue* (1990). Indeed, so influential was his example

that several groups have been formed around the world to engage in "Bohmian dialogue," and a Dialogue Project is thriving at the Massachusetts Institute of Technology.⁵ Bohm believed that the fragmentation and breakdown in communication in our culture are reinforced by our ways of thinking, and that through free-form dialogue it is possible to reestablish a genuine and creative collective consciousness. Dialogue differs from ordinary conversation, where people generally hold a point of view that they feel compelled to defend. In dialogue, participants give serious consideration to views that may differ substantially from their own, and they are willing to hold many conflicting possibilities in their minds simultaneously and to accept what *is*, however uncomfortable. By this means, people in dialogue can together create the possibility for new insights and creativity to emerge, which would not be possible by merely thinking on their own.

To give a brief example of Bohm's dialogue with Krishnamurti, the following extract (Krishnamurti and Bohm 1985, 149-53) on the holomovement and death seems particularly appropriate, in view of Bohm's recent passing (as well as Krishnamurti's in 1986).

K: What is movement, apart from movement from here to there, apart from time—is there any other movement?

B: Yes.

K: There is. . . .Is there a movement which in itself has no division? . . . Would you say it has no end, no beginning?

B: YesCan one say that movement has no form?

K: No form—all that. I want to go a little further. What I am asking is, we said that when you have stated there is no division, this means no division in movement.

B: It flows without division, you see.

K: Yes, it is a movement in which there is no division. Do I capture the significance of that? Do I understand the depth of that statement? . . . I

am trying to see if that movement is surrounding man?

B: Yes, enveloping.

K: I want to get at this. I am concerned with mankind, humanity, which is me. . . .I have captured a statement which seems so absolutely true—that there is no division. Which means that there is no action which is divisive.

B: Yes.

K: I see that. And I also ask, is that movement without time, et cetera. It seems that it is the world, you follow?

B: The universe.

K: The universe, the cosmos, the whole.

B: The totality.

K: Totality. Isn't there a statement in the Jewish world, "Only God can say I am."

B: Well, that's the way the language is built. It is not necessary to state it.

K: No, I understand. You follow what I am trying to get at?

B: Yes, that only this movement *is*.

K: Can the mind be of this movement? Because that is timeless, therefore deathless.

B: Yes, the movement is without death; in so far as the mind takes part in that, it is the same.

K: You understand what I am saying?

B: Yes. But what dies when the individual dies?

K: That has no meaning, because once I have understood there is no division. . . .

B: . . . then it is not important.

K: Death has no meaning.

B: It still has a meaning in some other context.

K: Oh, the ending of the body; that's totally trivial. But you understand? I want to capture the significance of the statement that there is no division, it has broken the spell of my darkness, and I see that there is a movement, and that's all. Which means death has very little meaning.

B: Yes.

K: You have abolished totally the fear of death.

B: Yes, I understand that when the mind is partaking in that movement, then the mind *is* that movement.

K: Yes, I would say that everything is. . . One can never say then, “I am immortal.” It is so childish.

B: Yes, that’s the division.

K: Or, “I am seeking immortality.” Or “I am becoming.” We have wiped away the whole sense of moving in darkness. . . .

B: Just going back to what we were saying a few days ago: we said we have the emptiness, the universal mind, and then the ground is beyond that.

K: Would you say beyond that is this movement?

B: Yes. The mind emerges from the movement as a ground, and falls back to the ground; that is what we are saying.

K: Yes, that’s right. Mind emerges from the movement.

B: And it dies back into the movement.

K: That’s right. It has its being in the movement.

B: Yes, and matter also.

K: Quite. So what I want to get at is, I am a human being faced with this ending and beginning. [This] abolishes that.

B: Yes, it is not fundamental.

K: It is not fundamental. One of the greatest fears of life, which is death, has been removed.

B: Yes.

Superimplicate Order and Beyond

The hologram analogy gives only a limited view of the implicate order because it is a metaphor derived from a classical treatment of the transformations within a light wave. To delve more deeply into the implicate order, Bohm developed a causal interpretation of the quantum field theory.

Superquantum Potential. Quantum field theory is the most general and sophisticated form of quantum physics. The primary physical reality is assumed to be a continuous field, and the discrete, particle-like quanta are viewed as mere epiphenomena. Hence, rather than taking the particle as the

starting point, the field is taken as the fundamental reality. In parallel, rather than postulating a quantum potential that acts on the particle, Bohm postulates a *superquantum potential* that acts on the field. This superquantum potential is far more subtle and complex than the quantum potential, yet its basic principles are similar, and its net effect is to modify the field equations so as to make them nonlinear and nonlocal. Hence, the superquantum potential is responsible for the perception of discrete quanta because it can “sweep” energy from the entire

“ripples” and discontinuities in the field that our instruments can observe, which are created by the effect of the superimplicate order on the implicate order. In this understanding, the particle is no longer a basic concept, since the primary reality is the implicate and superimplicate orders.

With the superimplicate order, Bohm reached his final and deepest interpretation of the solution of the Schrodinger equation for a particle. He had begun in his youth with the Copenhagen interpretation, in which the particle does not exist, which he

Bohm’s model of reality consists of three levels of manifestation: the explicate order, the implicate order, and the superimplicate order—with the latter two constituting the bulk of reality.

field into a tiny region of space, thereby creating the appearance of a “particle,” or of a quantum jump in a particle’s energy state. In this way, a continuous field can behave as if it were made up of discrete elementary particles. This differs from the particle model described earlier, in which wave-particle duality was explained as the effect of the quantum potential on the particle. Here, wave-particle duality is understood to be an effect of the superquantum potential on the continuous field.

Superimplicate Order. This leads to the most general formulation of Bohm’s theory, presented in his 1987 book *Science, Order, and Creativity* (coauthored by David Peat). Bohm proposed that above and beyond the implicate order, there is also a *superimplicate order*. In the example of quantum field theory just described, the implicate order is just the field itself, and the superimplicate order is the superquantum potential, which is a much more subtle and complex implicate order than the field. Once again, the explicate order is merely the set of

had always found unsatisfactory. Then in his initial formulation of the implicate order, he supposed that the particle does exist more or less as an ordinary particle, but that it behaves in a strange manner because it receives information through the quantum potential, which is a wave-like information field independent of space and time. As Bohm put it, “The electron, in so far as it responds to a meaning in its environment, is observing the environment. It is doing exactly what human beings are doing” (in Weber 1986, 69).

Then finally, in the superimplicate order, the particle does not exist except as an abstraction in our minds or an epiphenomenon perceived by our instruments. What *exists* is the holomovement, which in this case consists of the continuously changing quantum field (or implicate order), and the superquantum potential (or superimplicate order). The “particle” (explicate order) is merely a discontinuous ripple effect created by the effect of the superquantum potential on the field.

Naturally, given a second implicate order, it is easy to imagine third,

fourth, and higher implicate orders. Indeed, Bohm suggested that a whole hierarchy of superimplicate orders might be envisioned, although their effects would be increasingly subtle and therefore difficult to observe or analyze. These higher implicate orders would feed back to the original explicate order, which could produce complex dynamics over time, allowing creativity and novelty to unfold.

To clarify these concepts with an analogy, consider a video game. The first implicate order corresponds to the screen, which is capable of producing an infinite variety of explicate forms or images. The images on the screen, which constitute the explicate order, can be regarded as manifestations of the first implicate order. The second implicate order corresponds to the computer, which provides the information that organizes the various forms in the screen, or first implicate order. Finally, the player of the game represents a third implicate order, whose actions and inputs organize the second implicate order. This creates a closed loop, and creative possibilities can emerge over time.

Eternal Order. In sum, Bohm's model of reality consists of a dynamic holomovement that has three basic realms or levels of manifestation: the explicate order, the implicate order, and the superimplicate order—with the latter two realms constituting the bulk of reality. The possible forms for the superimplicate order (or orders) may be highly complex, subtle, and difficult to conceive in terms of ordinary concepts. For example, Bohm speaks of an eternal order, which is a superimplicate order that lies beyond the domain of time. As such, the eternal order is neither static nor everlasting but is outside of time altogether, and it is ever creative. As this creativity filters down to lower implicate orders, it tends to become manifest in time; that is, it enters a temporal order. In Bohm's words, "the eternal order is not properly to be regarded as static, but rather as eternally fresh and new. As attention goes to the consideration of succession, however, it begins to get directed toward the tem-

poral or secular order" (Bohm and Peat 1987, 225).

The quantum potential, the super-quantum potential, the implicate order, and superimplicate orders are all names given to realms that are invisible to ordinary perception, yet for Bohm, they constitute the true structure of reality. For Bohm, the holomovement is the nature of reality, and the implicate order and superimplicate order are its primary structural features, with the explicate order being the surface appearance.

Superimplicate orders may be involved in innumerable physical and natural processes. In evolution, for example, superimplicate orders could guide the emergence of a bird, which must not only develop wings but aerodynamically adapted feathers, appropriate musculature, shifted center of gravity, lighter bones and appropriate changes in metabolism—all at the same time. Otherwise, any one of these changes by itself would likely decrease chances of survival. Observe that the superimplicate order appears to be analogous to archetypes or to Sheldrake's morphogenetic fields. All of these terms are just labels for subtle orders or forces that remain hidden to empirical science, and hence they are resisted by mainstream scientists, sometimes vehemently. However, just because they have not been directly observed does not mean that they do not exist. In his postulate of the implicate order, Bohm clearly demonstrates how such realms could exist and be very fundamental, while being missed altogether by mainstream science in its focus on the explicate order only.

Thought and Meaning

Bohm inquired deeply on many levels and subjects that went quite beyond his field of science. He developed a poignant critique of thought, which was influenced by his association with Krishnamurti, and he also came to believe that meaning is a fundamental element of existence. These ideas are briefly explored below, mostly in his own words.

Critique of Thought. Bohm was unusual among scientists in questioning

the primary epistemological engine for all scientific inquiry: human thought itself. He stressed that *thought creates structures and then pretends they are objective realities independent of thought*. Thus our "objective reality" is largely a construct of thought, and not recognizing this leads us to endless circles of self-deception—in science as well as in life in general. Indeed, Bohm felt that much personal and collective suffering has its roots in human thought. In his words (1982),

[T]hought is really a very tiny little thing. But thought forms a world of its own in which it is everything. . . . It reifies itself and imagines there's nothing else but what it can think about itself and what it thinks about. Therefore thought will now take the words, "the nonmanifest" and form the idea of the nonmanifest; and therefore, thought thinks the manifest plus the nonmanifest together make up the whole, and that this whole thought is now a step beyond thought, you see. But in fact, it isn't. This nonmanifest (that thought imagines) is still the manifest, by definition, because to imagine is also a form of thought. (P. 63)

For this reason, Bohm felt that it is vital to go beyond thought, for which mediation is one possible path.

[M]editation would even bring us out of all [the difficulties] we've been talking about. . . . [S]omewhere we've got to leave thought behind, and come to this emptiness of manifest thought altogether. . . . In other words, meditation actually transforms the mind. It transforms consciousness. (Pp. 103–104).

Ontology of Meaning. As Bohm's work matured, he placed increasing emphasis on the importance of *meaning*, and he came to regard matter, energy, and meaning as three major constituents of our existence (in Rimpoche 1992, 354).

From the point of view of the implicate order, energy and matter are imbued with a certain kind of significance which gives form to their over-all activity and to the matter which arises in that activity. The energy of mind and of the material substance of the brain are also imbued with a kind of significance which gives form to their over-all activity. So quite generally, energy enfolds matter and meaning, while matter enfolds energy and meaning. . . . But also meaning enfolds both matter and energy. . . . So each of these basic notions enfolds the other two. . . .

This implies, in contrast to the usual view, that meaning is an inherent and essential part of our overall reality, and is not merely a purely abstract and ethereal quality having its existence only in the mind. Or to put it differently, in human life, quite generally, meaning *is* being (Pp. 90–93).

Impact and Implications of Bohm's Work

Bohm's theories have had a powerful impact in many fields ranging from psychology to brain physiology to philosophy. A brief review of these implications are given below, beginning with the curious reaction to Bohm's ideas in his own field of physics.

Cool reception in physics

Bohm's theories never received a full, serious reading in the mainstream physics community, to his considerable disappointment. His work met with reactions ranging from lack of understanding or interest to dismissal or even suspicion. There are several reasons for this, which tell much about the state of science today.

Bohm lamented that physics is primarily concerned with prediction and control, rather than with truth. Because his theories offered little to enhance prediction and control, many scientists were simply not interested in them. Indeed, Bohm's interpretation of quantum mechanics was criticized because it did *not* yield results that differ from orthodox quantum theory, which makes it difficult to test against conventional interpretations. In this sense, Bohm's theory was charged with failing to satisfy Popper's (1969) falsifiability criterion for a legitimate scientific theory. Yet this very criticism could be leveled at *any* of the interpretations of quantum theory. There are at least eight different interpretations, each of which is consistent with the Schroedinger wave equation and the experimental results of quantum mechanics.⁶ Which of these theories is "correct," if any, is not a question that can be settled by resorting to the experimental evidence. Indeed, as Bohm points out, "all the available interpretations of quantum theory, and indeed of any other physical theory, depend fundamentally on implicit or

explicit philosophical assumptions, as well as on assumptions that arise in countless other ways from beyond the field of physics (Bohm and Peat 1987, 102).

Thus there is no *scientific* reason for preferring one interpretation over the others. As John A. Wheeler put it, "No theory of physics that deals only with physics will ever explain physics" (in Wilber 1982, 183).

Penchant for Parsimony. Another objection to Bohm's ideas is that they are not "parsimonious"; that is, they introduce unnecessary concepts like wholeness and holomovement, which cannot be observed in the laboratory. Bohm responds that rigid adherence to Occam's razor is overrestrictive and could obscure a deeper reality that may underlie laboratory observations. To illustrate his point, Bohm considers the example of a fish in an aquarium that is observed by means of two television cameras at right angles to each other. The observed images on the two television monitors give the appearance of distinct, correlated entities, but these observations are not the reality; rather they are merely different aspects of a deeper underlying unity—in this case, the fish itself.

There are some curious ironies in this objection to Bohm. Surely it is more parsimonious to assume that reality is a single, undivided whole until *proven* fragmented, rather than the other way around. Yet today's physics takes reality to be fragmented into some 10^{80} extremely tiny particles, each of which is further divided into untold numbers of elementary particles. This can be considered "parsimonious" only because the majority of physicists are committed to an extreme form of what could be called instrumental positivism, which says, in effect: Reality *is* that which is observed and measured by laboratory instruments; what cannot be measured does not exist. Even more ironic, despite the mandatory allegiance to fragmentation required of all practicing physicists, not one of them actually believes it—else they would not search in earnest for the Grand Unified Theory. In any case, were they to

seriously contemplate Bohm's perspective, they might discover that they have been striving to unite what was never really separate, and that Occam's razor argues for Bohm's understanding of undivided wholeness, rather than against it.

Matter and Consciousness

When Bohm's *Wholeness and the Implicate Order* was published in 1980, the "holographic model" quickly became a lively topic of discussion and debate among new paradigm thinkers. One of the most enduring issues was the implications of Bohm's theories for the relationship between matter and consciousness. Do mind and body correspond to the implicate an explicate orders? Can consciousness tap directly into the implicate order?

Bohm's own reflection on these questions seems to have evolved over time. Early on, in response to Wigner and others who proposed that consciousness should be included in quantum theory, Bohm said that his aim was to describe the quantum potential without bringing in the conscious observer in any fundamental role. Later, Bohm came to believe that material and informational processes are inextricably intertwined together in all things, and he used the term *soma-significance* to refer to this intrinsic interpenetration. As he explains (in Bohm and Peat 1987, 185–86 and Weber 1986, 215),

Consciousness is much more of the implicate order than is matter. . . . Yet at a deeper level [matter and consciousness] are actually inseparable and interwoven, just as in the computer game the player and the screen are united by participation in common loops. In this view, mind and matter are two aspects of one whole and no more separable than are form and content.

Deep down the consciousness of mankind is one. This is a virtual certainty because even in the vacuum matter is one; and if we don't see this it's because we are blinding ourselves to it.

Materialism and idealism. A corollary of this view is that the philosophical distinction between materialism and idealism disappears (in Weber 1986):

The question is whether matter is rather crude and mechanical or whether it gets more and more subtle and becomes indistinguishable from what people have called mind. . . . [In] idealism form is primary. One suggestion is that the form enters into an energy which gives rise to a determinate activity and eventually to a determinate structure of matter. . . . I'll extend Gregory Bateson's definition of information to say that it's a difference of form that makes a difference of content and meaning. This form is carried out as meaning and energy. If you read a printed page, which is a form, the meaning gives rise to an energy from which you act. Therefore we could say that the distinction of materialism and idealism is eroded, it gradually dissolves. . . .

Pure idealism would reduce matter to an aspect of mind. Hegel was an example of that. Pure materialism would reduce mind to an aspect of matter, and of course that's what we see in a great deal of modern science. My view does not attempt to reduce one to the other any more than one would attempt to reduce form to content. . . . Every content is a form and every form is at the same time a content. (Pp. 150–51)

Applications of Holographic Model. Bohm's holographic metaphor has found fruitful application in brain physiology and human consciousness. Neurosurgeon Karl Pribram developed a model of the brain based on holographic principles (1971). Pribram was trying to understand various features of the brain, especially the observed result that the function of memory storage is not localized in the brain. Pribram's controversial holographic model accounts for seemingly mysterious properties of the brain such as the vast storage capacity, the imaging capability of the sensory system, and certain features of associative recall. Another striking application of the holographic model is in the spectrum of human consciousness. Psychiatrist Stanislav Grof (1985, 1988) has developed a cartography of human consciousness that summarizes his extensive research into nonordinary states of consciousness. He has noted a close correspondence between the holomovement and his research findings. More than thirty years of clinical research and observation have led Grof to the viewpoint that "each of us is everything," meaning that every human being has potential ac-

cess to all forms of consciousness (Grof 1990). His data provide a kind of phenomenological evidence for a holographic model of consciousness.

Science and Spirit

Thomas Kuhn has eloquently shown that scientists' preference for one paradigm over another is determined by a host of nonscientific, nonempirical factors. As noted earlier, Bohm also points out that there is no scientific evidence that argues for the dominant fragmented scientific world view over Bohm's hypothesis of undivided wholeness. However, while *scientific* evidence offers no help in this regard, other forms of evidence may, indeed, shed some light on the matter. Mystical and spiritual teachings down through the ages have spoken about the fundamental interconnectedness of all things and that the microcosm somehow contains the macrocosm. A beautiful and legendary image of this is the "jeweled net of Indra" in the Avatamsaka Sutra, in which the universe is represented as an infinite network of pearls, each of which reflects all the others. Fa-Tsang, the founder of Hua-yen Buddhism in the seventh century, represented the relation of the "One to the many" by placing a candle in the center of a room full of mirrors, and he represented the relation of the "many to the One" by placing a polished crystal next to the candle. While these and other images do not constitute experimental evidence of the kind that science considers admissible, they do represent a consistent body of "experiential evidence" from a long line of deeply perceptive traditions down through the ages. So if we broaden the permissible epistemology beyond the bounds of science, we find ample precedent for a unitive holographic understanding of reality. From this perspective, there is, indeed, evidence for preferring Bohm's holomovement over other views of reality that dominate science today.

Buddhism and Physics. The Tibetan Master Sogyal Rinpoche (1992) has noted striking parallels between Bohm's model and the three *kayas* in Buddhist ontology.

Could this possibly suggest that the role of *meaning*, as [Bohm] explains it, is somehow analogous to the Dharmakaya, that endlessly fertile, unconditioned totality from which all things rise? The work of *energy*, through which meaning and matter act upon one another, has a certain affinity to the Sambhogakaya, the spontaneous, constant springing forth of energy out of the ground of emptiness, and the creation of *matter*, in David Bohm's vision, has resemblances to the Nirmanakaya, the continuous crystallization of that energy into form and manifestation. . . . The deepest parallel between David Bohm's ideas and the bardo teachings is that they both spring from a vision of wholeness. (P. 354)

Bohm (in Weber 1986) himself sounds indistinguishable from a spiritual master at times: "When we come to light, we are coming to the fundamental activity in which existence has its ground. . . . Light is the potential of everything. . . . This ocean of energy could be thought of as an ocean of light" (155).

Of course we must remember that mystical experience ultimately transcends intellectual experience, theories, and insights. The concepts and descriptions of superimplicate order and the holomovement may sound similar in some ways to descriptions of mystical experience. However, these correlations in language court the danger of equating *concepts* relevant to mystical experience with the experience itself. Ken Wilber (1982) cautions against this with his inimitable wit: "To be sure, there are similarities of language—the holographic blur ("no space, no time") sounds like a mystical state. It also sounds like passing out" (180).

The implicate order has been likened to an ultimate realm beyond matter and thought that is the wellspring of true knowledge and wisdom. Bohm and Peat (1987) emphasize that the suspension of "explicate" activity is essentially the same in Taoism, Yoga, Buddhism, and Krishnamurti's teachings (255–57). From an ontological point of view, the superimplicate orders may be seen as symbolic of a realm of Mystery, the Unknown, the Unseen, as referred to in the world's spiritual and mystical traditions.

When Krishnamurti asked Bohm what is the point of the mystery, Bohm (Krishnamurti and Bohm 1987) gave the following succinct reply:

Of the mystery? I think you could see it like this: that if you look into the field of thought and reason and so on, you finally see it has no clear foundation. Therefore, you see that "what is" must be beyond that. "What is" is the mystery. (P. 46)

Bohm's Legacy

David Bohm has shown that physics is rigorously consistent with a radical

call science. The single most important feature of this reality is "unbroken wholeness in flowing movement." What is remarkable about Bohm's hypothesis is that it is also consistent with spiritual wisdom down through the ages. Moreover, Bohm shows that there is no concrete evidence in science to favor its fragmented world view over the unbroken, flowing holomovement he proposes; it is a matter of individual beliefs and predilections.

Within physics, Bohm has demonstrated that one way to interpret the Schroedinger equation in quantum field

in accounting for a wide range of truths that stem from a diverse spectrum of epistemologies. If the greatness of scientific work can be measured by its depth and general applicability in a multiplicity of fields, then David Bohm is clearly one of the greatest physicists of this century.

Bohm was deeply troubled by the suffering in the world, and his vision called for a complete restructuring of our fragmented collective consciousness in a new Renaissance (Bohm and Peat 1987).

What is needed today is a new surge that is similar to the energy generated during the Renaissance but even deeper and more extensive; . . . the essential need is for a "loosening" of rigidly held intellectual content in the tacit infrastructure of consciousness, along with a "melting" of the "hardness of the heart" on the side of feeling. The "melting" on the emotional side could perhaps be called the beginning of genuine love, while the "loosening" of thought is the beginning of awakening of creative intelligence. The two necessarily go together (Pp. 265, 271).

Genuine love and creative intelligence were, indeed, the hallmarks of David Bohm's life work. Through his mind and heart, he has given us a magnificent gift, which he offers to us in the grace of yet another gift. Bohm cautions us not to take *any* ideas—including his own—too literally. Indeed, David Bohm (1982) encourages us all to go far beyond theories of any kind.

This whole construction of the implicate order is a kind of bridge [that] leads to somewhere beyond. . . . However, if you don't cross the bridge and leave it behind, you know, you're always on the bridge. No use being there! The purpose of a bridge is to cross. . . . Or, more accurately, we could perhaps think of a pier, leading us out into the ocean and enabling us to dive into the depths. . . . [To] linger on the implicate order would then. . . . [be] like the fellow who stays on the pier and never dives into the depths of the ocean (Pp. 103-104).

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The great strength of science is that it is rooted in actual experience; the great weakness of contemporary science is that it admits only certain types of experience as legitimate.

reinterpretation of reality that goes quite beyond the revolutionary new physics of the early twentieth century. Contemporary scientists may ignore Bohm's work (as many have done), but they cannot escape its implications. Bohm approached science as a quest for truth, and, in this spirit, he unpacked and revealed the epistemological foundations of science (in his study of order), and he utilized these insights to conceive a profound ontological hypothesis (the holomovement and implicate orders). This hypothesis is rigorously grounded in the experimental evidence of physics, and as such it is not just a new way of thinking *about* physics, it *is* a new physics; that is, it is an entirely new way of understanding the fundamental nature of the physical universe, as glimpsed through the data and laws of physics.

As such, Bohm's world view has profound implications for the whole of science. Prior to Bohm, science had generally regarded the universe as a vast multitude of separate interacting particles. Bohm offers an altogether new view of reality to underpin the entire body of theory and data that we

theory is to introduce a wave-like information field called the superquantum potential, whose action transcends all of space in a timeless unity. This is not to say that Bohm has discovered God in the Schroedinger equation; it is to say that he has found theoretical precedent *within* physics for a subtle realm that lies *beyond* physics, as usually conceived. This does not prove anything, but it does show that physics can be rigorously consistent with the existence of higher realms of truth, order, existence, and eternity.

The great strength of science is that it is rooted in actual experience; the great weakness of contemporary science is that it admits only certain types of experience as legitimate. Bohm responded to this by carrying his quest for knowledge not only deeply *into* science, but also far *beyond* science. He did not restrict himself to laboratory data or accepted theoretical methods—though he was master at both. His passion for truth carried him wherever it might possibly find nourishment, and his theories consequently reflect tremendous breadth and depth

NOTES

1. Einstein's opinions of Bohm's work reported in M. Talbot, *The Holographic Universe* (New York: HarperCollins, 1991), 39.

2. For a detailed account, see Nick Herbert, *Quantum Reality* (New York: Doubleday, 1985).

3. Bohm defines a *random order* as one having the following three characteristics: (1) it is of infinite degree, (2) it has no significant correlations or stretches of suborder of low degree, and (3) it has a fairly constant average behavior. David Bohm and David Peat, *Science, Order, and Creativity* (London: Ark, 1987), 126-27.

4. For example, one such program operates by starting with a given eight-digit number, then multiplying this number by itself, which gives a huge number, and then selecting the middle eight digits. This new eight-digit number is then cycled through the same process, and the result is a sequence of digits that appear to have no order in relation to each other.

5. See W. Isaacs, "Dialogue: The Power of Collective Thinking," *Systems Thinker* (April) 1993.

6. See, for example, Nick Herbert, *Quantum Reality* (New York: Doubleday, 1985).

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IN MEMORIAM

The Sufi mystic poet Rumi characterized death as the “wedding day with eternity.” In honor of David Bohm’s recent ‘wedding,’ the following poem by Rumi is offered.

When on the day of my death
You carry my bier,
Do not imagine my heart has remained in this world.
Do not weep over me,
Do not say, “Oh, how sad, how sad!”
That would be tumbling into the trap of the devil,
And *that* would be sad.

When you see my corpse laid out,
Don’t cry out, “He has gone, he has gone!”
For union and meeting will be mine then, forever.
And as you lower me into my tomb.
Do not say “Farewell, farewell!”
For the tomb veils from us the union of Paradise.
My decline you have seen,
Now discover my soaring ascent.

Would setting cause any harm to the sun, or moon?
To you, my death seems a setting,
But really, it is dawn. Dawn!
Does the tomb seem a prison to you?
It is the liberation of the soul.
Has any seed been sown in the Earth
That has not one day flowered?
Why doubt man also is a buried seed?

What bucket would go down empty
without being filled?
The spirit is like Joseph,
Would he complain of the well?
Keep your mouth closed over here
To open it over there.
So that, beyond space, may
Thrill your song of victory.

From a new translation by Andrew Harvey, presented during a lecture given at the California Institute of Integral Studies in San Francisco on June 9, 1993.

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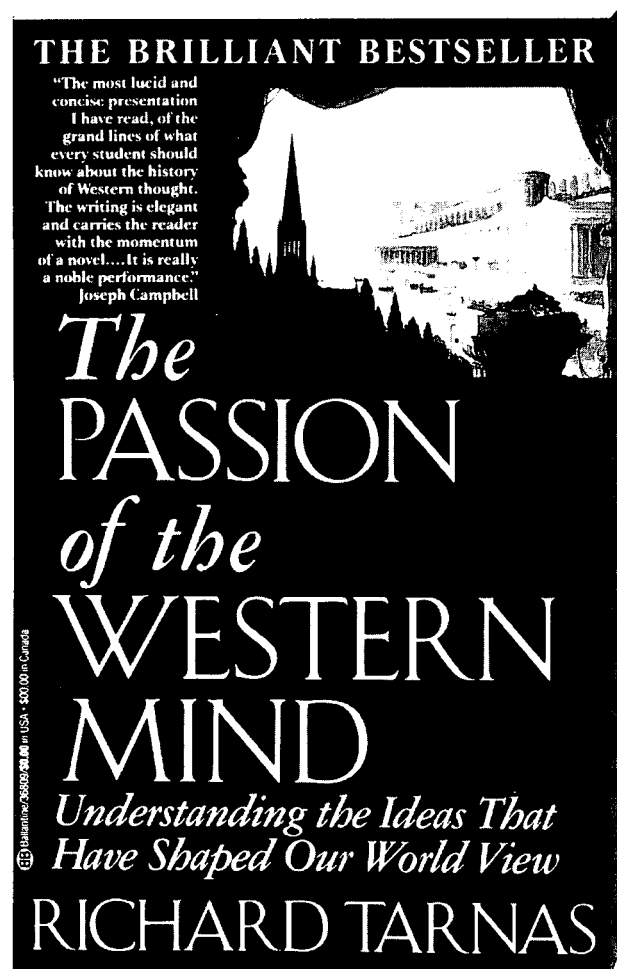
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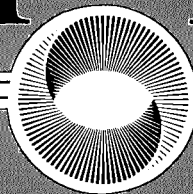
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NEXT ISSUE



The Ecological Imperative

Over the past fifteen years during which *ReVision* has consistently addressed the growing ecological crisis, there has been an increasing awareness of the scope and urgency of our problems and some mobilization of concerned citizens—but in many ways, the state of our planet has deteriorated. We have added more than a billion people; this in spite of the fact that some two hundred million people have died of starvation and malnutrition, a horrendous death rate equivalent to a holocaust every four months. Our environment is under increasing ecological strain such that forests have shrunk, pollution has increased, untold thousands of species have become extinct, and ozone depletion now threatens wildlife, agriculture, and health.

With so many needs, so much to be done, and so many arenas requiring help, where do we start? While each of us must choose our own unique form of contribution and the arena in which we make it, the hope is that we can inspire others to the awakening and welfare

of our planet, and to work in diverse and complementary ways to preserve it. To this end, the next issue of *ReVision* collects and presents together for the first time a selection of articles on ecology, spirituality, and social responsibility previously published in *ReVision*. These articles represent the best and most thoughtful reflections over the years of leaders in the race between consciousness and catastrophe. The distinguished contributors to this issue are **Thomas Berry**, an expert on the emerging ecological age in earth history and bioregions; **Fritjof Capra**, the eminent physicist and systems theorist; **Philip Novak**, the noted ethicist, theologian, and philosopher; **Jack Kornfield**, teacher of Vipassana Buddhist meditation; and **Roger Walsh**, one of the pioneers of transpersonal psychology.

In addition, this issue will provide reviews of current books and journals in the field of ecology, including a major review by **Ralph Metzner** of **Theodore Rozak's** new book, *Ecopsychology*.

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