NOETIC SCIENCES REVIEW

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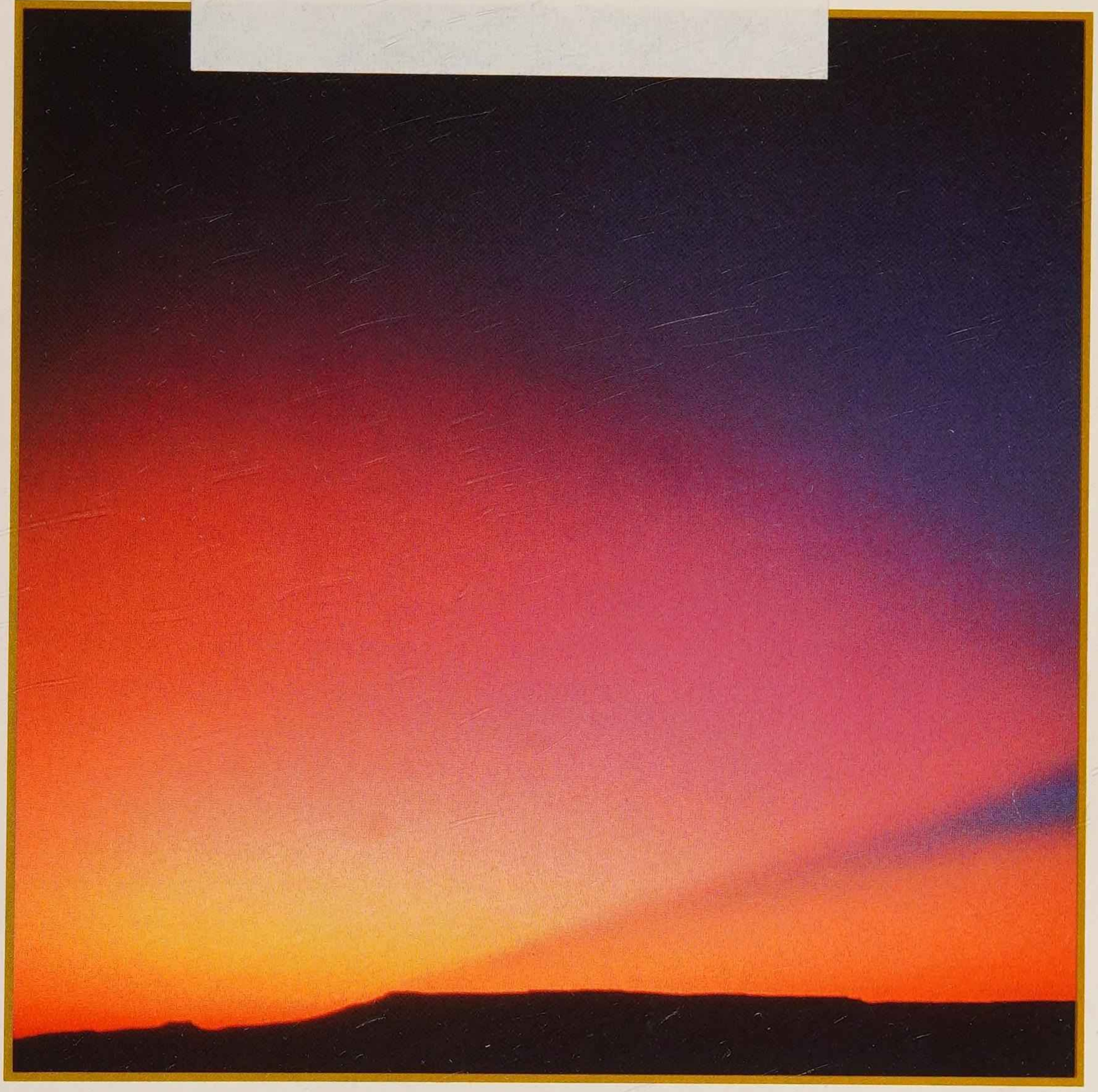

AUTUMN

20th Anniversary Issue
1973-1993

STATEMENT OF PURPOSE

The Institute of Noetic Sciences, founded in 1973, is a research foundation, an educational institution, and a membership organization. The word Noetic is derived from the Greek word nous, meaning mind, intelligence, or ways of knowing. Therefore, "noetic sciences" are those that study the mind and its diverse ways of knowing in a truly interdisciplinary fashion.

As a research foundation . . .

We provide seed grants for leading-edge scientific and scholarly research. Our intention is that results from these pilot studies will encourage other funding sources to generate larger research projects. In this way, important new ideas gain legitimacy.

As an educational institution . . .

We organize lectures, sponsor conferences, and publish books, research reports and monographs by leading scientists, philosophers, and scholars. We also publish a quarterly *Review* and quarterly *Bulletin* for our membership. Our annotated catalog service includes extensive collections of books and tapes. We support and stimulate individuals and organizations interested in discovering and legitimizing new belief systems which embrace human potential for healing, creativity, and wholeness.

As a membership organization . . .

We offer opportunities for individuals to blend knowledge of scientific and scholarly research with their own experiences. Members receive regular Institute publications and are invited to participate in study groups, lectures, and field research. Our travel program offers exploration of diverse cultures around the globe. Through these activities, we are creating and bringing legitimacy to a vision of a humane, sustainable, and peaceful world.

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I don't have a message.

My message is my life.

—Gandhi

Celebrating the Past Two Decades

Foreword by Winston O. Franklin, Executive Vice-President, and Barbara McNeill, Director of Communications

When we first began thinking about this anniversary issue of the *Noetic Sciences Review,* we realized that the occasion for celebration was more than simply 20 years of the Institute of Noetic Sciences (IONS). We are part of a much larger field of consciousness development, globally as well as locally. We are taking this opportunity, therefore, to celebrate the broader movement of consciousness and community with a selection of articles covering its long lineage, highlighting some of its major achievements, and featuring some of its pioneering contributors.

We spoke in the early days of the "world problematique"–the inevitable clash of human and natural forces. On the one side we saw a rapidly growing world population, a Western lifestyle to which many aspired, dependent on excessive use of energy and natural resources, the by-products of which pollute the environment. On the other side we began to confront the finite limits of that precious, blue-white sphere which astronaut Edgar Mitchell saw so vividly from his lunar orbit–and which inspired the founding of IONS. During these past 20 years, that futuristic scenario has become an everyday reality for us all.

Institute President Willis Harman, among others, has pointed out that it will require nothing short of a "global mind change" to address these issues. The seriousness of the present-day situation is boldly told in one of our major articles by *The Ecologist* editor Edward Goldsmith, who suggests a worldview of ecology as "The Way" to a sustainable future. In an accompanying article, Sy Safranski struggles with what may be the central question (speaking personally, it is for us), "How can *I* change *my* daily behavior so as to be part of the solution, rather than adding to the 'world problematique'?"

Perhaps more than any other single individual, the late Brendan O'Regan, Vice-President for Research, shaped the course of IONS during our first 20 years. His contributions in the field of mind-body health extended far beyond our institutional boundaries. Brendan was the consummate networker, and provided much of the infrastructure that a new field needs in order to cross-pollinate, and for researchers to feel supported and legitimated. To recount that story, we invited members of our Scientific Advisory Board for the Inner Mechanisms of the Healing Response research program to come together and share their reflections. This program was supported from the outset by the Fetzer Institute, a number of private sponsors, and smaller family foundations.

One of the most exciting developments in the mind-body health area in recent years is the bold leadership provided by the Fetzer Institute. Fetzer president Rob Lehman describes the opportunities that he foresees "to enrich and expand Western medicine" in coming years. The Inner Mechanisms of the Healing Response program provided much of the grist for both the Fetzer Institute-sponsored television series, *Healing and the Mind with Bill Moyers*, and our own television series, *The Heart of Healing*. The broadcast of these two series in our twentieth year is one of the most satisfying anniversary gifts the universe could have given us!

In all the years we've been publishing the *Noetic Sciences Review,* the single most requested reprint item has been Rachel Remen's "On Defining Spirit". To celebrate our anniversary, and as a gift to members who want to read it again, Rachel's perceptive words grace this issue's centerfold. In the same spirit of creating sacred spaces, Patricia Hopkins and Sherry Ruth Anderson, authors of *The Feminine Face of God,* offer suggestions for starting a women's circle for prayer and meditation–a community for exploring the sacred in women, and a place from which "right action" can emanate.

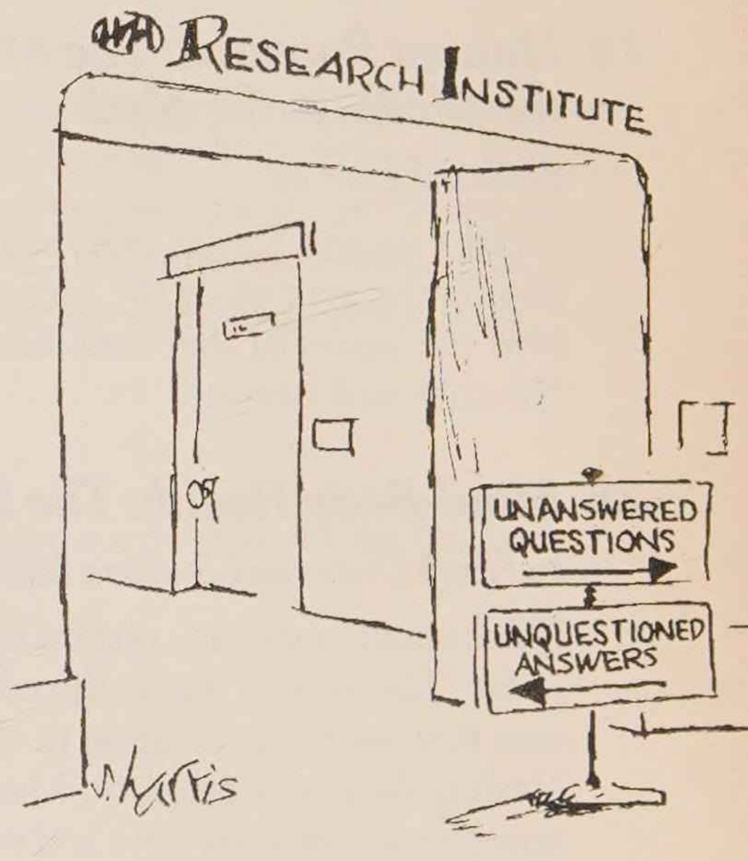
We are reminded in our lead article by William James scholar and Harvard historian Eugene Taylor that the quest for a new community dedicated to human potential is not unique to our time. Rather, it is part of what he terms "the visionary tradition" which has been an immensely important source of inspiration and guidance for Western–and particularly American–society, not for 20 years, but for many decades. Part of a long lineage of associations, largely outside formal religious denominations, the visionary tradition has sought to bring together science and spirituality, inner and outer experience, and to transform the world through individual transformation of consciousness.

In another feature article, George Leonard recalls an occasion when he said to Esalen-founder Michael Murphy "How about a Human Potential Movement?" Esalen's unique brand of leadership subsequently emerged to shape much of the movement that was to affect millions of people.

Long-time staff researcher and membership director Tom Hurley recounts how IONS' membership has grown from a small but loyal group of supporters to a large and still-expanding membership (more than 31,000). He talks about how the "three legs of the Institute"–research, publications and membership–reflect a growing societal awareness of the relationships between individual consciousness and community well-being.

When we lose touch with our connections to each other and to nature, too often we make decisions and take actions that adversely affect the environment and our near and distant neighbors. Native American scholar Vine Deloria Jr. suggests that we may learn some of the lessons needed for "global mind change" by paying attention to the knowledge and wisdom of tribal peoples.

Much of Willis Harman's attention in recent years has been focused on what he perceives as the most fundamental issue of this "world problematique". We have been so awed by the contributions of science and technology to our Western standard of living that we have almost unconsciously come to view the world through the filter of Western science. We easily forget that science was conceived and designed to represent merely one dimension of our reality: physical processes. The article "How Do We Know What We Think We Know?" is a statement Willis drafted, after discussions with a group of distinguished scientific colleagues, as a challenge to the prevailing scientific epistemology, a statement subsequently endorsed by a number of leading scientists. In the final article, "Toward An Adequate Science of Consciousness", Willis reflects–on the occasion of his 75th birthday–on the connection of the scientific worldview to the major political and social issues of our day, and consequently why the business of science is, increasingly, everyone's business.



Cartoon courtesy of Sidney Harris

A great number of people have contributed to our growth over the last two decades. We can't thank each of them individually but this special anniversary issue is a way to acknowledge our collective contributions. It is a record of the journeys we have travelled together and a guidepost to where we might be going. Let's walk on together. □

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"When the people lead . . ." The Institute is not just the staff and board members; it is a growing network reaching out to include all 31,000-plus members who share our vision. As a network focal point, the Institute emphasizes the importance of membership for setting directions and agendas.

NOETIC SCIENCES REVIEW

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Number 27

THE FUTURE

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by Sherry Ruth Anderson and Patricia Hopkins

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INSTITUTE OF NOETIC SCIENCES 1973-1993

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Our Roots:

The American Visionary Tradition

by Eugene Taylor

"Tongo zenshu," says the Zen monk–sudden realization followed by a lifetime of gradual achievement. The totality that we see in an instant is also the vision of a path upon which we are about to walk. But, while the ecstatic vision of God, the bliss consciousness of Atman, to the quiet emptiness of satori may guide us, with the passage of time, the actualization of personal destiny can often seem like a long, arduous and lonely journey. We are then confronted with the great spiritual question, "Where is my real home, and with whom do I truly belong?" To answer, in all our subsequent wanderings we constantly search for both relation and place, for spiritual compatriots who have also chosen to turn within, and for that chimerical resting place of the soul which we hope to call home.

Now, this question of spiritual lineage must apply to institutions as well. It seems appropriate, therefore, on the twentieth anniversary of the Institute of Noetic Sciences, to acknowledge the historic context of the organization and its mission. Where have we come from? Where might we be going? But I use the term history in a special sense. Normally we would think of the Institute's genealogy in terms of the outward chronological facts of its birth, the people involved, the events that occurred, the programs launched. I presume that these will have been told elsewhere. Instead, I propose to sketch in broad strokes my view of the inner spiritual history within which I believe the noetic sciences belong.

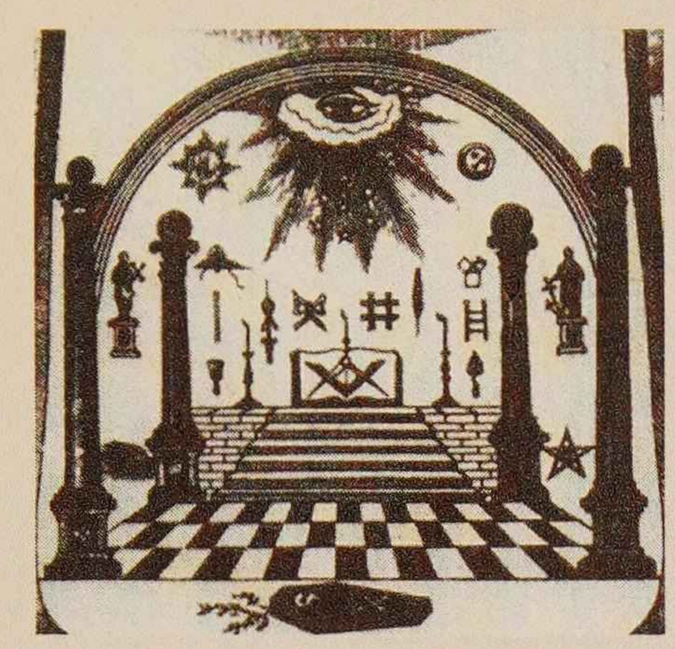
First of all, it may be surprising for readers to discover that noetic sciences can be placed within the context of a much larger visionary tradition in the West. The visionary way of interpreting experience has certainly existed since the prehistory of human civilization, but its recent past has become obscured and in many ways it seems to have disappeared. My view is that during the last two thousand years it has continued to develop, but in the shadow of the Judeo-Christian, Greco-Roman, Western European, and Anglo-American definition of reality. Beyond the religious law of the Jewish Pharisees, the mystical Essenes flourished. Beside Aristotle's logic was Plato's analogy of the cave. Alongside early Christianity grew up Gnosticism and Neo-Platonism. Behind the Talmud was the Kaballah. As a counterpoint to the religion of the Mullahs was Sufism. In the shadow of Catholicism were the Rosicrucians and the Freemasons. Next to astronomy was astrology, alongside chemistry was alchemy, by mathematics was numerology. As opposed to the dominant culture, which has been outward, rational, reductionistic, dominated by the senses, and driven by the letter of the law, this alternative tradition has been inner, contemplative, ascetic, and mystical, believing itself to be the true aristocracy of the spirit from which the letter of the law was derived.

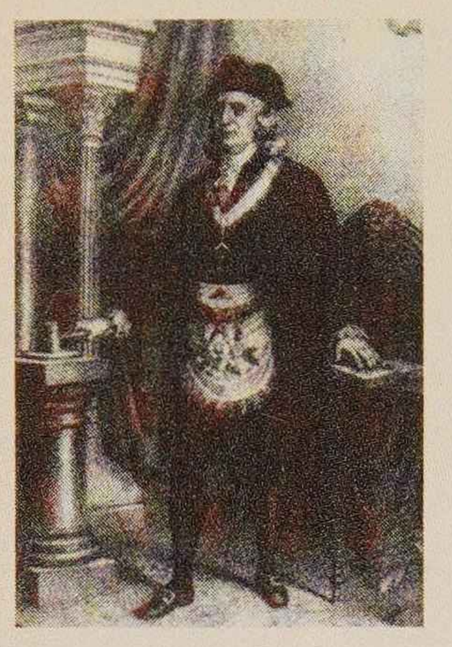
Because American society has tended to both drive and reflect the larger patterns of Western civilization, a shadow culture reflecting this visionary tradition has developed behind the American mainstream as well. This mainstream has been defined largely by the rationalist tradition of the European Enlightenment, which has brought us Bach, Beethoven, and Brahms, elegant French wines, the Sistine Chapel, the concept of the university, and those two great behemoths struggling for control of human consciousness: Christianity and science. In contrast, surrounding this visible tradition is a welter of ethnic subcultures represented by the mythic beliefs, folk tales, and religious practices of European immigrants, which have sometimes clashed but also not infrequently melded with such diverse forms as American Indian cosmology, Latino culture, the African American slave traditions, and Orientalism.

In my opinion, these two great streams of Enlightenment science and popular ethnic subcultures have merged into a deeper and wider current which I would like to characterize as a uniquely American folk consciousness–a folk psychology in the visionary tradition. Neither all science nor all religion, this tradition has been and remains distinctly psychological in nature. It is intensely spiritual but not allied with institutional Christianity. Rather, as a shadow culture of Judeo-Christian Protestantism it freely savors the religiosity of many ethnic traditions, and it represents more what has been called the secularization of the religious impulse. At the same time it is not related to a science of behavior or to the type of modern cognitive science that passes for psychology. It is rather an inwardly oriented psychology of self-realization, driven by distinct archetypes, led by specific individuals, marked by its own progression of historic events.

Opposite page:
"The Quilting Party", circa 1854-75, artis unknown. Photo courtesy of the Abby Aldrich Rockefeller Folk Art Center, Williamsburg, Virginia.

Such a psychology is characterized by its emphasis on multiple realities, by its view that personality is shaped by dynamic forces of the unconscious, by its aim toward an understanding of extraordinary states of consciousness and expanded human potential. It is also known by its intense attraction to the natural environment and by its hint that there is some fundamental relationship between a return to nature and the recovery of basic values. It can be identified by its millennial vision of world peace. In its search for





Above left: The United States Constitution is based on ideas of spiritual democracy and influences from the visionary tradition. George Washington's Masonic apron was a gift from France, hand-sewn by Lafayette's wife. The apron features symbolism derived from various sources including Freemasonry and Rosicrucianism, and reflects the long tradition of Hermetic esoteric knowledge.

Above right: Although never an elected official, Benjamin Franklin was a major influence on the themes and content of the Constitution. He is pictured here wearing a Masonic apron similar to Washington's. (Photos courtesy of the Grand Lodge of Free and Accepted Masons of Pennsylvania.)

parity between science and spirituality, it rests on the assumption that mental healing is a key component of physical health, and that there is healing in community. It promotes the paranormal as an integral part of human functioning and it takes seriously accounts of spirit communication on the after-death plane, dream images, personal symbols of one's destiny, and religious visions. One can see that, above all, the most important element of this psychology is its emphasis on the possibility of the transcendent–that consciousness can be molded into something higher, purer, better.

While there is much more that could be said about this folk psychology, I want to emphasize my belief that it defines the heart of American popular consciousness. It is the essential filtering mechanism through which all foreign influences must pass in order to have an impact on American culture, regardless of their source or content. Thus, by psychologizing them, by imbuing them with a teleology, by reifying them into a worldview, and by retailing them into a mass market commodity, we have Americanized such diverse influences as Darwinian evolutionary theory, logical positivism, Freudian psychoanalysis, and zen Buddhism.

At the same time, while the archetypal goal of mystical Christianity in the West is based on the turning of the soul inward toward God, the separation of spirit from matter, and the ascent of the soul to heaven, the main thrust of the American visionary tradition is unique. Rather than the separation of opposites, it has been a more pragmatic blending of science and religion, spirit and matter, mind and body. Reason and revelation together make a whole person; consciousness can be transformed to see the arising of spirit in matter; mind and body are not radically distinct, but rather co-arise.

We need to understand this tradition. At the very least, it will help us to place the noetic sciences in their historical context. Simultaneously, I suspect that we will discover new insights into the uniqueness of the American character. It may also help us to think more clearly about the place of spirituality in modern culture. One can only hope here, however, in the compass of so short a space, to hint at its deep historical roots, the enormity of its scope, and its power as a force for constructive social change. To do this I would like to develop a single point: namely, that there are important underlying continuities between divergent periods in American religious history, which when taken collectively help to bring this uniquely American visionary tradition into better focus.

Six periods, which I can only present here in the form of a few quick snapshots, begin with the mystical communities that emerged after the founding of the American colonies (1732-1784), then include the era of the Transcendentalists (1821-1882) and the overlapping period of spiritualism and mental healing (1835-1893); the development of scientific psychotherapy and the religious psychologies (1882-1920); the era when psychoanalysis had its greatest impact (1933-1964); and the counter-culture revolution, from the early 1960s to the present.

The Early Mystical Communities (1732-1784)

The utopian experience in America might be said to have begun with the founding of the American colonies after the 1620s, since the New World itself might be considered a vast utopian experiment. Some historians of the alternative reality tradition cite in this regard Sir Francis Bacon's conception of The New Atlantis, a world where science and the spirit would find common ground. Such a vision, they suggest, was a motive for colonization of the New World. With regard to the visionary tradition proper, however, the 1730s are a convenient starting date. This was the time religious scholars have called The First Great Awakening. Calvinism, which had reigned over the affairs of personal life for nearly one hundred years, was at a low ebb and an evangelical wave

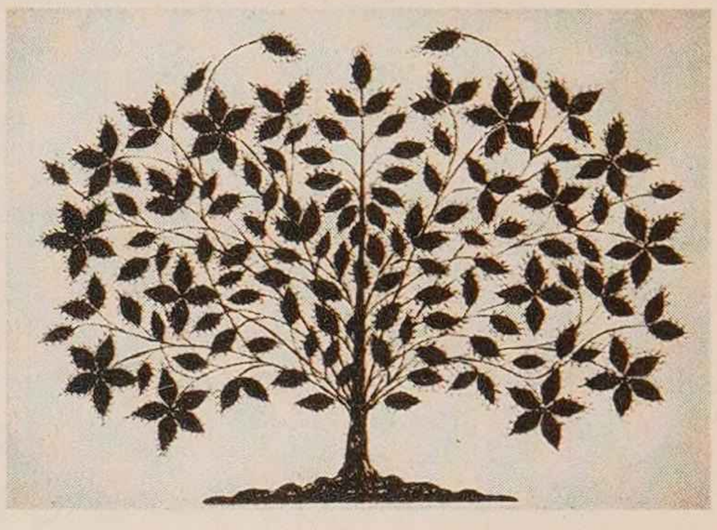
of religious enthusiasm, begun through the charismatic preaching of Jonathan Edwards, swept through New England. Hundreds of new churches were founded and thousands became active members of mainstream Christian denominations.

In the shadow of these developments mystical religious communities also began to flourish. Among them was the Ephrata Cloister, a group of German immigrants fleeing religious persecution in Europe, who settled in the 1730s forty miles west of Philadelphia to pray, meditate, and fast. Numbering 200 at their peak, they were successful farmers and shrewd businessmen as well. Their importance lies in the fact that they constituted the first monastic community on the American frontier. Here, solitary hermits, householders, as well as celibate monks and nuns lived as a religious commune. Their leader, the German Pietist Conrad Beissel, was a mystical Lutheran who had studied the Kaballah, practiced Rosicrucianism, and worshipped the Gnostic Sophia, meanwhile believing that he was participating in a historic renewal of Christianity.

Another group at the time worth noting was the Society of Friends, or Quakers, their name being derived from the occasional involuntary trembling of the limbs during ecstatic trance. Quakers, following the writings of George Fox, believed that God could come directly into each person's life through the Inner Light. All one had to do was look within. Their prayer meetings were simple, usually conducted in silence in a plain hall with no adornment. Occasionally someone rose and preached or confessed as the spirit moved them. Men and women were considered equal and both sexes freely spoke. There was no liturgy, priesthood, or vestments of holy office. Their garb was distinctively simple and their speech punctuated by "thee" to all as a mark of equality. Historically they have been known for their pacifism and have always been conscientious objectors to war.

As a sect of deviants from the Puritan theology, the Quakers were mercilessly persecuted in England in the middle of the seventeenth century because they posed a major threat to the alliance between the state church and the English throne. To be a Quaker in England or the colonies in the early 1660s was punishable by death. Early missionaries to America, mostly women, arrived beginning in 1656 and were arrested, tortured and deported. Four such followers were hanged on Boston Common before the death penalty was rescinded in 1664.

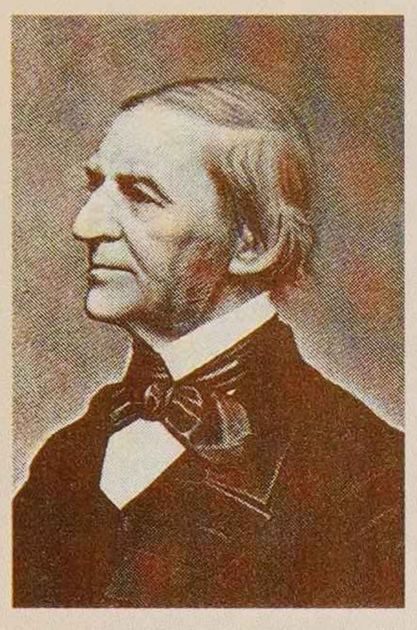
Above: A typical Shaker meeting involving trance dancing. The United Society of Believers, or "Shakers", remains today one of the most enduring and visible examples of the early American visionary tradition. Founded by the charismatic Mother Ann Lee, the Shakers came to America in 1784. (Picture courtesy of author.)

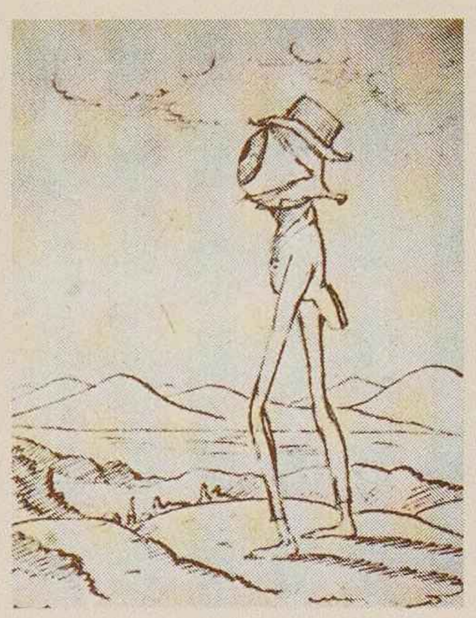


Right: The Tree of Light revealed in a Shaker elder's dream vision. It symbolized the renewal of the Society of Believers, after the death of their founder, Mother Ann Lee. The design was sewn onto quilts and napkins by Shaker women as an expression of faith in its prophetic vision. The expected revitalization of the sect did in fact occur, due to an influx of new members from other sects in the 1840s. (Picture courtesy of author.)

While various forms of persecution continued until 1725, their most notable success was the founding of Pennsylvania in 1682 under William Penn. Quakers, because of their intense religiosity, fairness in financial dealings, and peaceful ways, were often spared by warring Indian tribes. They played a major part in the governments of other near-by states, and eventually they became quite prosperous and politically active in what we would identify today as liberal causes. Exerting an enormous influence that far exceeded their small numbers, they controlled the whaling trade in New England in the nineteenth century; they were one of the more outspoken groups to oppose slavery and, since then, they have long been involved in international humanitarian aid.

Yet another utopian community in early America was the United Society of Believers, whom we remember today as the Shakers. The Shakers were led by Mother Ann Lee, an uneducated English charismatic Quaker whose prison vision brought her and her followers to America in 1784. Trance



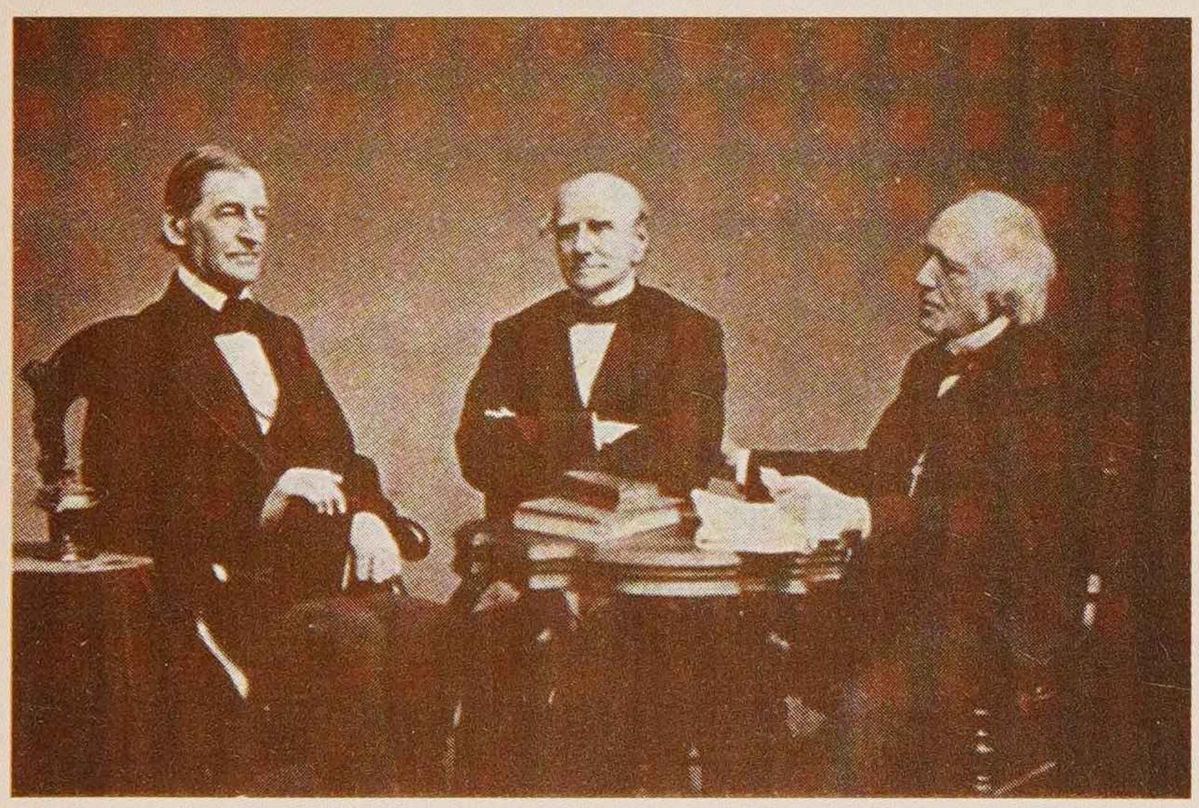


Above left: A distinctive nineteenth century phenomenon, American transcendentalism was a spiritual philosophy filtered by popular thought. Its leader, Ralph Waldo Emerson, was an influential literary philosopher-naturalist. His essential message was that God speaks to us through nature:

> "Standing on the bare ground—my head bathed by the blithe air, and uplifted into infinite space—all mean egotism vanishes. I become a transparent Eyeball."

Above right: Inspired by these lines from Emerson's first book Nature, *Christopher Cranch sketched this "portrait" of Emerson as a transparent eyeball seeing the Divine everywhere. (Houghton Library, Harvard University. Photo above left from* Pictorial History of Philosophy, *1959.)*

Below: A confluence of three major visionary movements of the nineteenth century: Emerson, representing Transcendentalism; Samuel Bradford, representing the Swedenborgians and homeopathy; and William Furness, a Unitarian Church minister. All three were graduates of the Boston Latin School in 1818. (Photo courtesy of Hahnemann Medical Archives.)



dancing, ecstatic whirling, deep contemplative meditation, religious visions, and the doctrine of celibacy dominated their spartan existence, as did the motives of thrift, simplicity, and segregation of the sexes. At the height of their colonies, eighteen communities existed throughout the United States with 5,000 members and land holdings in the hundreds of thousands of acres. We need only name such inventions as the straight broom, the circular saw, the lazy susan, and the wooden clothespin to be reminded of the numerous contributions from Shaker inventiveness that have passed into common usage.

Such early groups are emblematic of the richness and diversity which have always defined utopian experiments of all kinds in America. Swedenborgians, Icarians, Mormons, Harmonists, and more, proliferated–some to this day. Their religiosity was deep, their diversity astounding, their success varied, and their attempts at commercialism often pioneering. They remind us that spirituality in the United States is not the unique province of the mainstream denominations. Rather, radically different experiments continue to fill the American landscape. Then and now, the fact that divergent expressions are permitted to flourish side by side marks America as a true spiritual democracy. This is what continues to make the American experience unique.

Transcendentalism (1821-1882)

It is now generally recognized that events following the First Great Awakening led directly to the American Revolution, a war fought not so much for political independence and economic self-rule as for the ideal of spiritual freedom. One major result was not only the defeat of the English church as a dominant form of religious expression but also the death of Calvinism as a pervasive form of social control. A major period of religious enthusiasm naturally followed the Revolutionary War in which the most varied forms of spirituality were launched, from the ultra-conservative to the ultra-liberal. This is the period which religious scholars have called The Second Great Awakening. Evangelical Bible religion again swept in a mighty torrent across the American landscape, but this time it centered in the Midwest. Traditional Protestant denominations, from Kentucky to Michigan and south to the Carolinas, were converting thousands at a time through the phenomenon of the frontier camp meeting. Upstate New York became known as the "Burned Over District", because so many spiritual fires had successively ignited the population.

While mainstream Christians were consolidating their denominational hold ever westward, in their shadow loomed the much larger and more diffuse movement of American folk psychology. During this same period, what we would today call holistic health was the rage. Homeopathy, the use of drugs in minute doses that produced the same symptoms as the patient's illness, was first introduced from Germany in

the 1820s. Phrenology, the diagnosis of personality from bumps on the skull, and mesmerism, or hypnosis, came in the 1830s. Americans were by then well-equipped with an armamentarium of self-help techniques. They had methods to alter their state of consciousness, maps of the inner terrain, and a spiritual system of therapeutics to heal their body.

Out of this environment of diverse religious experiments emerged New England Transcendentalism, the first uniquely American literary aesthetic to develop independently of European roots, and the great over-arching expression of the various popular philosophies of self-realization that flourished in the middle of the nineteenth century. Transcendentalism was, first of all, a literary psychology, produced by introspective writers and avidly read by a wide community of educated readers interested in self-development. Led by the philosophers Ralph Waldo Emerson, Henry Thoreau, and Margaret Fuller, religious thinkers like James Freeman Clarke, and novelists such as Louisa May Alcott and Nathaniel Hawthorne, transcendentalism redefined the American popular idea of personality. There was a higher self within, guided by the Oversoul, renewed by Nature, tested by adversity, driven by unconscious springs. This self we should strive to develop, to bring out, and to actively engage in the affairs of the world. Secular, but deeply spiritual, it was an intuitive psychology of character formation that defined an era.

But transcendentalist philosophy was itself deeply embedded in the prevailing popular psychology. Emerson's second wife, Lydian, practiced a form of naturopathic medicine. Thoreau avidly studied American Indian culture. Margaret Fuller had her books printed and distributed through Fowler and Wells in New York, the phrenological publishers. Hawthorne, in his novels, depicted the psychosomatic consequences of defying public moral standards. Diet fads, such as Grahamism–eating only coarse grains–and strict vegetarianism were practiced for their influence on promoting a purified state of spiritual consciousness. Hydrotherapy–the naturopathic regime of taking cold water baths and vigorous exercise upon awakening, even in mid-winter–became widespread. Utopian retreats such as Brookfarm in West Roxbury and Bronson Alcott's community, Fruitlands in Harvard, Massachusetts, sprang up based on transcendentalist principles.

Popular consciousness went wild with the possibilities of inward freedom. Meanwhile, Emersonianism was castigated by the pundits of high culture. After the students at Harvard Divinity School invited him to lecture on these ideas in 1838, the faculty rose in joint condemnation and Emerson was banished from the halls of his alma mater for more than a quarter of a century.

Shrugging off the denunciation, members of the Concord circle proceeded on their own course, articulating to an eager public the outlines of a generic psychological theology based on their own inward experience. The result was what scholars now generally recognize as an American renaissance, which affected not only popular culture, but literature, liberal religion, and the arts, as well as later developments in philosophy, ethics, and psychotherapy. And to a certain very important extent, transcendentalism, because it was both secular and pragmatic, also came to influence the tone and mood of a burgeoning American science.

Spiritualism and Mental Healing (1835-1893)

Spiritualism refers to the belief in communication with the dead. Historically, the forms that spirit communication took in the nineteenth century were varied. Raps, knocking, automatic speech, automatic writing, ectoplasmic displays, table-tipping, slate writing, and so on, usually took place within the context of the seance, or mediumistic circle, the growth and popularity of which represents one of the more interesting chapters in the early history of group psychotherapy.

Spiritualism as an organized therapeutic and religious movement recognized Andrew Jackson Davis as its grandfather, the itinerant faith healer from Poughkeepsie who claimed to communicate with Swedenborg and Galen, and who could allegedly effect miraculous cures in the trance state. Spiritualism usually dates its beginnings, however, from 1848, when the Fox sisters first reported unexplained "rappings" in their bedroom. These noises purportedly came from the spirit of a man once murdered and buried in the cellar of their house. Although the Fox sisters later confessed to fraud, the account of their experiences gained widespread newspaper coverage at the time. Thrust into the public eye, they soon made a career of public speaking and served to heighten public interest in mediumship and the occult. Seances, table-tipping, and slate writing became the rage. Large public demonstrations were common, and a new popular literature on the subject began. Medical societies, academic committees, and established church groups then began a counterattack, but by the 1850s, as an organized movement, spiritualism could claim as many as one million followers, and by the 1890s, the figure had grown to eleven million. Constantly informed by such weekly newspapers as *The Spiritual Telegraph* and *The Banner of Light,* spiritualists

Madame Helena Petrovna Blavatsky, co-founder of the Theosophical Society in New York City, 1875. Theosophy, established to preserve the esoteric knowledge of the world's mystery religions, grew to international status in the nineteenth century. (Photo courtesy of the Theosophical Society, Pasadena Archives.)

Theosophy, launched in New York City in 1875 by Helena Petrovna Blavatsky and Colonel Henry Steele Olcott, was dedicated to preserving the esoteric knowledge of the world's mystery religions and promoting the universal harmony of all mankind. It became an international movement in 1878 when it located its headquarters in India. There it became responsible for a major Sanskrit revival, which placed translations of esoteric religious texts on meditation, yoga, and higher states of consciousness into the hands of, among others, a wide community of American mental healers.

After Madame Blavatsky's death, the Theosophic mantle passed to Annie Besant, who reorganized the society into its present form. In addition, several offshoots of Theosophy are worth noting. Alice Bailey and her Arcane School, as well as Astara, begun by Paul and Erlyne Cheney, are two examples. Another is Anthroposophy, started in 1911 by the Goethe scholar Rudolf Steiner. Steiner's metaphysical philosophy is the foundation for the Waldorf Schools, which have an excellent reputation throughout the United States and elsewhere. And another has been Jiddu Krishnamurti, Indian-born spiritual thinker–raised under the aegis of Besant's Royal Order of the Star–philosopher and independent lecturer, who had a significant impact on the American counter-culture beginning in the 1950s.

attended summer camp revivals by the thousands, and founded such local organizations as the New England Spiritualist Association and the ill-fated attempt at national organization known as The Society for the Diffusion of Useful Spiritual Knowledge.

It is probably true to say, in this regard, that spiritualism has been the least centrally organized and yet the most widespread and diffuse expression of the American mental healing movement. Meanwhile, several other groups were also well known. These included Theosophy, New Thought, and Christian Science.

New Thought, so-called because its practitioners sought to transcend the laws of materialistic science to discover the spiritual laws which govern the mind and the body, was a loosely bound coalition of different mental healing groups based on the ministry of the trance healer Phineas Parkhurst Quimby of Portland, Maine. Quimby did not write extensively, however, so his work was carried forward by several of his more influential patients. Chief among these was Warren Felt Evans, a Methodist minister turned Swedenborgian who went to Portland in 1863 to be healed of a chronic physical and mental affliction.

With Quimby's death in 1866, Evans became the first to retail the founder's methods to an eager and devoted public. In 1899, the First International New Thought Convention was held in Hartford, Connecticut. Another was held the same year in Boston, and became an annual event. In 1908, these meetings were incorporated as the International New Thought Alliance. Branches of this group today include such healing systems as Ernest Holmes' Religious Science and the present Unity School of Christianity. Perhaps more well known have been the writings of Ralph Waldo Trine, whose *In Tune With the Infinite* has been in print for almost one hundred years.

While the ideas and methods of Davis, Quimby, Evans and others mingled to form a cultural ethos that stood apart from orthodox science and religion, it was the genius behind Christian Science that welded these opposing traditions into a totally unique American institution that persists today as an influential cultural force. Mary Baker Glover Patterson Eddy, the founder of Christian Science, suffering bouts of spasm and nervous prostration, became Quimby's patient in 1863. She stayed with Quimby, studied his writings, underwent his treatments, and left successfully cured. He died a short time later, after which she sustained a bad fall on the ice. Unable to get help from Quimby's disciples, or from regular doctors, who believed she would never walk again, Eddy turned within for spiritual guidance. At one point, alone with only her Bible, she turned to one of the healing episodes of Jesus, and she later wrote, his words began to flood into her thoughts: "I am the Way, the Truth, and the Life: No man cometh unto the Father, but by me." She was suddenly filled with the conviction that her life was in God and at that moment she was healed. The core of her realization was that faith in matter was error. "Mind is All, matter nothing" became her watchword. According to her own

accounts, she was miraculously healed. Christian Science thus dates its beginnings from this experience.

Between 1870 and 1875, Mrs. Eddy traveled extensively throughout New England, teaching, writing, and healing others. In 1875, she published the first edition of *Science and Health with Key to the Scriptures,* her enduring statement to an unenlightened world enmeshed in material life. In 1879, she was granted a charter by the state of Massachusetts to form the Church of Christ, Scientist with headquarters in Boston. In 1881 she launched the Massachusetts Medical College, which taught pathology, therapeutics, moral science, and metaphysics according to her teachings. Soon, her church would become a world-wide movement, staunchly proclaiming the life of the spirit in an increasingly technological age.

Scientific Psychotherapy and the Religious Psychologies (1882-1920)

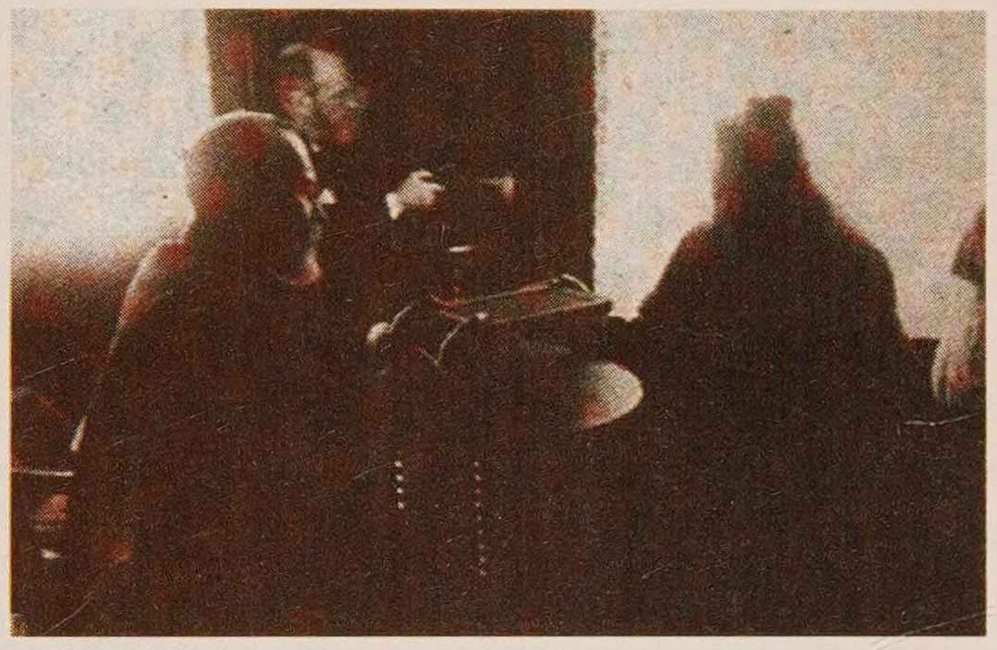
Between 1880 and 1920 American society witnessed an unprecedented era of psychological medicine in many ways rivaling interest in the mind-body problem today. Substantial evidence shows, for instance, that as early as the latter 1840s, there were doctors and dentists who, in addition to ether, chloroform, and nitrous oxide, also used hypnosis as an anesthetic. As early as the 1880s, psychotherapeutic techniques such as hypnosis, crystal gazing, and automatic writing had been adapted for medical use by some physicians from methods then in vogue among the spiritualists and mental healers. By the 1890s, certain neurologists, in addition to dispensing drugs and performing surgery, also practiced psychotherapy, depending on whether the patient's malady was functional (that is, of psychological origin) or organic (based on some physical disease or lesion). Just after 1900, forward-looking institutions such as the Massachusetts General Hospital routinely used techniques of group psychotherapy in the treatment of tuberculosis patients. As early as 1905, certain forms of pastoral counseling were an integral part of "mental nursing" (what later became known as psychiatric social work).

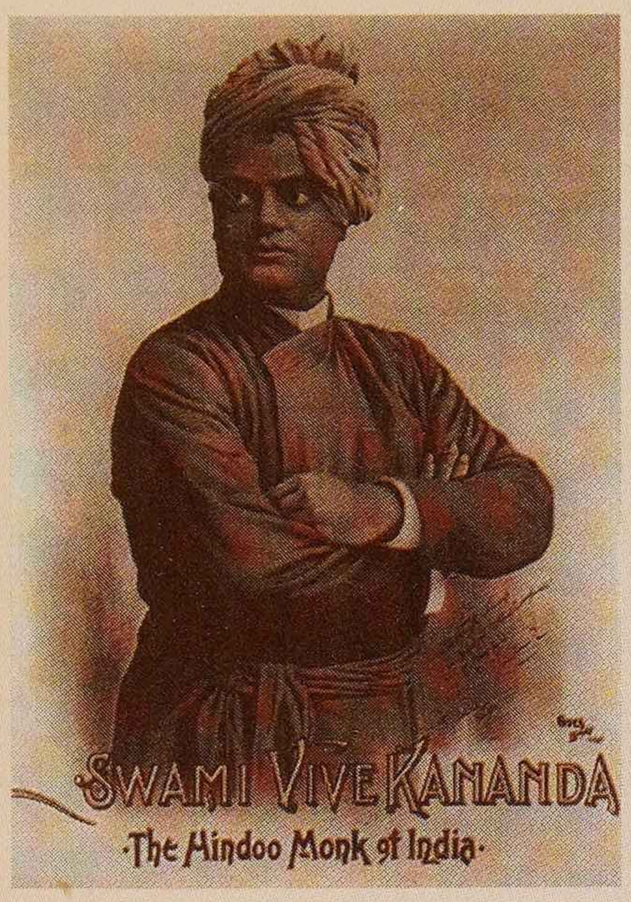
Defining this late nineteenth century era of psychological medicine were events and personalities associated with the so-called Boston School of Psychotherapy, which began around 1880 and extended to 1920. This "school", more a scientific attitude toward the mind-body problem than a physical place, centered around a number of youthful heirs to the intuitive psychology of character formation bequeathed to them by the Swedenborgians and transcendentalists. Among the new young turks were the Harvard philosopher-psychologist William James; Henry Pickering Bowditch, who was Dean of Harvard Medical School and a research physiologist; and Harvard's first full professor of neurology, James Jackson Putnam. Each one in his own way was called upon to square the older literary psychology with the more rigorous scientific dictates of the age. They, in turn, spearheaded the Boston School, and drew into their circle such lights as Josiah Royce, Morton Prince, Edward Cowles, G. Stanley Hall, Richard Cabot, Joseph Hersey Pratt, Gertrude Stein, Mary Calkins, Ida Cannon, and more.

Perhaps the most significant development of the Boston School of Psychotherapy was the Emmanuel Movement, an unprecedented collaboration between religion and medicine that was launched in Boston in 1906 and soon reached international proportions. Its success was based on combin-

Left: Considered the "Father of American Psychology", nineteenth century philosopher-psychologist William James pioneered the field of psychotherapeutics. He was co-founder of the American Society for Psychical Research and a major proponent of Charles Peirce's philosophy of pragmatism. His prodigious work in the areas of pragmatism, introspectionism and exploration of religious experience continues to influence researchers in cross-disciplinary science and religion. (Photo from Pictorial History of Philosophy, *1959.)*

Below: Throughout his career, James carried on extensive investigation of mediums and psychic healers. He is photographed here engaged in a "slate-writing" experiment with a medium. The alleged spirit responds to questions from James by writing answers between two tightly bound slates. (Photo courtesy of the Houghton Library, Harvard University.)





One hundred years ago, Hindu monk Swami Vivekananda, a disciple of Sri Ramakrishna, came to the United States as a delegate to the first World's Parliament of Religions, in Chicago. Throughout the 1890s, he taught meditation and lectured widely around the US, founding various chapters of the Vedanta Society.

Commemorating its centenary this year, the Parliament of World's Religions is again hosted in Chicago. Contemporary luminaries of the visionary tradition who will attend the conference include the Dalai Lama, Mother Teresa and members of the Swedenborg Society. (Photo courtesy of the Vedanta Society of Northern California.)

ing the scientific advances of dynamic psychotherapy with Christian teachings of moral character development. The movement began when Elwood Worcester, an Episcopal priest and head of the Emmanuel Church in Boston, with his assistant George Coombs, teamed up with the local physicians Richard Cabot, James Putnam, and Isador Coriat. The group gave a public presentation at the Emmanuel Church on religious ethics and the techniques of modern psychotherapy, and thereafter invited anyone with psychological problems to apply the next day for a free psychotherapeutic treatment. More than a hundred and twenty were waiting, and over the succeeding months the numbers grew.

Neighboring mainstream Boston churches soon began similar programs, as did many of the spiritualist and mental healing churches. Local colleges began collaborating in the training of ministers and physicians. Before long, the Emmanuel experiment had spread across the state and to churches throughout the nation. Eventually, churches began experimenting with the Emmanuel program in Europe and England.

A controversy soon developed in orthodox medical circles, however, over whether or not the ministers were practicing medicine without a license. Meanwhile local businessmen believed this was not orthodox Christianity, but more of what they called disreputable Christian Science. Richard Cabot and Elwood Worcester, by then the leading lights, quickly shut down the Emmanuel programs, but kept their own private practices alive until the 1920s. At that time they collaborated in launching the career of Anton Boisen. Boisen was a former mental patient and ordained minister who eventually became the founder of the clinical pastoral education movement, which is now a part of every divinity school program in the country.

In addition to Worcester and Cabot, one of the key figures of this period was William James. While he was a senior psychologist and philosopher at Harvard, his influence on the American visionary tradition was extensive and far exceeded merely his involvement in dynamic psychotherapy and theories of the subconscious. In the 1890s he had befriended Swami Vivekananda and promoted yoga and meditation. Later he inspired Helen Keller. He supported W.E.B. DuBois, founder of the NAACP, and Walter Lippman, the budding social critic. He taught Gertrude Stein the technique of automatic writing. His psychology of subconscious states profoundly moved Jung. His *Varieties of Religious Experience* (1902) fueled the psychology of religion movement and later played a role in the founding of Alcoholics Anonymous. His radical empiricism influenced Henri Bergson and impacted both German phenomenology and French existentialism.

Even the scientists said they got something from him. Percy Bridgman claimed that his theory of operationism was derived partly from James' pragmatism. Niels Bohr borrowed from James for his principle of complementarity, showing that James even contributed to the new physics.

Beyond all these specific and personal influences, James set the theme for an age. He linked the older intuitive psychology of character formation propounded by the transcendentalists with the new experimental science by demanding that modern psychology be much more than a discipline obsessed with measurement. In addition to normal thought and feeling, he admitted the reality of hallucinations, dreams and visions, religious ecstasy, paranormal experiences, near-death phenomena, and more, into the realm of a legitimate scientific psychology. In his eyes psychology should become a person-centered science. By this he meant that science might refuse to deal with any phenomenon that is outside the range of human experience, but it may not refuse on purely philosophical grounds to deal with that which is, in fact, *within* the range of human experience. Thus, by the end of his career, James presciently advised psychologists to study the fall of the threshold of consciousness; he maintained that psychology's true contribution to the religious sphere lay in developing a cross-cultural comparison of subconscious states; and he variously forecast that depth psychology, psychical research, and meditation would become the psychology of the future.

The Psychoanalytic Underground (1933-1964)

The American visionary tradition at the opening of the twentieth century expanded in many directions with the onset of modernism. Between World War I and the 1950s, academic psychology was controlled by the experimentalist mindset, which produced mental measurements and behavioristic learning theory, while psychiatry became increasingly more biological. Meanwhile, a host of European influences, from Freud to Marx and existentialism, flooded the popular landscape. Ascona, a popular retreat for socialist radicals and free thinkers, flourished in Switzerland. On the Left Bank in Paris, in the 1930s, American expatriates read poetry, wrote novels, and learned from the Sufi teachings of Gurdjieff. American popular psychology reveled in the exploits of Harry Houdini, the charismatic writing of the blind-deaf Helen Keller, and later the trance utterances of Arthur Ford and Edgar Cayce. The Reverend Frank Buchman launched the Oxford group, which became Moral Rearmament. Doctor Bob and Bill W. founded Alcoholics Anonymous. Harry Emerson Fosdick and Emmett Fox propounded a new message for popular Christianity. Dale Carnegie produced his *How to Win Friends and Influence People.* Vedanta, the Self-Realization Fellowship, zen as interpreted by D. T. Suzuki, and the meaning of truth and beauty according to Krishnamurti all began to flourish.

But the main avenue by which educated intellectuals were permitted entry into the unconscious as a socially sanctioned behavior, from the 1920s to the 1960s, was psychoanalysis. This was somewhat paradoxical because when Freud came to speak at Clark University in 1909, he decried as unscientific the very religious psychotherapies that first took up his ideas. All culture, for Freud, was the sublimation of forbidden sexual impulses into socially acceptable channels. Art was the expression of neurosis, religion an illusion of the masses. Only through controlled scientific analysis of one's free associations, he maintained, could unconscious repressions be discovered and neurotic symptoms lifted.

His ideas caught the imagination of a generation of New York intellectuals in the 1920s, and thus began to influence American social thought. But the real era of psychoanalysis began in the 1930s, when eminent Jewish analysts from Vienna and Berlin who had trained under Freud were forced to flee the rise of Nazism. Many found distinguished posts at American universities and medical schools. Analytic institutes were founded in the United States, and later generations of young physicians became staunch Freudians.

Left: Founder of psychoanalysis, Sigmund Freud was an exponent of a dynamic theory of the unconscious, and a major influence on American popular psychology from the 1920s to 1960s. (Photo from Pictorial History of Philosophy, *1959.)*

Right: Swiss psychiatrist Carl Jung was the twentieth century's major proponent of a theory of archetypal symbolism, with deep roots in the world's wisdom traditions. His theories were influenced by the late nineteenth century psychologies of transcendentalism—particularly those of William James, Theodore Flournoy, and Frederick W. H. Meyers. (Photo courtesy of the C. G. Jung Institute of San Francisco.)

Freudian theory, meanwhile, although it never influenced the core of experimental laboratory psychophysics in psychology, or biological advances in experimental psychiatry, had penetrated into art, literature, sociology, theology, and the clinical practice of psychotherapy. Psychoanalysis then became integrated into medical psychology during World War II and began to dominate clinical psychology within the Veterans' Administration. Thereafter it ceased being merely a popular movement of the avant garde and entered the American mainstream.

But psychoanalysis also had its own shadow culture. Numerous dissenters to Freud, such as Harry Stack Sullivan, Erich Fromm, and Karen Horney, modified Freud's theories to fit the American psyche. Foremost among these dissenters were two problematic figures: Wilhelm Reich and Carl Jung. Reich propounded a sexual theory of orgone energy in many ways more radical than Freud's. His sexual politics so enraged the status quo that he was eventually imprisoned, and died in 1957 in a mental institution for the criminally insane.

Jung, meanwhile, had established himself in America long before Freud. His presence was due largely to the pre-psychoanalytic influence in Boston of Swiss psychiatrists such as August Forel, Adolf Meyer, August Hoch, and Paul DuBois. Jung became pre-eminent on the American scene from 1904 because of his word association studies and his

Left: Alan Watts, Episcopal minister turned zen practitioner, opened a new era of Asian influence in the American counter-culture with the publication of his Psychotherapy East and West, *along with many other books popularizing Eastern religions, such as* The Spirit of Zen. *(Photo by Pirkle Jones.)*

Right: Aldous Huxley, essayist, novelist and psychedelic researcher, wrote and lectured to an eager and wide counter-culture audience. Among his most influential books are: The Perennial Philosophy, The Doors of Perception *and* Brave New World. *(Photo by George Kramer, courtesy of Laura Huxley.)*

theory of unconscious complexes, which he used as much in service of biological psychiatry as Freudian analysis. Jung, in fact, represented the earlier psychology of William James, Theodore Flournoy and F.W.H. Myers, and not psychoanalysis. He remained somewhat bitter to the end of his life because history had cast him so totally in the shadow of Freud. In reality, he was the only twentieth century psychologist of the older dissociation school to take up the methods of unconscious symbolism. Rightly, however, his theories continue to have vitality among the various counter-culture psychotherapies of transcendence, long after psychoanalysis has ceased to be a moving influence in that domain.

The American Counter-Culture Movement (1964-Present)

The modern visionary tradition is best exemplified by the counter-culture movement of the 1960s. The era was, to turn Aldous Huxley's phrase, a collective opening of the doors of perception, which we associate with the names of Alan Watts, D. T. Suzuki, Abraham Maslow, Rollo May, Richard Alpert (Ram Dass) and Timothy Leary. Like similar eras in American folk psychology which preceded it, the counter-culture movement was mystical, anti-rational, a flight from materialism, as well as youthful, idealistic, utopian, and transcendent. While it was nationwide, even international, it was also a California phenomenon. In its wake there followed, almost as a cultural backlash, a fundamentalist revival among American evangelicals, which religious scholars are sure to recognize eventually as the Third Great Awakening.

There can be little doubt that the primary focus of the counter-culture movement was on altered states of consciousness. What the journalists haplessly referred to as merely egotistical, self-centered, and irresponsible behavior was an unprecedented collective movement into a mythic, inward, transcendent, and cross-cultural domain that continues to define the direction of American folk psychology.

The counter-culture emphasis on higher consciousness, for instance, has led to a vast network of psychotherapeutic practices that operate far beyond the reach of medical and psychological orthodoxy, a network which now includes many more licensed practitioners than ever before. In this milieu, psychedelic drugs were first used, which brought about that collective opening of the doors of perception. Then interest developed in meditation, a central practice of growth and renewal in the new forms of psychotherapy. Both virtually replaced psychoanalysis within the counter-culture as methods of access to inner states.

Their impact cannot be underestimated. The psychedelic revolution catalyzed a new vision of consciousness and its possibilities, and led to new ideas beyond the control and the understanding of the rationalist mainstream. Meditation followed as a national underground self-help therapy, allowing collective memory to pass beyond reliance on mind-altering drugs. As a vehicle for personality transformation and the actualization of inward values, meditative practices have, since then, led an entire generation of young people into the pursuit of lifetime personal disciplines, and have helped to foster a multiculturalism that will inevitably change the parochial face of Western social institutions.

Noetic Sciences and the Modern Scene

When Edgar Mitchell first christened the Institute of Noetic Sciences in 1973, he said that he derived the name from Greek sources, then found it again in William James' writings. Noetic, meaning visionary understanding, was a principle quality of mystical consciousness, James had said. The mystic state was transient; experienced in a moment, but with effects that lasted a lifetime. It was ineffable in the sense that, while directly experienced, it seemed to be beyond all description. It could not be brought on at will by simply engaging in voluntary operations. One could only alter the conditions for its arrival by spiritual practice. But above all, it was noetic, it carried with it a sense of deep personal knowledge unplumbed by the discursive intellect. In fact,

James conjectured, all our rational faculties may find their source in this state.

This insight essentially characterizes a noetic tradition within science and medicine that also has a long history and a potentially viable future. Plato spoke of the *nous* as the goal of logic. The Rosicrucians and Hermetic philosophers promoted a spiritual science against the pretensions of the institutionalized church. The rational, for Swedenborg, meant the conjoint faculties of logic and religious intuition. Goethe was at once a scientist and poet. Even Einstein claimed that at the farther reaches of the mind, science and religion become one.

Within modern American culture, the noetic sciences have many manifestations, each with its own implications and possibilities. To name but a few: In the shadow of experimental laboratory psychology stands psychical research, which since the 1930s has become known as parapsychology. It has largely confined itself to the laboratory measurement of psychic abilities and achieved only modest result. In the shadow of reductionistic physics stands the physics-and-consciousness movement. Its followers believe that quantum physics may provide a conceptual basis for understanding problems in biology and psychology. In the shadow of physical medicine, we have holistic health, or mind-body medicine, now widely discussed in popular circles and becoming more commonplace in general medical practice. Finally, within the shadow of the neuroscience revolution and the new cognitive psychology of consciousness, we have consciousness research. It is driven by the idea that consciousness is not just another category to be investigated but rather pervades everything we do.

The greatest potential for change, it seems to me, lies in this last area, the scientific study of consciousness. This is because, while there are many different theoretical opinions about the matter, it is generally agreed that the neuroscience revolution now underway, which has at its core the problem of consciousness, may dwarf by comparison the Copernican revolution which preceded it.

As basic research unlocks further knowledge about the biology of cognition, the pervasiveness of consciousness beyond its rational boundaries is becoming more evident. Scientists are becoming more self-reflective; neuroscience research is fostering a torrent of communication across disciplines that previously would not talk to each other; and the neuroscience revolution is clearly generating implications for a more humanistically oriented science far beyond the control of the reductionistic mentality that spawned the revolution in the first place.

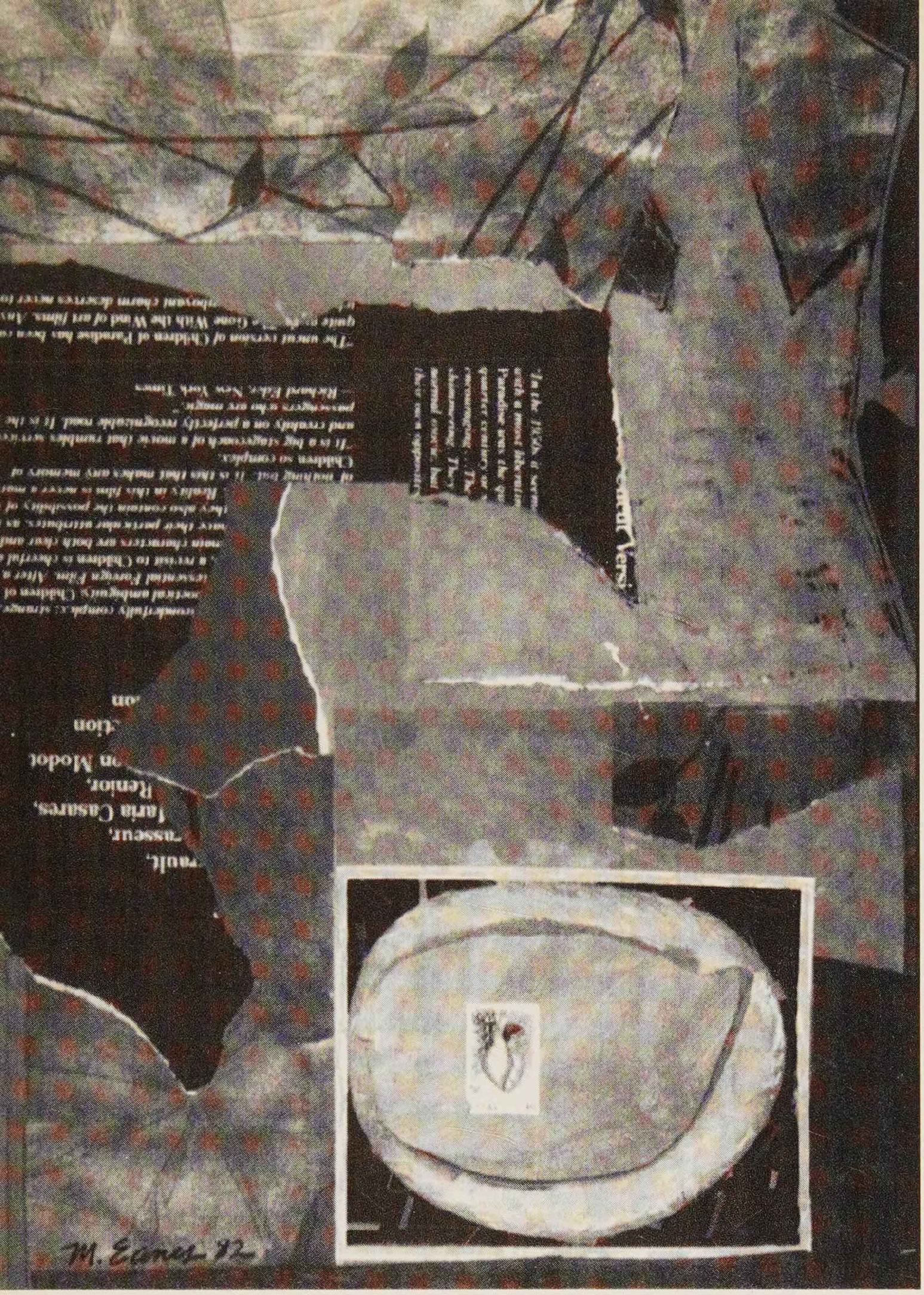
Some Implications

It is quite possible that, under these circumstances, an unprecedented opportunity now exists for a massive reassessment of the way mainstream science is conducted. According to one scenario, the present scientific worldview might lose its supremacy and be repositioned as only one of many other useful forms of knowledge in modern culture. According to another, science as we know it could well become transformed to accommodate a more encompassing worldview than the present reductionistic outlook affords. Whichever turns out to be the case, it is now generally understood that the various fields of science are undergoing major alterations.

How much these alterations in science are fueling the tremendous changes now going on in modern society, or whether the current social changes are in fact driving the new scientific revolution, is also hard to tell. In all likelihood, the change will not be merely the replacement of some old ideas by a few new ones. It may involve more than just a change in the content of our awareness, it may involve a basic shift in context–a fundamental transformation of the background which we habitually use to construct meaning.

In such a context, the noetic sciences could emerge as something of a prophetic voice. The mind does influence the body. Consciousness is a potent factor in the biological evolution of the species. It is possible in this modern technological age to foster self-healing. Beyond economic, political, and sectarian concerns, we are a spiritual community linked by an infrastructure of world mythologies. At any rate, because it draws on the fruits of Western science as much as it emphasizes the process of self-realization, the larger visionary tradition, of which the noetic sciences are a part, cannot be summarily dismissed as inconsequential. Rather, bereft of neither history nor significance, it may be a power that the old but still entrenched way of thinking has yet to reckon with.

Eugene Taylor has a BA and MA in Experimental Psychology and Comparative Religion, and a PhD in the History and Philosophy of Psychology. He is currently Lecturer in Psychiatry at Harvard Medical School, and Consultant in the History of Psychiatry at the Massachusetts General Hospital. An extended version of his work on the visionary tradition is contained in a forthcoming Noetic Sciences monograph, and a more extensive version will appear in book-length form through Addison-Wesley in the fall of 1994. □



Eanes

OUR LINEAGE

Human Potentials: The Movement, the Media, and the Myth

by George Leonard

"There's no question but that you guys are going to change the world," Herman Kahn said to Michael Murphy and me as we walked across the lawn at Esalen on a crisp November morning in 1967. Kahn was perhaps the most famous–and infamous–futurist of his time. Some say he was the model for Dr. Strangelove in the Stanley Kubrick movie of the same name, a black satire on nuclear war. Kahn never looked up, just kept walking, eyes searching the thick, springy grass beneath our feet for an image, an omen. "Actually, it's easy to change the world," he said at last. "The only problem is, it probably won't come out the way you planned it."

Was Kahn right? Well, yes–and also no. Or maybe it's still too soon to be sure. But now that nearly 30 years have passed since Murphy and I casually, playfully, half-kiddingly gave a "Movement" named "Human Potential" its name, it might be time to do a little summing up. Let me tell you a story.

In 1964, Michael Murphy, at 33, was co-founder (with Richard Price) and president of a small institute on the California coast that had started two years earlier under the name Big Sur Hot Springs and only recently had changed its name to Esalen, after the tribe of Indians that had once occupied its land. Murphy was a Salinas, California, native, a Stanford psychology graduate, a student of Eastern philosophy, and an eight-hour-a-day meditator who had lived in the Aurobindo Ashram in Pondicherry, India, for 18 months before Indian pilgrimages had become de rigueur for young American seekers. He was also, according to almost anyone who had ever met him, a man of enough enthusiasm,

charm, and sheer mental voltage to light up the entire Big Sur coast. Still, very few people had noticed when his institute opened in 1962 under the theme "Human Potentialities".

I was 41, a native of Georgia, an air corps veteran of World War II and Korea, author of one quickly forgotten novel, and, since 1953, a senior editor of *Look* magazine, which was to become, before the Sixties ended, the most influential magazine of its time, with a readership of 34 million. At *Look*, I had covered education, the civil rights movement, politics, and foreign affairs. I had put together special issues on youth of the Sixties ("The Explosive Generation") and California, and was finding myself more and more drawn to a subject that fit in no current category. We called it "lifestyle".

Now, in the late summer of 1964, I was embarked on what I hoped would be my magnum opus, an article to be titled "The Human Potential". It was a golden age of magazine journalism. I was free to go wherever I wished, interview anyone I chose, and take as long as I needed. I criss-crossed the nation, visiting laboratories, interviewing brain researchers, biologists, philosophers, theologians, psychologists, psychiatrists. I bopped back and forth between Cambridge, Mass., and La Jolla, Cal., trying to convince B. F. Skinner and Carl Rogers that their warring disciplines (behaviorism and humanism) were actually joined in a common enterprise to unlock the enormous potential of the human organism. By early 1965, I had interviewed 37 experts and had drafted the first 10,000 words of what was eventually to become an unwieldy, essentially unpublishable broadside of some 20,000 words.

My 38th interview was a fateful one. I had heard rumors of Murphy's mysterious institute on the Big Sur coast, but had never considered going there for an interview. On February 2, 1965, I had lunch with a brain researcher and friend named Lois DeLattre at the Palace Hotel's Garden Court in San Francisco, just across the street from *Look*'s West Coast headquarters. I had asked for her reaction to my first 10,000 words on the human potential. She offered a perfunctory critique then got down to business. My draft had convinced her that I would *have* to meet Mike Murphy. It just happened he was coming to dinner at her apartment that night. She wasn't inviting me to dinner, she was ordering me. "You can't say no," she said firmly.

"How About a Human Potential Movement?"

We started talking in the kitchen. I suppose we ate dinner, but that essential and elemental act was barely registered in my consciousness. Lois and the other two guests seemed to fade from view. The best metaphor is open to misunderstanding but can't be avoided: It was like falling in love. Each of us brought separate streams of information to the conversation. I had the latest stuff on brain research, behavioral psychology, educational theory, political and social movements. Murphy came in with a rich and heady mix of Eastern religion and philosophy, humanistic psychology, creativity research, Huxley, Heard, Maslow. The wonder was that it all fit together, like the dovetailing joints of fine cabinetwork. But it was more than just a perfect knowledge matchup. The two of us shared a passionately held belief that the individual and social potential of our species was being sold short in innumerable ways, and that the time was ripe to develop new means to tap this potential, new ways, not just of doing, but of *being* in the world.

Sometime after dinner we drifted over to my house, an old Victorian rental on California Street with thirteen-foot ceilings and an antique marble fireplace in the living room. The talk continued nonstop, with agreement piled on agreement. We agreed that the culture needed changing. We agreed that change was in the air. We agreed that California was currently the fountainhead of change in the world. At last, around two or three in the morning, there was a pause in the conversation. We were standing, leaning on the marble mantelpiece. The sounds of the city had come to a stop. If a certain naive optimism is a prerequisite to all action, then Michael Murphy's next words were perhaps inevitable.

"George, let's fire a shot heard 'round the world," he said.

"Okay, Mike," I said matter-of-factly, "let's do it."

Five days later, my wife and I drove down to Big Sur for the weekend so I could continue my conversations with Michael and try out some of the new disciplines that were being developed at Esalen. Three weeks later, Michael came north for a long weekend at our house. After that, it was a rare fortnight that went by without one of us visiting the other to continue a dialogue that is still going on. Those early conversations, though, had a special quality, inspired by the spirit of the times. The zeitgeist of the decade not only had wings but a full set of rocket boosters. As I wrote later in my memoir of the Sixties, *Walking on the Edge of the World:*

> *Now that it's gone, how can I recreate that time? . . . The dazzling light, the ferocious, incandescent release of energy, the renunciation of all the repressions of the past, the crazy sense that each new day might bring something unexpected and wonderful. It was the season of Eros, and the only sin was to say no.* ➢

Michael had invited a prestigious group of leaders to Esalen for the fall 1965 programs and hardly a no was to be heard. For reasons arcane if not entirely inexplicable, almost everyone Michael contacted agreed to travel, some for great distances, to an unknown institute on the edge of the Pacific in return for an insignificant speaker's fee. They included Gardner Murphy, director of research for the Menninger Foundation; Virginia Satir, a founder of family therapy; S. I. Hayakawa, a leading general semanticist; J. B. Rhine, the pioneering parapsychologist from Duke University; James Pike, the controversial bishop of the Episcopal Diocese of California; Rollo May; Alan Watts; Frank Barron; Carl Rogers; and–back to back with Rogers–B. F. Skinner.

It was to be Esalen's biggest show of firepower to date, and there would be a new and larger format for the brochure. I agreed to write the opening statement. For a long time I had been viewing America as a huge laboratory of personal and social transformation. But now the rate of change was speeding up, opening whole new areas of experimentation. I suggested we do a brainstorming session on signs of current or impending change in American culture. The ideas came in a rush and I wrote each one down on a slip of paper and tossed it on the living room floor–everything from "Changes in family structure" to "Radical youth movement–SDS". (See page 23 for some of the items we jotted down that evening.)

As the carpet disappeared beneath a snowfall of ideas, my mind kept coming back to the Civil Rights Movement. As a native Southerner and a civil rights reporter, I had seen changes that had been successfully resisted for generations accomplished in a matter of months–deep-down changes that were literally unthinkable to the vast majority of my fellow Southerners. In 1961, I had witnessed the desegregation of Atlanta's Piedmont Park Lake, a childhood haunt. Only a few years earlier, it would have been easier to imagine Little Green Men from Mars with antennae than those black and white bodies I could see playing in the sparkling, sunlit water. The Civil Rights Movement not only gave hope to those who envisaged radical change but also offered a means–non-violent resistance–by which to make the change happen. If this was possible, then what was *not* possible?

"There's a free speech movement and a civil rights movement," I said. "How about a human potential movement?"

I scrawled "Human Potential Movement" on a slip of paper, threw it on the floor, and went on brainstorming. Neither of us had any idea that we had just named a "movement" that eventually–in one way or another, slightly or greatly, for better or worse–was to influence the lives of millions of people, a movement that would be interpreted and misinterpreted in hundreds of articles, and that, in many cases, would be taken for something that neither of us had intended.

We used the term off and on over the next three or four years–which was long enough for the media to take it up–but there was always a certain playful quality in our usage. As I was to write in my Sixties memoir, "we were always willing to laugh at our most grandiose plans while at the same time pursuing them for all we were worth. We took ourselves both seriously and lightly. In the spirit of play, we dedicated ourselves to changing the world."

The Anatomy of a Vision

The 20,000-word Human Potential text piece never ran as such in *Look*. "Too long, too intellectual for a general magazine," said the top editor. A wonderful break, as it turned out. The material in the article exploded into prismatic fragments, inspiring and informing picture stories, short articles, special issues of *Look* magazine, books, speeches, programs, practices. I continued my journalistic career for a few more years, but now I had a vision that gave a deeper meaning to all that I was witnessing in my travels: the triumphs of the human spirit, the injustice and suffering, the caring and the cruelty, the greed and the love. I became associated with Esalen, first as a board member, then as a vice president. I donated my time; Esalen was my good work. And more and more, as the years passed, I realized that a vision of human potential was to light my path for as long as I lived.

Our vision began simply with a sense of wonder at one of the world's great mysteries: What is the purpose and the destiny of the enormous surplus capacities built into every human being? None of the 38 experts I interviewed in 1964-1965 estimated that we were using more than a tiny fraction of our potential. Dr. W. Ross Adey, head of UCLA's Brain Research Institute in the Sixties told me that the "ultimate creative capacity of the human brain is, for all practical purposes, infinite". The attempts to produce true artificial intelligence have confirmed the awe and wonder we felt about this subject. While computers can now play excellent chess and pass a Harvard calculus exam, they are still hard put to perform such "ordinary" tasks as recognizing faces or understanding a book for eight-year-olds. Computers are wondrously fast and clean in their operations, but it is the very messiness of the human brain–its ability to deal with

ambiguity, to make unanticipated connections, to soar into unexplored realms–that is its crowning glory.

The mystery of unused human capacities has another side: Why and how do societies work to squash the realization of all but a tiny fraction of our potential? This subject gets a thorough treatment in my books *Education and Ecstasy* (1968) and *The Transformation* (1972). Clearly, the full expression of human creativity or the onset of swift, significant change can constitute a threat to the status quo; complex civilized societies, by and large, have relegated most individuals to the role of component–standardized and specialized, reliable and predictable. Make a small adjustment in the lenses of your conceptualizations, and you might well see that the covert aim of our own system of mass education is to *stop* learning–if learning is defined as anything more than standard symbolic manipulation and the memorization of certain commonly accepted cultural material.

"STOP LEARNING!" Those words, in large Gothic type, headed the full-page newspaper advertisements for the three-part *Look* magazine serialization of *Education and Ecstasy* in the fall of 1968. The book became a bestseller and the serialization was available to 34 million readers. It was based on my visits to hundreds of classrooms and interviews with scores of educators over some twelve years of education writing. But it was also a strong statement of the emerging vision, reflecting the ongoing dialogues between Michael and me; Chapter Two, in fact, was titled "The Human Potential". The book brought hundreds of letters. The magazine serialization brought more than 5,000. Many of the letters asked for more information. Some told of plans to start schools based on the human potential model. I'll never know how many private schools got their starts as a result of the book or how many teachers in ongoing public and private schools felt its influence. I do know that the walls of the teachers' restrooms in one of my four daughter's public schools were papered with pages from the *Look* serialization.

Among other things, *Education and Ecstasy* was a vehicle for the expression of one of the key ideas Michael Murphy brought to the vision: the need for a realization of human potential across the whole spectrum of human possibilities. It was clear that different cultures chose different possibilities to reinforce. The Bushman could track an eland with exquisite accuracy through trackless deserts. The Hindu yogi could enter an ecstatic trance. The medieval European architect could conceive and design a cathedral, the modern technologist a spacecraft. It was equally clear that our culture had chosen, by and large, to educate and reinforce one manifestation of human potential, the cognitive/verbal, to the detriment of many others. Cognitive training holds center stage today on virtually all high school and college campuses.

In our marathon dialogues on the subject, Michael Murphy and I were more likely to refer to it as "this thing" than as "the Human Potential Movement". We never saw "this thing" as a single, specific step-by step program for human change but rather as a larger vision, a way of seeing human life that would inspire many and diverse programs for change. On two matters, we were absolutely clear: If this was a movement, it was not to be an exclusive, esoteric one; it was a big party and everyone was invited. And it should never, never fall prey to the guru model. As the living embodiment of some remote human possibility, the guru might manifest great power and appeal. But the dangers were even greater, especially in the age of mass communications, when thousands, even millions of people might be swept off balance by a single charismatic individual. Perhaps the guru model had become obsolete with the invention of the loudspeaker. Our forebodings about the guru-type leaders who might fly the human potential banner were to be rather forcibly borne out over the next three decades.

Where then do we find our wholeness? What about the education of the senses, the heart, the spirit? Where can we go to discover the deeper wisdom of the body or the uses of dream and fantasy? Is it possible to learn to be more loving, more open, more aware? How about the education of creativity, of the imagination? Or, to go a step further, can mystical illumination or psychic abilities be developed through instruction and practice?

The education of the whole person is an old idea, going back at least to the ancient Greeks. In 1961, the English writer Aldous Huxley did a series of lectures on what he called "the non-verbal humanities", helping inspire the language of the early Esalen brochures. The Montessori Schools, the Waldorf Schools and some other individuals and institutions were still aiming for wholeness in education, but for the most part it was as if we simply hadn't noticed we were educating only a thin slice of our potential–and not doing that very well. The non-verbal humanities were rou-

tinely neglected, ignored, or entirely repressed, and the Sixties were a time when repressed material by the closet-full was shoving its way into the light. "Education's new domain is not bound in by the conceptual, the factual, the symbolic," I wrote in *Education and Ecstasy*. "It includes every aspect of human existence that is relevant to the new age."

From the beginning, this old/new domain was well represented in Esalen's seminars and workshops. Never, however, was it our intention to downgrade the importance of the intellect. We were convinced that the life of the mind, one of the highest human achievements, could be enriched and balanced through the judicious education of the body, the senses, the emotions, and the spirit. Those Sixties slogans, "Get out of your head and into your body" and "Lose your mind and come to your senses", represented a wild swing of the pendulum, the simplistic reaction to a crippling imbalance long endured.

How can I distill the stuff of 10,000 hours of dialogues, conferences, brainstorms, seminars, and late night bull sessions in a few paragraphs? Many people's ideas went into the mix. Well established as well as brand new practices informed the vision. Numerous individuals had their own versions of the movement. But it's doubtful that anyone spent more time on it or stayed with it for as long as Michael and I did.

The vision that has held our attention for so many years is rooted in a still developing body of thought that is powerfully represented by Michael's teacher, Sri Aurobindo. This remarkable man was a native of India who lived in England from ages seven to 20 and was educated at Cambridge, a mystic who was also a social activist. He stood as a synthesis of East and West, of contemplation and action, a man who took delight in bringing seemingly disparate elements of existence into new harmonies. Michael, too, likes to take down boundaries, to discover possible alliances where others see irreconcilable differences–between mind and body, black and white, physics and mysticism, the Occident and the Orient, Western sports and Eastern yoga, the United States and (what was) the USSR. This predilection for convergence and synthesis in itself has helped shape the vision of human potential and many of the programs the vision has inspired.

Aurobindo's philosophy entails the evolution of a higher consciousness, perhaps of a new kind of human being. He accepts the Western scientific discovery of evolution while going beyond mainstream science in explaining its tendency toward increased complexity and order. At the beginning of time, according to Aurobindo, the divine spirit "descended", or involved itself, to form the inconscient stuff of the universe. Ultimately, then, evolution is the emergence of ever-higher organization and consciousness through the unfolding of a hidden divinity. This idea, which is also reflected in the thought of Hegel, William James Sr., and a few other philosophers, reflects the intuition reported by countless people since antiquity that they enjoy a secret contact or kinship with the founding principles of the universe. It also resonates with the belief in the possibility of individual and social transformation that is so essential to the human potential vision.

From the beginning, Michael and I agreed that social transformation requires individual transformation and individual transformation requires social transformation. We felt that in some respects a transformation of self and society already was underway. The challenge lay in the fact that technology was not only speeding up human interaction, but also threatening human survival. For the first time in history, material progress could end up destroying much of what is best in the life of this planet. The history of the nation-state was one of exploration, the conquest of territory and other peoples, and the exploitation of physical resources. In an overpopulated, overexploited world, such pursuits were clearly becoming maladaptive, even in a narrow, selfish sense. This situation alone demanded radical revisions of our values. Until recently, for example, a high degree of aggressiveness and competitiveness had appeared to enhance the survival and furtherance of a given society, and thus was seen as a positive value. Our present and future situation, however, seemed to call for collaborative, empathic relations. A society bent on conquest and domination would naturally value tight emotional control, mind-body dualism, single-mindedness, sexual repressiveness, and the like. But these old values were now bringing the world closer and closer to destruction.

The future as we saw it called for a turn to the exploration of consciousness, the deepening of relationships, and the full development of human resources. We saw this as the next real frontier. I was particularly taken with Michael's idea of "psychic mobility". The coming age might well see more travels of the psyche than of the physical body–travels less polluting of the atmosphere, gentler on the land.

The purpose of life? To be fully, consciously engaged in the great adventure of evolution; to manifest the divine spirit as best we can through the development of our potential–the potential not just to memorize facts and manipulate sym-

bols but also to expand the senses, to develop the body, to explore consciousness, to deepen relationships and serve others. To put it another way, life's purpose could be seen as lifelong learning in the broadest sense.

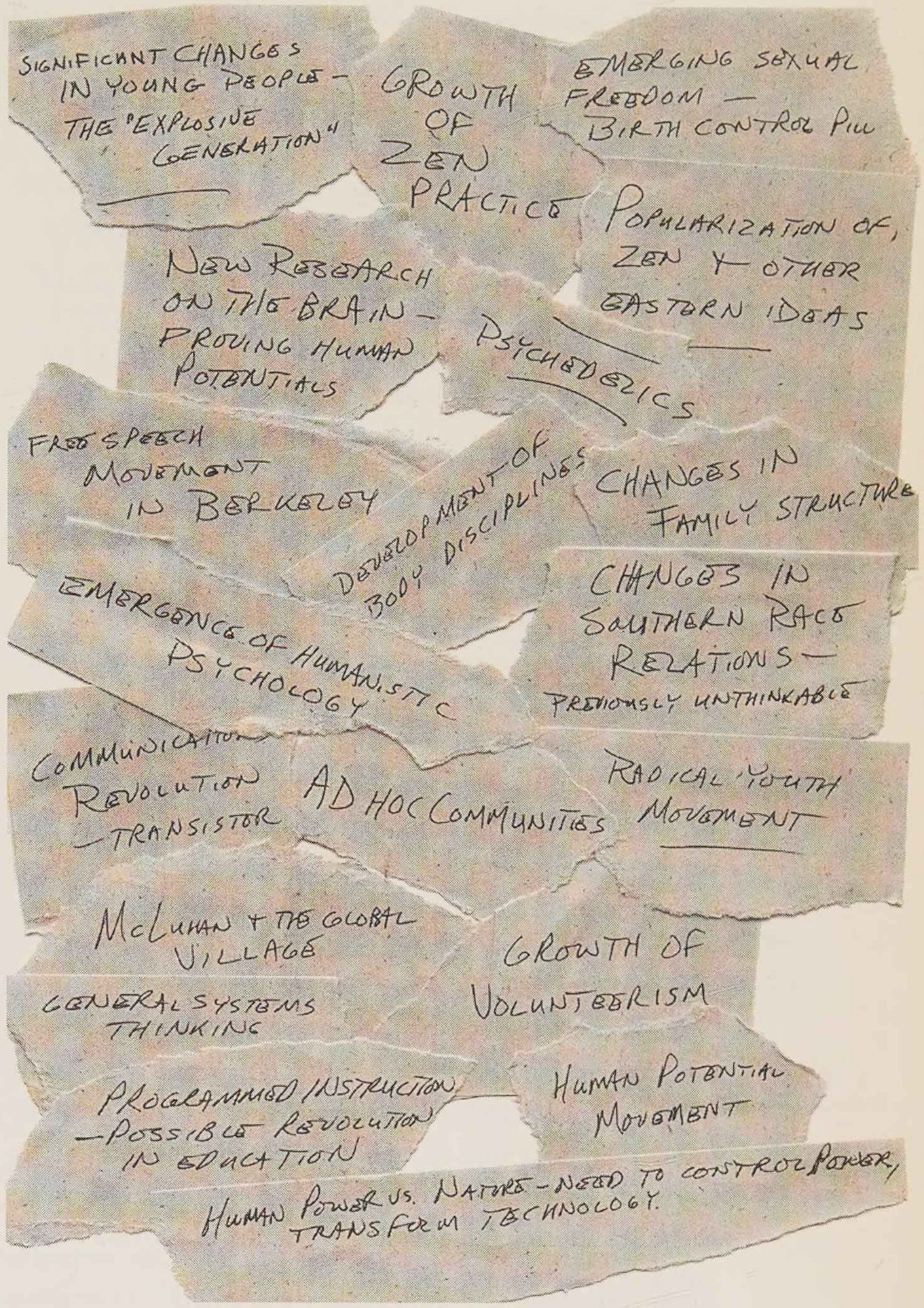
To look at it from yet another angle, the waste of human potential must rank among the greatest of tragedies. A good part if not most of the world's unhappiness, unrest, neurosis, drug abuse, illness, and crime, it seemed to us, could be traced to our failure to develop even a fraction of our abilities. To quote the novelist James Agee: "I believe that every human being is potentially capable, within his 'limits', of fully 'realizing' his potentialities; that this, his being cheated and choked of it, is infinitely the ghastliest, commonest, and most inclusive of all the crimes of which the human world can accuse itself. . . . I know only that murder is being done against nearly every individual on the planet." Agee's words seared my heart. The pain was not abstract, "out there". It brought me close to the hideous injustices of my native South. It touched the lives of my parents and children, my friends and brothers, myself. To help create the conditions under which each of us could better develop our potential–what better aim could we find for our lives?

The Media Blitz

From 1965 through most of 1967, the human potential movement developed in the blessed absence of media attention. I abstained from reporting specifically on Esalen or the movement, both out of reluctance to get into questions of conflict of interest and from a real fear of what this attention, whether unfavorable or favorable, might do to a movement, an orientation toward living, that was still new and vulnerable. In 1958 I had produced a *Look* picture story on the community of beatniks that had congregated in San Francisco's North Beach district. Within three weeks, the Gray Line Tour buses were cruising the area, the Hell's Angels had made a raid, and the beatnik scene was never to be the same.

By the time the media finally got around to the little institute on the Big Sur Coast, several powerful and colorful teachers were in place to gain no small measure of media fame and, to some extent, to reshape the movement. They included Frederick S. (Fritz) Perls, the brilliant and irascible founder of gestalt therapy, who had moved to Esalen in 1964, and Ida Rolf, the founder of a deep, often painful form of massage called "rolfing", who had been invited by Perls to make Esalen her West Coast headquarters.

And then there was Will Schutz.



These were some of the ideas scribbled on scraps of paper at George Leonard and Michael Murphy's brainstorm session in San Francisco, December 1965, which led to the idea of a Human Potential Movement and reflected the agenda of the times.

Schutz was a top-flight research psychologist who had received his PhD at UCLA and had taught at Harvard. By 1967 when he moved to Esalen, however, he had given up formal research to pioneer a no-holds-barred form of group self-revelation he called Open Encounter. With a balding head, a muzzle beard, and the build of a wrestler, Schutz was an impressive presence. He was deeply committed to the human potential vision, and believed that Open Encounter was the royal road to its realization. Freud described himself as being primarily a *conquistador*, and it would be hard to find a better word for Schutz. He wanted to make complete

openness and honesty the rule rather than a rarity in human relations. He was determined to strip away every last vestige of convention, secrecy, defensiveness, and social conditioning until finally the pure and shining gem of unadorned human nature would be revealed for all to behold. I participated in several Schutz workshops and found them enormously exciting, not as therapy but as high adventure. For many people, the workshops had the impact of a thunderbolt. After revealing some lifelong secret in a flood of cathartic tears, then being embraced and celebrated by their fellow participants, they felt their lives were to be forever changed.

Schutz moved to Esalen just as the second nine-month Residential Program was getting started. Back in 1965, I had helped Michael Murphy lay plans for this experiment in higher education. If to create a new university is to take a new look at the universe, our look was more radical in curriculum than in format. There would be courses in sensory awareness, guided imagery, meditation, gestalt therapy, creativity, and other non-verbal humanities as well as more conventional fare. But there would also be assessment, final student projects, and plans for the fellows to take their learning out into their own communities. The 1966-67 program had lost much of its revolutionary momentum when its leader, the noted family therapist Virginia Satir, abruptly walked out. When Schutz took over the 1967-68 program with its 22 residential fellows–dubbed by some of us "astronauts of inner space"–it was quickly apparent that we were in for a different kind of ride. Schutz was dedicated to testing every known limit of intimacy and self-revelation with the nine-month fellows while continuing to provide weekend and five-day workshops for the public.

It was in this milieu, with Perls' explosive gestalt therapy vying with Schutz's even more explosive Open Encounter, that the media finally discovered Esalen and the human potential movement. It started rather quietly, with an Associated Press story on the inauguration of the San Francisco Esalen center in September 1967. Not long after that, *Time* magazine ran an Esalen piece in its education section. Both of these treatments were favorable, if a bit tentative. Then, on Sunday, December 31, an event occurred that opened the floodgates of media coverage: *The New York Times Sunday Magazine* led off with Leo Litwak's "A Trip to Esalen: Joy Is the Prize", a superb piece of reporting and writing, later to be reprinted and anthologized again and again. The very fact that *The New York Times* had done such a favorable story certified Esalen and the movement as worthy of serious attention.

The genius of Litwak's article lay in the fact that it started from the point of view of a skeptic. The reader could easily identify with the writer's reservations about the human potential vision, his suspicions about Schutz's techniques, and his initial dislike of some of the other group members. The reader then follows Litwak as Schutz leads him on an imaginary trip through his body and he discovers a gaping emptiness where his heart should have been. Litwak realizes, as his journey continues, that he had shut off his emotions during his tour of duty as a medic with General Patton's forces in World War II, more than 20 years earlier. He recalled an incident when he had been summoned to attend to a German soldier, a blonde about 16 years old, who was dying, his heart exposed. He had forced himself to feel nothing for the kid, to go numb. "Now," Litwak wrote, "I wailed for that German boy who had never mattered to me and I heaved up my numbness." At the end of the session, he "felt wide open, lightened, ready to meet others simply and directly."

On the final morning, the entire workshop met to say goodbye, and Litwak found himself "hugging everyone, behaving like the idiots I had noticed on first arriving at Esalen." He sums up his experience in the article's last paragraph:

> *The condition of vulnerability is precious and very fragile. Events and people and old routines and old habits conspire to bring you down. But not all the way down. There is still the recollection of that tingling sense of being wide awake, located in the here and now, feeling freely and entirely, all constraints discarded. It remains a condition to be realized. It could change the way we live.*

During the week after the article appeared, queries about Esalen were fired off from editorial offices in New York, Boston, Washington, Chicago. By the end of the week, Michael Murphy was getting phone calls from editors and producers who wanted to do their own versions of the *Times Magazine* piece. The media blitz was under way. Over the next three years, over 100 articles on Esalen hit the newsstands. Will Schutz became a familiar face on national television talk shows. At first, the articles were essentially favorable, some of them shamelessly aping the Litwak format. Then a cynical, tongue-in-cheek tone crept in. And then came the inevitable put-downs, as if the media were ashamed of their initial enthusiasm.

During this period, some people suggested that we must have had a first-rate press agent to get such wide coverage. The truth lies at the opposite extreme. We actually did everything we could to discourage or delay coverage–every-

thing, that is, except refuse it, which would have been antithetical, we thought, to the openness and disclosure that goes to the heart of the American spirit.

What bothered us was not so much the negative articles, which were to be expected, as the misrepresentation. Encounter was an important work for its time–a sunburst of expressiveness after decades, centuries, of pent-up emotions. But it was only one aspect of Esalen's curriculum, and it was purely an accident of timing that led millions of readers and viewers of the late Sixties to assume that the human potential movement was made up primarily of people crying and hugging and submerging themselves in hot baths. According to Gregory Bateson, "Mere purposive rationality unaided by such phenomena as art, religion, dream, and the like, is necessarily pathogenic and destructive of life." If this is true, it is also true that immediate emotional expressiveness, unaided by such things as wisdom, compassion, and long-term practice, can be trivializing and in its own way destructive. It was a lesson we still had to learn. Score one for Herman Kahn.

Expansion and Diffusion

Still, the publicity created an explosion of interest in the human potential, however it was seen. Institutes copying Esalen–the programs, the leaders they attempted to book, and in some cases even the letterheads they used–began springing up throughout the nation and overseas. There were at least 100 by late 1968, when a meeting of representatives of about 50 such "growth centers" was convened at San Francisco's St. Francis Hotel. The suggestion was made that all the centers syndicate under Michael Murphy's leadership –a sort of Kentucky Fried Esalen. Michael declined.

That was only the beginning of a period of development and expansion that saw a wide diffusion of the movement's ideas into the culture. Scores of books on the subject appeared. Esalen had its own publishing program with the Viking Press, producing 17 books. From the late Sixties through the Seventies, entrepreneurs of the human potential mounted weekend extravaganzas, taking over all the meeting rooms of major hotels to present the works of a dozen or more movement leaders to upwards of a thousand people. At a typical event, the leaders might include Will Schutz, zen philosopher Alan Watts, revolutionary brain researcher Karl Pribram, tai chi dancer Al Chung-Liang Huang, and gestalt generalist Ilana Rubenfeld. Michael Murphy didn't care for large audiences and generally stayed in the background, but I did my share of such events, enjoying the collegiality of the leaders and the enthusiasm of the participants. Introducing the movement to London in May of 1970 might have been the most fun of all. There were endless parties, excursions to Cambridge and the countryside, interviews on BBC, and a tabloid press that made the American press seem positively responsible. One day Michael came in waving a headline and laughing: "STRANGE CULT VISITS ENGLAND". It was not as Michael and I had imagined it, but some sort of human potential message was getting out to the world.

Sometimes it seemed that following the progress of this movement was like taking an amusement park ride through a dark tunnel: You never knew what was going to pop up next. Here, in the early Seventies, came est, to be followed by similar training organizations, growing exponentially through the decade, using a number of human potential exercises and ideas but giving them a dogmatic, authoritarian twist. These organizations served a purpose, introducing the experience of altering consciousness to professionals and business executives in hotel ballrooms. Where they operated out of the guru model, they violated what was essential to

We believe that all people somehow possess a divine potentiality; that ways may be worked out—specific, systematic ways—to help, not the few, but the many towards a vastly expanded capacity to learn, to love, to feel deeply and to create. We reject the tired dualism that seeks the divine and human potentialities by denying the joys of the senses, the immediacy of unpostponed life. We believe that most people can best find the divine and themselves through heightened awareness of the world, increased commitment to the eternal in time.

We believe, too, that if the divine is present in the individual soul, it must be sought and found in human institutions as well; for people will not readily achieve individual salvation without a saving society. We envisage no mass movement, for we do not see people in the mass; we look instead to revolution through constant interplay between individual and group, each changing the other.

The revolution has begun. Human life will be transformed. How it will be transformed is up to us.

—George Leonard

from *A Proclamation for Human Potential*
given at Grace Cathedral, San Francisco, January 6, 1966

. . . the legacy of that time is nothing less than an agenda for action in the Nineties and beyond.

the vision that Michael and I and most other people associated with the human potential movement held dear.

Meanwhile, from the late Sixties on, the culture was spawning one movement of human liberation after another, movements complementary with but not connected to the human potential movement and its predecessor, the civil rights movement. As never before, groups of people loudly and sometimes violently were expressing their previously repressed feelings about such matters as war, the environment, sexual freedom, women's rights, gay rights, animal rights, ethnic rights. In their concern for self-expression, oneness with nature, and the need for a reform in our value system, these movements seemed to us largely congruent with a concern for the human potential.

Some people have painted the Sixties as a decade in parentheses, an anomalous time when an entire nation got out of step. We view it, especially now that two more decades have passed, as an inevitable, long-overdue reaction to years, decades, centuries of repressiveness and injustice. In the Sixties, we were hasty, unbalanced, often ahead of ourselves, and sometimes downright foolish. The Sixties and their spillover into the Seventies didn't really solve anything in a final, satisfying way. What that period did do is bring long-repressed material to light, material which must eventually be dealt with. The Eighties might be seen as a reaction to the Sixties, an interlude of denial, of phony reassurances that the pressing demands around the human potential in its broadest sense could once again be stuffed back in the closet. But the denial hasn't worked. Today, when every extrapolation of the present way of doing things points to the possibility of worldwide chaos and the degradation of human life, we can at last understand that the legacy of that vivid time is nothing less than an agenda for action in the Nineties and beyond.

The View from 1993

Esalen's 25th birthday in 1987 was celebrated by an outpouring of articles and feature stories in magazines and newspapers throughout the US. Not all the writers' tongues were completely dislodged from their usual resting places in their cheeks, and there were still a few mentions of the hot baths, but the articles were overwhelmingly favorable, even appreciative. Esalen's 30th birthday occasioned more articles of a favorable nature. One of them, in the traditionally conservative *US News and World Report*, praised the movement itself in an article entitled "Human Potential Hits 30".

Maybe all this media approbation simply represents respect for the durability of an institute and an idea. Or maybe the media as well as the movement have matured. Most of the articles cited Esalen's Soviet American Exchange Program, which was started in early 1980. This program essentially set the pattern for what Joseph Montvill of the US State Department termed "Track Two Diplomacy", that is, citizen efforts that complement formal government diplomacy. Among other things, the program organized the first live television "Spacebridge" between the US and the USSR; signed some of the first working agreements between such organizations as the Soviet Writers Union and a non-governmental American institution; and organized the first visits of several influential Soviet leaders to the West, including Boris Yeltsin. After his Esalen-sponsored visit, Yeltsin renounced the Communist Party, helped form the democratic movement in Russia, and led resistance to the attempted coup against the Gorbachev regime in late 1991.

Another birthday is being celebrated in this special issue, and it can be said that the Institute of Noetic Sciences stands, with Esalen, at the solid core of a movement that has often seemed to flake at the fringes. Where Esalen has led the continuing exploration of transformative practices, IONS in many ways has taken the lead in establishing a theoretical and research base for the development of human potential. Serving as a forum for scientists and academicians interested in consciousness and mind-body issues, IONS has increased the awareness and credibility of many previously ignored phenomena.

What would we say now to Herman Kahn's judgement that the human potential movement would change the world, but not in the ways we planned? We might have been surprised at how decisively human potential practices would move into corporate training and development programs.

Many of our old friends from the Sixties now spend much of their time flying around the world consulting with giant corporations. But business people were showing their interest in programs that would make them more human, more socially conscious, and possibly more profitable as early as the late Sixties. We might have been dismayed that our principles and practices would not make a larger impact on public education. We might have been delighted that human potential ideas and practices would have such a strong influence on the health field and on the acceptance of mind-body unity.

Actually, 30 years is not a long time, and we might say that the influence of what is generally associated with the human potential movement has grown in just about the way we might have expected. By the mid-Seventies, university extension divisions, community colleges, YMCAs, church groups, self-help groups, and individual practitioners were already offering the kind of programs that five or ten years earlier could be found only at places like Esalen. Today you'd be hard-pressed to find a good old-fashioned encounter group simply because you just have to switch on your television to see and hear the kind of material that in the mid-Sixties was largely limited to Esalen-type group sessions. And if you want to talk about a previously taboo subject, there are telephone hotlines available on almost anything you might imagine, and if you don't want that, there are your own friends and colleagues, who are probably far more willing to talk openly about intimate subjects than a comparable group would have been before the Sixties. The truth of the matter is that the boundary of admissible expression has radically shifted. A play or movie originally set in 1960 would most likely have to rewritten from beginning to end before it could be set in the 1990s.

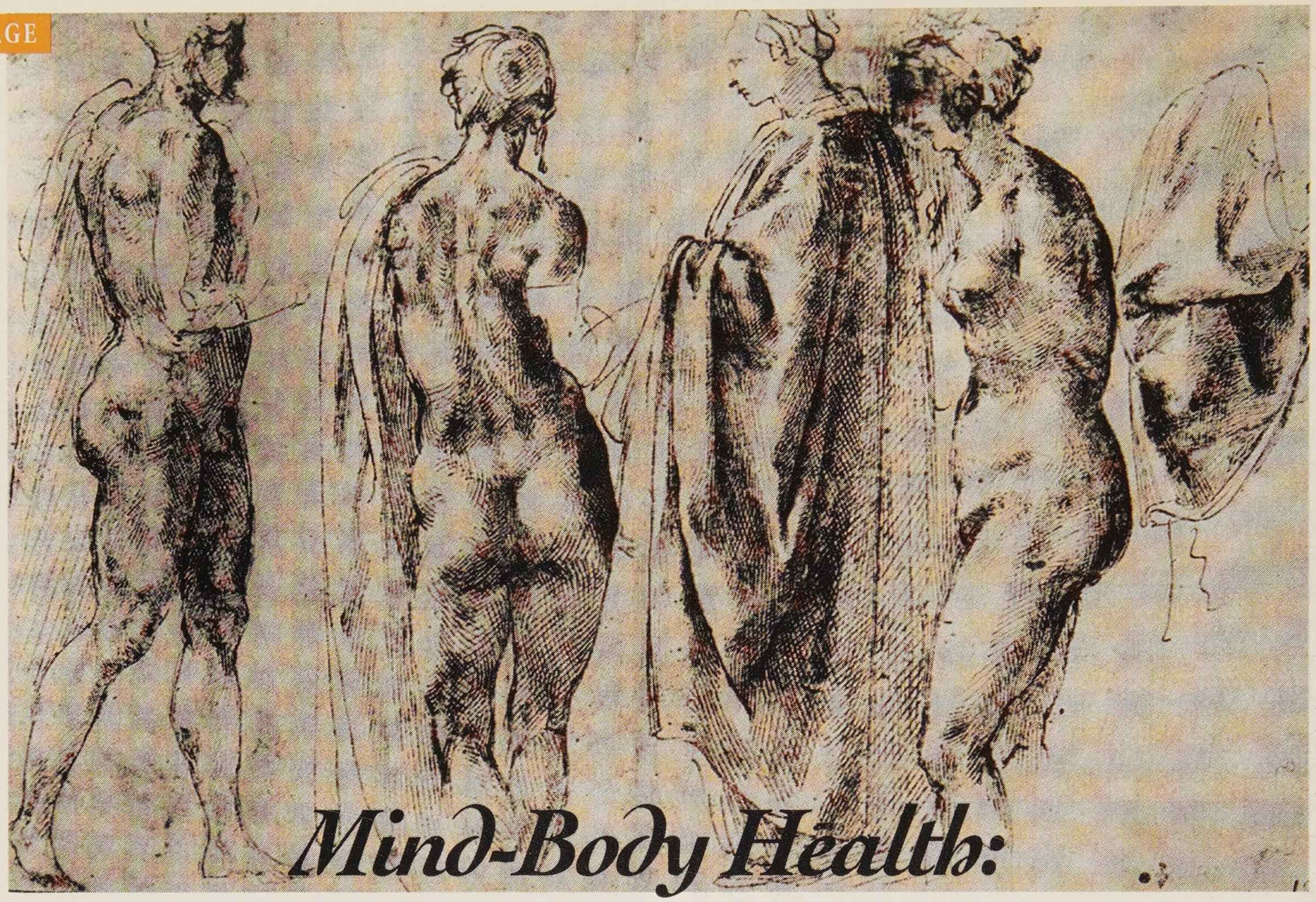
There remain two significant disappointments. The first has to do with a false assumption. In the Sixties, Michael and I at first went along with the notion that a single cathartic, psychedelic weekend could create a lasting transformation. But it didn't take long for us to realize that this was not at all the case. We find it disturbing that some groups, reflecting the quick-fix assumptions of our culture, still subscribe to this big-bang theory of transformation. Life-changing moments do exist, but for the change to endure they generally must have been preceded by or be followed by patient, long-term practice. In the age of exploration, adventurers could visit an exotic foreign shore, be deeply moved by what they saw, and bring home breathless tales of their adventure. But creating a permanent settlement is another thing, involving such mundane and essential matters as housing, sustenance, governance, relationships, security, and the disposal of waste. Many human potential failures can be traced to their continuing belief in the big bang, the quick fix. In our most recent works, my small book *Mastery* and Michael's monumental *The Future of the Body*, we have stressed the importance of long-term practices that integrate body, mind, spirit, and relationship with others.

We have also felt a certain disappointment that more people and organizations haven't yet addressed the philosophical implications of the human potential vision and gathered data to support it. The Institute of Noetic Sciences has moved strongly to fill this vacuum, as has Michael Murphy himself in *The Future of the Body*. In 1978, Michael started an archive of exceptional human functioning, eventually collecting around 10,000 documents offering evidence on those extraordinary manifestations of the human potential that might presage the next step in our evolution. He began a seven-and-a-half year marathon of writing in 1983 that resulted in the 1992 publication of a book which, according to Georg Feuerstein, "is a magnificent tour de force in documenting and interpreting practically the entire range of extraordinary physical and psychic capacities with which our species seems to be so richly endowed."

Currently Michael and I, along with Annie Styron Leonard and Erik Riswold, are leading an experimental class in Integral Transformative Practice aimed at creating a long-term practice for busy people that involves the whole person while offering participants the possibility of extraordinary changes in body and being. The data gathered in this experiment will be reported in *The Life We Are Given*, a book jointly authored by Michael and me due for publication in early 1995.

This thing, this movement, this vision of human potential and the further evolution of human nature, has endured a stormy voyage since that night in December 1965 when it was so casually named. The 20th birthday of an organization that has well served what is finest in our troubled, magnificent species seems an appropriate occasion to recommit ourselves to the longer journey. More balanced, better equipped for the long haul, less buffeted by the waves of media and myth, we can choose this moment to consult our compass, check our course, and raise our sails into the winds of grace.

George Leonard's books include The Transformation, The Silent Pulse, *and* Mastery. *He is a trustee of Esalen Institute and founder of Leonard Energy Training (LET).* □



Drawing by Michelangelo

Mind-Body Health: The Birth of a Movement

A Retrospective Discussion of the Inner Mechanisms of The Healing Response Program

by Henry Dreher and Barbara McNeill

IONS' Inner Mechanisms of the Healing Response program (IMHR) has supported innovative approaches to mind-body research since 1984. It is organized around the premise that we may possess an as yet undiscovered healing system which operates in a manner similar to the other important systems of the body, such as the nervous system, the immune system and the endocrine system. Major funding is from the Fetzer Institute and Mr. Laurance S. Rockefeller, with additional funding from private donors and foundations.

The following commentary is based on reflections from the project's Scientific Advisory Board and from Nola Lewis, Research Coordinator. The Advisory Board includes: Michael Lerner, PhD, President, Commonweal; Rachel Naomi Remen, MD, Medical Director and Co-founder of the Commonweal Cancer Help Program; Lucy Waletzky, MD, Co-Director, Medical Illness Counseling Center; Joel Elkes, MD, University of Kentucky at Louisville; Winston Franklin, Executive Vice-President, Institute of Noetic Sciences.

The program was originated and directed by Brendan O'Regan, Vice-President for Research, who died in August 1992. We had intended for this article to be a factual analysis and evaluation of a decade of research. However, since Brendan was such an integral part of this program at IONS, we found our conversations kept returning to his unique role and his research agenda . . .

The Concept of the Healing System

Lucy Waletzky: I first talked with Brendan O'Regan in 1985 about the inner mechanisms of the healing response. As a medical doctor, I was very interested in this field, and was impressed to find that Brendan was looking at the issues from a very broad perspective—including spiritual, psychological and physical factors. Few people at that time had such a holistic vision. But Brendan had an idea that the human body contained a distinctive and operational healing system. I think that concept could be elaborated further, and I think it will be. Although psychoneuroimmunology, or PNI, clearly figures in this, it is primarily looking at biochemical and psychological influences. However, following Brendan's agenda, we may expect that research on the healing system will include, also, bio-electrical and spiritual influences that are not otherwise being studied.

Michael Lerner: I don't know many people who had as comprehensive and far-reaching a vision of mind-body health as Brendan O'Regan. That vision which I think he tried to chart out in the Healing Response program included chemical and electrical approaches, psychological and cognitive approaches, spiritual and subtle energy. To that he added psychoneuroimmunology, then its relationship to research on multiple personality and on positive emotions. He had this ever-expanding set of interlocked fields that mind-body research has barely begun to touch. I'm convinced that if people were really to work systematically with the agenda that Brendan set out, it would have an enormous amount to yield as a broad research strategy.

Rachel Remen: I think Brendan's vision and his courage to follow it needs to be documented because other people need to find that courage too. I remember a discussion with Brendan a very long time ago about the concept of healing being a doorway to a whole new consciousness that would affect things far beyond mere physical healing. And I remember thinking to myself that this idea was nonsense. I was interested in "consciousness" at the time, and I thought that the study of consciousness was far more important than the study of healing. I thought that the process of healing was only a little part of the bigger picture.

But I came to see that "healing" is the connecting point to everything else. "Consciousness" just floats around somewhere. It's interesting. It's nice, like frosting on the cake. But healing and suffering touch every human being. We're all involved in this process; we all participate in it. And Brendan saw that. He understood that. He had this impeccable ability to hone in on what was the royal road to the future, the next step, the way in.

Seeding the Mind-Body Field

The Institute of Noetic Sciences makes seed grants which help validate new research and establish fruitful relationships between key researchers. These relationships enable leading-edge researchers to make further connections with key organizations and sources of funding also committed to work in the mind-body health field.

Remen: I think that those who supported Noetic Sciences' program financially should be credited for what they did. When a researcher's ideas are so far ahead of the accepted paradigm, the only basis for a funder's decision to support is faith in that researcher's integrity. Brendan had such integrity, such pure commitment to the development of these ideas, that people who otherwise would never have understood, would never have been supportive, came forward with time and money. In a way they became pioneers in the field of philanthropy—committing funding to ideas they would never have originally sought out. I thought this was a remarkable process, how people came to support things so much before their time—only Brendan could see them—and how much people were able to trust his vision.

Nola Lewis: The Inner Mechanisms of the Healing Response program is now about ten years old. But before it was formalized in 1984, we were already giving financial support to research in the mind-body-and-health field as part of our ongoing commitment to consciousness research. The Institute has always had an interest in this area. Through Brendan's efforts, issues related to healing eventually differentiated into a more formal program, generating and allocating its own funding. The Healing Response program, then, became one of several programs at the Institute—alongside, for instance, the Causality Project, the Altruistic Spirit Program, and Meditation Research. Consciousness as a causal factor is the common thread weaving through all these programs. For example, the Causality Project, though not focused on questions of healing, is interested in ontological and epistemological issues of how we shape reality; and, of course, these may have a dramatic bearing on how and whether or not we learn to heal ourselves. Exploration of the "inner mechanisms" of healing was important enough, we believed, to be a distinct project sustained with its own funding.

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Small IMHR seed funding has served as a launching pad for more ambitious scientific explorations into healing.

Seed grants for crucial pilot studies are often the most difficult to obtain from usual funding sources. To help fill this need, the Inner Mechanisms of the Healing Response program (IMHR) has identified a number of innovative researchers, and supported their seminal work with small grants (in some cases as little as $5,000). Although these funds by no means substituted for major research funding, they did serve as "catalysts" that enabled researchers to pursue their projects further. These included:

Dr. Eva Glazer: Long-Term Survivors

Bay Area Tumor Registry, Department of Health Services, Emeryville, California

Regional cancer registries compile statistics on the incidence and the course of the disease over time. Dr. Glazer received funding to search for long-term survivors of metastatic cancer. Altogether, 88 individuals were identified who had been diagnosed with a metastatic cancer during the years 1975 or 1976, but whose records indicated that they were still alive in 1986. The original pathology reports were then examined by an independent pathologist to confirm the original diagnoses. This group of patients now represents a unique resource for the identification of factors involved in their survival.

Dr. Ronald Herberman and Dr. Theresa Whiteside: Immunologic Markers for Remission

The Pittsburgh Cancer Institute, Pittsburgh, Pennsylvania

Dr. Herberman and Dr. Whiteside observed that transplant patients, when given cyclosporin to inhibit rejection of the transplant, sometimes develop post-transplantation lymphoproliferative disease (PTLD), which in some instances progresses to lymphoma. When the cyclosporin is withdrawn, they observed remission of these diseases. Their IMHR grant enabled these researchers to study the role of the immune system in remission. The results of comparisons between patients who developed PTLD versus those who did not indicate that several immunologic markers may be useful for "flagging" patients likely to develop post-transplant malignancy or signal its remission.

Dr. Sandra Levy: Attitude and Immune Function

University of Pittsburgh, Pittsburgh, Pennsylvania

Dr. Levy applied her IMHR grant to investigate whether immune function could be improved by changing attitudes linked with pessimism and helpless, passive behavior. Using a standard psychological therapy for depression, she studied a group with either metastatic breast cancer or malignant melanoma. Patients who improved following this intervention also showed a clear trend for improved immune function, both in terms of natural killer (NK) cell function and other immune measures. The study is important because it demonstrates that psychological intervention is significantly correlated with maintenance of immune function—whereas the immune functions of the control group, who did not receive such support, *declined* over the period of the study.

Dr. Dean Ornish: Lifestyle and Heart Disease

Preventive Medicine Research Institute, San Francisco, California

In this study, 50 cardiac patients were randomly divided into two groups of 25. One group received a program of lifestyle changes—such as meditation, group support, dietary changes, and exercise—in addition to the usual regimen recommended for cardiac patients. The control group followed a similar regimen but made none of the lifestyle changes. After one year, measures of cardiovascular fitness showed that lifestyle changes can actually *reverse* coronary atherosclerosis. A report of this seed project, along with subsequent studies, are described more fully in Ornish's popular book, *Dr. Dean Ornish's Program for Reversing Heart Disease*.

Dr. Janet Quinn: Therapeutic Touch

University of Colorado Health & Science Center, Denver, Colorado

"Could teaching people to heal others act to boost their own immunity?" This question motivated Dr. Quinn's investigation into the dynamics of the interactive healing relationship, with practitioners using "therapeutic touch" (TT). Her study looks at the impact of such healing practices on the immune functions of both the healer and the healee. This pilot study was an affirmation of that holistic perspective. It was clear from this initial pilot project that several definite changes occurred following the series of treatments with TT. The best explanation for the factor or combination of factors will need to be explored in future studies.

Dr. William Redd: Anticipatory Immune Suppression

Memorial Sloan-Kettering Cancer Center, New York, New York

Between 25 and 75 percent of chemotherapy patients develop "anticipatory nausea" at the sight of the clinic, the sound of the nurse's voice, or even the mere thought of treatment. This is thought to be due to classical "conditioning". Since immunosuppression also accompanies chemotherapy, this pilot project investi-

gated the question: "Is there a *conditioned suppression of the immune system* in response to the non-specific features of the clinical setting, and in the absence of the chemotherapeutic agent itself?" The study's positive results have two significant implications: First, it will be important to explore the mechanisms underlying anticipatory immune suppression (AIS) in order to enhance understanding of how psychological, behavioral, and biological processes interact to modulate immune function. Second, regardless of mechanism, it is important to consider the potential influence of AIS on the health of the patient receiving chemotherapy.

Dr. Stephanie Simonton: Imagery and Immune Enhancement

Behavioral Oncology, Arkansas Cancer Research Center, Little Rock, Arkansas

Extending existing research, this study examined whether relaxation and imagery techniques might enhance immunity in cancer patients following radiation therapy, which is known to suppress the immune system. Since these patients are more vulnerable to infections, a positive finding could have very important clinical significance. Dr. Simonton found that patients who were taught relaxation/visualization techniques showed a significant increase in immune responsiveness. This is the first time that visualization-induced immune enhancement has been demonstrated in a clinical population facing life-threatening illness. Furthermore, the average change of immunity in these patients in just a three-week period suggests that the effect of this technique may indeed be physiologically significant. Further large-scale studies funded by the National Cancer Institute are now underway to explore the full significance of the phenomenon—a crucial step in getting psychotherapy accepted and integrated into the mainstream treatment of cancer patients in this country.

Dr. David Spiegel: Psychological Intervention and Survival

Stanford University School of Medicine, Stanford, California

Dr. Spiegel's earlier work confirmed the importance of a relatively modest psychological intervention in extending the lifespan of women with metastatic breast cancer. Women who attended a once-a-week meeting focused on emotional sharing and support, and who learned relaxation and self-hypnosis techniques to manage pain, lived twice as long as the control group. Three were still alive after ten years. The Healing Response program provided funding for Dr. Spiegel and his colleagues to continue study of these long-term survivors in greater detail, interviewing them in depth about their experiences to see why they might have survived while all the others in the study have succumbed.

. . . continued from page 29

Winston ("Wink") Franklin: The grants were important, certainly, but more as tools of validation and recognition than for the research they accomplished. They were very small grants, after all, just steps along the way. Healing Response funding was mostly about empowerment of ideas and people. The vision itself was empowering.

Lerner: I remember that Wink once said to me he was absolutely convinced that this movement was driven from the grassroots. To me that is a very important insight because of what Noetic Sciences has done to help articulate that vision. And that vision is comprehensive and holistic. It addresses not only mind-body health but spirit, and is concerned with subtle energies. If you read the poll data on the percentage of people who pray or have reported contact with the dead you will see that Americans are deeply religious and spiritual people.

Franklin: What we're talking about is the power of vision, the power of an idea—particularly an idea that articulates or conceptualizes what people are feeling in large numbers. Then there's real power. We needed a new image for humanity that would pull us in a certain direction. And that's what the Healing Response program was able to do. Ten years on, we are only beginning to live that vision. Brendan's gift was his ability not only to put it all together, but to articulate it in a way that people could understand. Through Brendan, the Healing Response program focused on an idea that really rings true for people. And that has tremendous power.

In a lot of ways, working in a small organization gives you the courage to take a stand on bold visions, and to back them up with action. In a big organization, risk-takers are much too visible; and when a lot of attention is focused on you, you may be less willing to make mistakes. But in a small organization like Noetic Sciences, you really can be bold. There's a lot more opportunity to step out and hold on to a vision. You may even be encouraged to intentionally follow a vision that runs counter to the dominant paradigm because that is often the role of smaller non-profit organizations.

Remen: In a small organization you can feel supported in your "maverick-ness", if you want to think of it that way. People may not fully understand what you're talking about, but they support the process that you're all part of, and they trust you as a member of the com-

The Working Conference

New ideas for research are generated when scientists talk to each other face-to-face. The Inner Mechanisms of the Healing Response program has helped support conferences that allow this dialogue to take place. Often, these were the first meetings of researchers in an emerging field. Covering a wide range of topics, these conferences include:

The Symington Conference I-IV: New Directions in Cancer Care—*Dr. Michael Lerner, President, Commonweal, Bolinas, California, 1988-91*
These meetings, held at Commonweal, draw together health professionals to discuss topics related to "Psychological Factors and Cancer".

How Might the Positive Emotions Affect Physical Health?—*Dr. Barry Flint and Dr. Eileen Growald, Institute for the Advancement of Health, New York, 1984*
This meeting of scientists from a variety of disciplines was one of the first where the role of positive emotions in relation to health was discussed.

First & Second International Workshop on Neuroimmunomodulation—*Dr. Herbert Spector, National Institutes of Health, Bethesda, Maryland, 1984-85*
These grants co-sponsored the establishment of the First International Workshop on Neuroimmunomodulation and helped give form to the field of psychoneuroimmunology.

The Inner Science Conference: A Working Conference with the Dalai Lama and Western Psychiatrists and Psychologists—*Dr. Robert Thurman, University of Massachusetts at Amherst, and the American Institute of Buddhist Studies, 1984*
This path-breaking meeting of psychologists and scholars provided an opportunity to meet with the Dalai Lama, and to discuss the links between Buddhist "inner science" and Western "outer science".

First International Conference on Multiple Personality and Dissociative States—*Dr. Bennett Braun, Rush Presbyterian-St. Luke's Medical Center, Chicago, Illinois, 1984*
This was the first gathering of researchers, theoreticians and clinicians interested in the field of multiple personality/dissociative states (MPD). Following the conference and reports of significant progress in this area, a major scientific congress was convened to pool data and further explore experimental and clinical approaches.

Sino-US Qi gong Health Sciences Exchange Program—*Dr. Daniel Brown, Harvard Medical School, Boston, Massachusetts, 1989*
At this cross-cultural exchange with the Beijing College of Traditional Chinese Medicine and the Beijing Qi gong Institute the immunoregulatory effects of traditional Chinese medicine were explored, along with the immunological consequences of qi gong and related practices.

munity of explorers. And that can make a big difference. When you start something new it needs time in a greenhouse, it needs space to put out feelers and roots, before thrusting upward and subjecting itself to the kind of critical scrutiny that nothing new can tolerate. In a small organization, ideas usually get more time to develop—to strengthen and deepen enough to face a more public exposure. It's interesting . . .

Networks: Pollinating the Mind-Body Field

The program's objective from the start was to identify highly qualified researchers respected in their own fields, who would be willing and motivated to share ideas and to support each other in effectively creating a new field of psycho-physiological healing. A major part of this networking was carried out by Brendan O'Regan.

Franklin: The Healing Response program was grounded in a rational construct to guide its efforts, with a dedicated team to take care of logistical details. Brendan's contribution was at another level. Along with his catalyzing vision, networking was perhaps the most important thing to him. It's useful to think about why he was so good at it. Part of it was his keen discernment of the boundaries and common cores shared between ideas and people; part of it was his insatiable and wide-ranging curiosity. In a sense, he embodied the essential features of the whole program and the healing vision he was focused on—trusting his intuition, always communicating, and engaging energies which most of us don't understand and can't document.

Lerner: The person that Brendan reminds me of is the nuclear physicist Leo Szilard who was an important contributor to the Manhattan project. It's an imperfect analogy. But Szilard was beloved by scientists everywhere. There are people who tell Leo Szilard stories to this day. He has sort of lived on because of this cross-pollinating influence. And I think there is a way in which Brendan has that afterlife going on. Brendan would show up in your life or at your place of work or in your lab, and he would have a huge satchel stuffed with articles. He would give you seven or eight things he had found that were critical to what you were interested in. And then he would take a couple of your things and go on.

Waletzky: Networking has many benefits, not least of which is meeting people who have information or skills that fill in gaps in your own work. A great advantage, personally, of the Healing Response program was my association with other members of the board—with Rachel Remen, Brendan O'Regan, Michael Lerner and Joel Elkes. Besides that, to know so many of the other researchers personally and through their work was an enormous contribution to my own professional development. It was a phenomenal networking opportunity to be exposed to their insights and knowledge over this ten-year period.

Validation of New Ideas and Investigations

An additional benefit of the Healing Response program was providing morale-building support for isolated researchers—validating their pioneering efforts and providing opportunities for publication and sharing of ideas.

Remen: Feeling validated was important. Brendan believed in the things that I could barely get words around. He knew that I could see them and he encouraged me to follow them. Part of it was the way in which he followed his own intuition, his instinct, himself. Fearlessly, he made it okay to follow ideas that did not fit into the old way. He respected things I was thinking when I could barely respect them myself. He was more accepting of the growing edge of understanding than anyone I have ever known.

There was nothing you could say to Brendan that he couldn't entertain. He could hold all of it, none of it was ever too outrageous. I used to tell him some of the odd experiences that happened to me when I was working with someone and he never said, "This is crazy." He simply gave it his respectful attention, asked the right questions, and more information would come out. He would hold your ideas with you, almost as in an expansive field. I don't know how new ideas come, but I suspect that when there's a critical mass of consciousness willing to receive them, they come most easily. And Brendan could add his consciousness to almost anybody's, acting in a sense as a midwife to your ideas.

Franklin: Validation was a very important part of what this program did—in its networking, in the conferences, in giving grants, and publishing research results in the *Noetic Sciences Review* and other places. When you talk to researchers in the field it's this concept of validation that comes out clearest. Numerous researchers have told me how comforting it is just to know that Noetic Sciences is there. Even if they don't have any contact, they sense the validation that Rachel just mentioned. This is very important in building a new field because, by definition, the people working in that field are not being validated. In a frontier area of science you constantly risk invalidation from all quarters—from the press, professional colleagues, family and friends. To have an institution, even if it's a little one, back you up and acknowledge your capabilities can be very important.

Waletzky: The Healing Response program encouraged many people at a formative stage in their career. To this day, they are reaping the benefits of a self-confidence grounded in the support of the program and fellow participants, as well as sharing the excitement of moving forward in a profoundly important field. I think that's the key to the Healing Response program: The project was there to validate all those people at crucial moments. I would include myself and the status of my professional work.

Selected Healing Response Projects

Throughout the past decade, the Healing Response program has provided seed grants to a number of research projects. Here we highlight a few of them. *(See also accompanying sidebar, pages 30-31.)*

Lewis: The first grant awarded by the Healing Response program, many years ago now, was to Stephanie Simonton and O. Carl Simonton for their research into the efficacy of imagery and visualization in the treatment of cancer. It was a very significant and important gesture. Although today the use of imagery in medical treatment is almost commonplace, it was unheard of back then. It was the sort of work often greeted by deep skepticism from the orthodox medical establishment. But Brendan recognized its potential, and effectively nourished a fragile seed enough for it to get a grip of its own.

Waletzky: The Healing Response program was supporting the Simontons before I got involved; but I remember Stephanie coming to one of our meetings early on. I don't think there really was anybody else out there supporting her work then. In the intervening years, though, the Simontons have become internationally renowned researchers in the field of non-invasive cancer treatment. Their work has inspired countless others to contribute to the field.

Lerner: Another project that the Healing Response program helped fund from early on was the Symington Foundation Conference on New Directions in Cancer Care at Commonweal. That was an interesting example because it was a meeting put together by modest grants from

The Remission Project of the Inner Mechanisms of the Healing Reponse Program

The Remission Project was started in 1985 by Brendan O'Regan, who had long pondered the interface of body/mind/spirit.

How do people maintain their health? How do the "super-healthy" become—and stay—that way? And when illness or accident happens, how do people recover? The ultimate question seemed to be: How do people with diagnoses of a usually fatal disease, even those given up by their medical doctors as "terminal", reverse the course of the malady and recover their health completely? What is unique about them, and what do they have in common? In this extremity may lie clues to understanding the self-regulating processes in the human body, perhaps even a source of evidence on *how* humans can heal and be healed.

The Institute of Noetic Sciences found that while spontaneous remission was widely documented in the world medical literature since the end of the last century, and occurs across a broad spectrum, there were few reviews of the phenomenon. In fact, there were only two texts and one monograph, all on cancer alone, and all out of print.

Since there was no standard reference for the field, the first task of this new Remission Project was to search the world's literature. As a result, staff members assembled the largest database of medically reported cases of spontaneous remission in the world, with more than 3,500 references from more than 800 journals in 29 different languages.

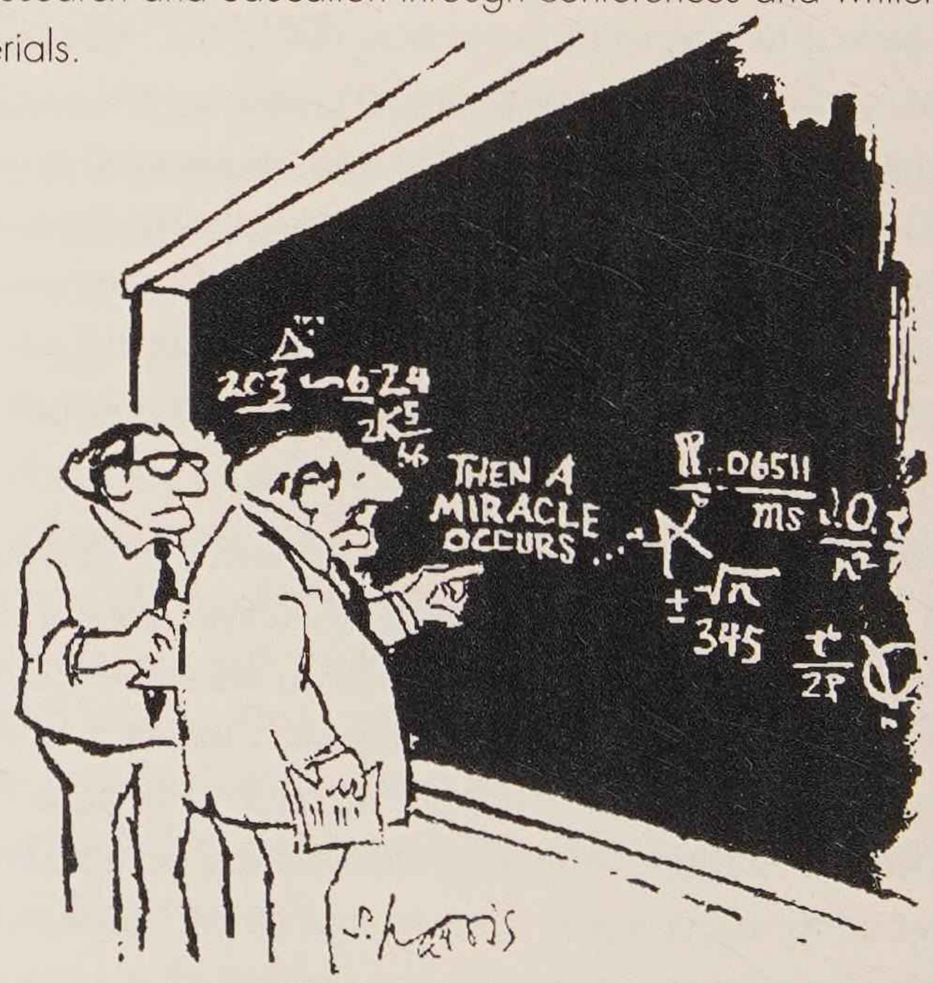
For the Project's *Bibliography*, 1,574 of these references were selected, with the full text of over 430 case reports, chosen as most representative of those cases in which there was little or no allopathic intervention or where, according to the attending physicians, the treatment received was considered inadequate to produce the resulting remission. Highest priority was assigned to reports that contained biopsy, x-ray and/or microscopic confirmation of tumors or other manifestations of disease, and contained adequate long-term follow-up verifying the existence of remission. The final book, *Spontaneous Remission—An Annotated Bibliography*, by Brendan O'Regan and Caryle Hirshberg, was published in June 1993.

With the publication of the *Bibliography*, the Remission Project is now considering how best to address the questions which require answers if the epidemiology of remission is to be determined, leading, perhaps, to the increased understanding of health and healing:

- *In which diseases is remission most common?*
- *What is the duration of remission and does that vary with disease type?*
- *What is the distribution of remission in the United States and world-wide?*
- *Are there particular psychological, social or other settings such as habits, spiritual or lifestyle changes, or support groups that act as significant biological response modifiers to trigger remission?*
- *Are the factors involved biological or psychobiological or both?*

The Remission Project sees the need for a clear definition of the terms and establishment of criteria. It has currently accepted this definition of spontaneous remission: "the disappearance, complete or incomplete, of a disease or cancer without medical treatment or with treatment that is considered inadequate to produce the resulting disappearance of disease symptoms or tumor".

Clearly, the Institute's Remission Project has its work cut out for it. Possible activities include creating an ongoing on-line database; helping establish a National Remission Registry; continuing research and education through conferences and written materials.



Cartoon courtesy of Sidney Harris

"I think you should be more explicit here in step two."

Noetic Sciences, the Symington Foundation and the Hale Fund. Despite low-level funding it became a gathering place for people with shared concerns for new directions in cancer care. People came from all over the country at their own expense, really wanting to be there. It was a place where they could talk about their work with cancer. That's just one example.

Through the Symington program I met a lot of the people whom I then recommended for the Advisory Board of the Office of Technology Assessment's (OTA) Study on Unconventional Cancer Treatments. Brendan was one of them. The OTA study led to National Cancer Institute (NCI) interest in beginning to provide technical assistance for research on unconventional treatments. In turn that led Michael Hawkins from NCI to come out to the Symington Conference in later years.

Lewis: The OTA study was a major effort by the US Government to try to understand what was going on in alternative therapies. The report was heavily criticized, particularly by proponents of specific therapies who felt that they hadn't received fair coverage. But the report wasn't entirely negative, and several important recommendations came out of it. One of these (I think partly as a result of our work on remission, and Brendan's participation on the study panel) was that a remission registry be established—for which Brendan had long campaigned. Although the recommendation has yet to be followed, it may fit into an emerging pattern of changes now that the National Institutes of Health has an office on alternative therapies.

And, indeed, a major part of the Healing Response program has been the Spontaneous Remission Project (see sidebar, page 34). Most of the funding came through the Healing Response program and was directed at creating a database of more than 3,500 papers documenting such cases, and the *Spontaneous Remission Bibliography*, which contains annotated abstracts of roughly 1,500 selected, significant cases. Brendan had envisioned other products coming out of the project, including an interactive database of remission reports.

Waletzky: I think from here on we will notice more and more attention to the phenomenon of spontaneous remissions, now that the *Bibliography* is available. This area has been virtually neglected until now. The epidemiology of cancer doesn't include the study of people who have lived long periods beyond remission. It's one of those oversights in medical science that's right there under everybody's noses and not being noticed. The *Bibliography* fills a very important gap in the research literature.

Brendan had a double goal of bringing the phenomenon of spontaneous remission to the attention of both the medical profession and the public. He didn't want to simply stimulate researchers, clinicians, educators, or other professionals; he wanted the general public to be aware of the vast amount of documented evidence for a healing process, for cancer and other illnesses, evidence which is beyond the understanding of contemporary medical science. He saw it as a platform of hope for millions of people. And I believe he was right.

Lerner: The Spontaneous Remission Project was a central focus in Brendan's investigation of the healing system. He had the amazing insight that if you're interested in a healing system, what better way to study it than to try to understand what goes into spontaneous remission. I believe this is an area that deserves serious follow-up from Noetic Sciences.

Lewis: The Healing Response program was instrumental, too, in helping fund the First International Conference on Multiple Personality/Dissociative States, organized by Bennett Braun in 1984. It brought together for the first time researchers who had begun to explore what this phenomenon might mean and how it could be researched. Here you have a dynamic instance, a kind of live demonstration, of the psycho-physiological potentials within one body. Brendan quickly recognized the importance of mind-body research involving multiple personalities inhabiting a single body. He saw it as an opportunity to measure the effects of different personalities on the body's immune response, for instance. That was such a profound insight. And he followed it up by bringing it to the attention of many workers in the field.

Waletzky: The Healing Response program also supported Dr. Jimmie Holland in forming the International Psycho-Oncology Society. As a result, there's a new kind of oncologist who is aware of the importance of the quality of care for cancer patients.

Healing and the Future of Mind-Body Health

Lerner: I think that with its success, the field of mind-body health has differentiated into a series of different areas. These include corporate wellness; behavioral medicine; work on policy that the Center for the Advancement of Health, for example, is doing; and a set of research initiatives such as those supported by the Fetzer Institute.

➢

A Pharmacy Within

The estate of the BodyMind is an ancient network of billions of cells functioning as a self-organizing and orderly society within the human skin. Communication is key. The part must be informed of the whole, and the whole of the part. We now know something of the electrochemical signals employed in this process of communication. One of the main services of the therapeutic use of drugs has been to advance our understanding how the brain does its work naturally without them. Families of neuroregulatory substances—neurotransmitters, neuromodulators, neuropeptides, and the like—are emerging as a sort of inner pharmacy mediating communication between the nervous, the endocrine, and the immune systems in illness and recovery. There is also the first silhouette of a wider and more pervasive network: electromagnetic fields may well prove attributes of the very processes and molecules we have come to know.

When communication breaks down—be it somatic or symbolic—there is a separation of the part from the whole. Physical pain or mental anguish are but aspects of this separation. Healing signifies restitution, conjoining, and restoration of the whole. The BodyMind is a fine paradigm of society. Small wonder that the tools of reductive science are insufficient to fully account for the processes of healing. We call this missing element the realm of the Spiritual.

Neither institutional medicine nor institutional religion has asked the right questions. In discussing inner mechanisms of healing with Brendan O'Regan we talked about an agenda of questions. I still treasure the questions he posed for me.

—Joel Elkes, MD

These are at least four mainstream research areas, and we could probably add more. But another thing—that Rachel, for example, pioneered early on—was to start talking about spirit in a serious way. She intuited a grassroots phenomenon and articulated it in a way that made it accessible to patients, health professionals, and others. As a result, spirit is emerging as a legitimate category in health. This concept of spirit focuses on a dimension of spirit that is part of the perennial philosophy. It is sacred. In addition there are things like psychokinesis and remote viewing, or whatever we want to call the material version of this. So it seems to me there are at least six main themes emerging in mind-body health. When you ask where is the field going, I suspect that it is now spreading into these specialty areas. That's my own guess.

Franklin: Another direction I think mind-body health is going is toward the community. We started today's discussion saying that this program is very broad, and that it is really about re-conceptualizing the concept of healing. Both the concepts of "community" and "integral" grow out of the mind-body health metaphor. They are holistic terms. I think we're moving into an integral or a community concept of mind-body health.

Remen: I agree with this very much. We need to recognize the power of community as a healing intervention, or that healing can happen best only in community. Even in health care, the difference between a health team and a healing community is enormous. There is a power that's liberated when people come into healing community with each other. We've been talking about networking, and Brendan literally saw all of that in terms of community. He saw that ideas emerge in a community of people, and he saw us connected to each other even though we didn't see ourselves connected. He was able to make that connection manifest, and to tap into the power of it to make change happen. It was more than a network—it was like a community without walls around him.

Lerner: Had the Inner Mechanisms of the Healing Response program really worked out as Brendan would have most deeply liked it to, it would have set in place an astonishingly new paradigm for both healing and our understanding of the nature of reality. I think Brendan had his eye on a very distant horizon, so that he saw the pieces of a profoundly different understanding of reality. He saw the Healing Response program as a way of focusing that vision—through this concept of a healing system. And his deepest goal, had he been given another 40 years, would have been to have played a seminal role in bringing that transformative new sense of reality into being.

In this sense I think Brendan would have said that the Healing Response program did not succeed in certain ways that mattered to him. Brendan really wanted to figure out how the healing system worked, and he wasn't able to do that. His concept, which I think is unrealized and should be realized, is one of a healing *system* that should be studied in an interdisciplinary, comprehensive way. Maybe a few people understand this concept but I don't yet see it as a coherent vision. One of the best things that could be done for Brendan and for the field would be to move forward that concept of an integrated healing system and its implications.

Henry Dreher is a writer specializing in mind-body health issues and co-author of The Type C Connection *with Lydia Temoshok. Barbara McNeill is the Institute's Director of Communications.* □

An Enriched Medicine: Taking the Next Step

Editor's note: One of the major developments in the mind-body health field during the last decade has been the emergence of the Fetzer Institute as a strong conceptual leader, networker and convener. The Fetzer Institute, a nonprofit institution, has become the largest independent source of research and education funds in mind-body approaches to health and healing.

The Fetzer Institute has embarked on a bold venture to discover the relationship of body, mind, and spirit to human health and healing. The path of this exploration provides unprecedented opportunities to develop new, scientifically sound methods for enhancing wellness, expanding the scope of biomedical science, and giving individuals greater control over their own health. Educating teachers, the public, and health professionals is a key component of this process.

Healing is an ancient art. Science is a relative newcomer to medicine, but it has dramatically changed this art, greatly improving the quality and duration of life. Despite the sweeping advances of the past century, however, we see growing evidence today that modern medicine has left unmet many fundamental human needs.

The source of the discontent is the unnecessarily restrictive view of humanity that dominates contemporary Western medical practice and biomedical science. This view focuses on the biochemical operations of the body and excludes mind and spirit as having little or no relevance to health. The hypothesis that we are investigating, by contrast, is that body, mind, and spirit are not only inseparable but are indeed only different aspects of the human being. Medical practice that does not recognize these facets of human existence therefore cannot fulfill the human need to live life at its fullest.

While there is every reason to believe that biochemical medicine will continue to advance, providing us with a steady stream of valuable new aids to health, it cannot produce a completely fulfilling approach to health as long as it continues to overlook the importance of mind and spirit. We therefore propose to enrich biomedical science and the practice of medicine by incorporating into them concepts and techniques reflecting these dimensions of human existence.

Just as the practice of medicine may be enriched by broadening its purview, so too may biomedical science be enriched by expanding its view of human biology. The biochemical view of human life has empowered medicine to a great degree, but it is a view that is inadequate to meet such critical challenges as understanding the operation of the human brain or identifying the nature of consciousness. The scientific tools needed for such purposes must come from different realms, including those of bioenergy, bioinformation, and even quantum physics. The Fetzer Institute is accordingly involved in a variety of studies that examine the biological effects of electromagnetic fields, brain activity associated with unusual cognitive capabilities, and the interplay between consciousness and the physical world. We anticipate that new knowledge emerging from this research will aid us significantly in the development of new, more comprehensive approaches to human wellness, approaches that explicitly acknowledge the vital roles that mind and spirit play in our lives.

The development of an enriched medicine is of little value if it is not put into practice by health professionals and used by an informed public. The Fetzer Institute is therefore deeply involved with education—education of teachers who bring new knowledge into the classroom, education of medical professionals to enhance their knowledge of mind-body techniques, and education of the public to help them become better-informed consumers of health services. One Fetzer-sponsored program for teachers focuses on education for human wholeness. Programs at Harvard University and other leading medical schools are expanding the scope of medical education to include mind-body approaches. In the area of public education, the television series *Healing and the Mind with Bill Moyers* has been an unqualified success in stimulating national awareness of mind-body approaches to health and healing. Taken together, these programs clearly indicate that we have indeed begun to attain the Fetzer Institute's ambitious goals.

—Rob Lehman
President, Fetzer Institute
Kalamazoo, Michigan

TELEVISION: A MEDIUM FOR TRANSFORMATION?

Throughout much of the first 20 years of the history of the Institute of Noetic Sciences, the ideas we have championed have largely been ignored by the media. Suddenly, in 1993, two major television networks are airing documentary series exploring the potential of mind-body health: *Healing and the Mind with Bill Moyers* (sponsored by the Fetzer Institute), and our program *The Heart of Healing* (on TBS). Has the tide turned, and are we likely now to have more opportunities for similar series on related topics in the years to come? I think probably so, for several reasons.

Both of those series grew out of a decade of solid research in mind-body health. Simultaneously, the market has matured, as more and more people tire of the old ways and turn toward noetic concerns, including the connection between consciousness and physiological health. The networks have recognized the shifts, and now seem genuinely interested in these issues. Signs of this growing market can be seen elsewhere: for example, a recent *New York Times* top-ten bestseller list in nonfiction included *Healing and the Mind, Care of the Soul, Women Who Run With the Wolves,* and *Embraced by the Light.*

I'm confident we will have ample opportunities in the years ahead to present our ideas on television. The more significant questions, and the ones for which the answers are not nearly so certain for me, are "Do we know how to present subtle, complex issues on television?" and "Do we know how to use television to stimulate thoughtful reflection, and to engage viewers rather than to mesmerize or anesthetize them?"

Duane Elgin points out the enormous potential of television in his forthcoming book *Awakening Earth:*

> *Caught within a rapidly closing circle of problems, the human family is challenged to reconcile its many differences and actively cooperate in building a sustainable future. Global reconciliation requires global communication. . . . Just as consciousness is not 'just another human capacity', television is not 'just another technology'. Television is at the very heart of our capacity for self-reflective consciousness at a societal scale. . . . [It] is our social witness–our vehicle for 'knowing that we know' as nations and as a human family. . . . Television has become the 'social brain' or 'central nervous system' of the human family.*

The context created around the Moyers' series by the companion book, talk-show and magazine interviews, and discussion groups in churches, schools, clubs, neighborhoods and families, transformed the television program into what the industry terms "an event". The result, it seems to me, is a significant step toward "electronic democracy". While we do not yet have access to the much-anticipated interactive television, the creation of discussion groups supported by effective process and provocative print materials, combined with serious television, is a beginning in the transformation of television from entertainment to democratic forum.

Many of us have been strongly critical of television in the past. I believe that we will all have an opportunity in the years ahead to play our part–whether by creating programming or organizing and participating in discussion groups–to explore how we can contribute to television's becoming a true medium for transformation.

–Winston O. Franklin
Executive Vice-President

the HEART *of* HEALING

REMARKABLE STORIES OF HOW WE HEAL OURSELVES

- **A six-hour television documentary**
- **Broadcast on TBS Superstation: October 26, 27 & 28 (8:05 PM Eastern-check local listings)**
- **Hosted by Jane Seymour**
- **Produced by the Institute of Noetic Sciences, InCA and TBS**

From Arizona to Africa, California to China, the people profiled in *The Heart of Healing*, when confronted with life-threatening conditions, call upon a combination of inner and alternative resources–including biofeedback, psychosynthesis, visualization, meditation, folk medicine, cultural ritual and faith healing–to achieve results that seem to rival and even confound conventional medical wisdom.

Supported by substantial case studies and scientific data, the series documents dozens of extraordinary personal stories of men and women whose experiences of illness and recovery–from cancer, serious burns, neurological disorders, phobias and more–are, for them, proof that the mind-body connection is enormously powerful and real.

Three production teams spent nearly a year and a half shooting dramatic footage in twelve countries on four continents. The series is complemented by a beautifully illustrated book of the same title, adding detail and depth to the television scenes, and connects human stories through research findings and perceptive theories.

The Institute of Noetic Sciences and collaborating organizations are distributing several hundred thousand copies of a 24-page guide to help viewers personalize the information. Also, a 32-page *Guide to Mind-Body Health* will be distributed by the Institute in response to inquiries to an on-air 800-number at the end of each series' segment. In order to support the educational potential of the series, the Fetzer Institute has provided a $25,000 grant for IONS to award 500 study-group mini-grants of $50 each.

EPISODE ONE—"WHAT YOU BELIEVE"

Tuesday, October 26, 1993

This three-part documentary series on the mind-body connection in health and healing begins by exploring how "What You Believe"—from religion to intellectual opinion—can affect the dynamics of well-being.

Personal stories of alternative approaches to health care are told by men and women in the US, Holland, Haiti, France and Zimbabwe. Highlights include hypnosis as a treatment for serious burns, spontaneous remission from cancer through visualization techniques, the connection between feelings and the immune system, traditional rituals and their role in creating sickness or health, fundamentalist faith healing, and miracles at Lourdes.

EPISODE TWO—"HOW YOU CHANGE"

Wednesday, October 27, 1993

Part Two looks at alternative medical treatments, "How You Change" your behavior, and how attitudes and beliefs can directly affect getting well.

Men and women around the world tell their stories. A young boy in Florida compensates for a brain cell deficiency with biofeedback, and by teaching himself to walk—even when doctors said it couldn't be done. Other segments feature astronauts fighting motion sickness; "Type-A" personalities learning to unwind; dramatic techniques for coping with stress; and AIDS patients waging successful wars against their disease with psychological and spiritual techniques.

EPISODE THREE—"WHO YOU BECOME"

Thursday, October 28, 1993

From around the world come more examples of people testifying to the mind and body as powerful allies in pursuing health. Part Three focuses on psychological and spiritual approaches to serious illness. Understanding "Who You Become" is determined by how you see yourself as an individual and in relation to family and community.

This ground-breaking documentary concludes with segments covering different rituals related to birth and childhood; how personal responsibility interfaces with social ritual; the effects of love and marriage on health; the influential power of cultural groups; the challenges of old age; and ideas about life after death. □

On Defining Spirit

What then is the spiritual? I find it difficult to define directly. It's much easier to say what it isn't than what it is. For example–the spiritual is often confused with the moral, but it's not the moral. Morality is concerned with issues of right and wrong. Although often attributed to the "godhead", it actually has a social basis and reflects a social tradition or consensus. What is considered moral varies from culture to culture and from time to time within the same culture. Furthermore, morality often serves as the basis for judgment, for one group of people separating themselves from other groups, or one individual separating from others. Yet the spiritual is profoundly non-judgmental and non-separative. The spiritual does not vary from time to time because it is not within time. Spirit is unchanging.

The spiritual is also different from the ethical. Ethics is a set of values, a code for translating the moral into daily life. It defines the right way to relate to other people, to carry out business and to behave in general. If the moral is not the spiritual, then the ethical isn't either.

The spiritual is also not the psychic. The psychic is a capacity we all share, although it is better developed in some than in others. It is a way of perceiving–a sort of direct knowing of conditions in matter or in consciousness. We may use a psychic power to know the spiritual–but that which we know is not the means by which we know. As a way of perception, the psychic is closely related to our other senses. If psychic perception is spiritual–then seeing is spiritual and hearing is spiritual. A sense is simply a way of gaining information about the world around us. How I use what I see or hear, what it means to me, is what makes it a matter of spirit or not. I can use the psychic as I can use my other senses–to impress others, to accumulate personal power, to dominate or manipulate–in short to assert my separateness and my personal power. The spiritual however is not separative. A deep sense of the spiritual leads one to trust not one's own lonely power but the great flow or pattern manifested in all life, including our own. We become not manipulator but witness.

Oddly, the psychic is often used to "prove" the spiritual to the non-believer. Yet the spiritual is the one dimension of human experience which does not require proof–which lies beyond (and includes) the very mind which demands proof.

Lastly, the spiritual is not the religious. A religion is a dogma, a set of beliefs about the spiritual and a set of practices which arise out of those beliefs. There are many religions and they tend to be mutually exclusive. That is, every religion tends to think that it has "dibs" on the spiritual–that it's "The Way". Yet the spiritual is inclusive. It is the deepest sense of belonging and participation. We all participate in the spiritual at all times, whether we know it or not.

There's no place to go to be separated from the spiritual, so perhaps one might say that the spiritual is that realm of human experience which religion attempts to connect us to through dogma and practice. Sometimes it succeeds and sometimes it fails. Religion is a bridge to the spiritual–but the spiritual lies beyond religion. Unfortunately in seeking the spiritual we may become attached to the bridge rather than crossing over it.

The most important thing in defining spirit is the recognition that spirit is an essential need of human nature. There is something in all of us that seeks the spiritual. This yearning varies in strength from person to person but it is always there in everyone. And so, healing becomes possible. Yet there is a culture-wide tendency to deny the spiritual–to delegate it at best, to ignore it at worst. In trying to point to it with a definition, I hope to initiate a kind of questioning of the role of spirit in health, in health care and in life.

–Rachel Naomi Remen

Reprinted from the Autumn 1988 Noetic Sciences Review. *This has been the most popular article we have published in twenty years. Rachel Naomi Remen is Medical Director and Co-founder of the Commonweal Cancer Help Program in Bolinas, California. (Photograph by Galen Rowell.)*

CURRENT FOCUS

Consciousness & Community: A Brief History of the Institute of Noetic Sciences 1973 – 1993

by Thomas J. Hurley
Director of Membership Education

Since its founding in 1973, the Institute of Noetic Sciences has supported research and education on consciousness and human potential. For 20 years, through innovative sponsored projects and publications, the Institute has served as a catalyst for creative, pioneering inquiry and for thoughtful reflection on some of the critical issues and opportunities of our time.

Today, the mission of the Institute is evolving. While our research and publications programs continue to break new ground, a third dimension of our work is equally important–the development of opportunities for individuals to become more active as members. Through member groups, our international and regional conferences, a membership directory and other opportunities for study, networking and exchange, we hope to foster an increasingly effective partnership with members.

Our new emphasis on membership participation reflects a simple conviction. As important as continuing scientific or scholarly inquiry is the everyday application of what we already know about consciousness and human potential–to transform our lives, relationships, organizations and communities. In this task, members are the innovators and leaders, and we seek ways to support their efforts and learn with them.

Research, publications and membership are three equally important dimensions of the Institute's mission. Each informs the others, and contributes in unique ways to our building together the world of our visions.

The First Decade

To put the growth of the Institute in perspective, it is useful to think about the world twenty years ago. In 1973, personal computers had not been invented. The Soviet Union and United States were still locked in a relationship of mutual assured destruction. Richard Nixon was President of the United States. Around him, the Watergate scandal was widening; it would soon lead to his resignation and help precipitate a profound loss of confidence and trust in leadership. The Club of Rome's study *Limits to Growth* had raised, for the first time among the general public, questions concerning the sustainability of unchecked economic and industrial growth. Outside the "counterculture", few people were interested in consciousness research. *The Aquarian Conspiracy* was still seven years from publication. And the energy crisis was awakening us to just how vulnerable our economy and lifestyle were . . .

In this context, Apollo 14 astronaut Edgar Mitchell founded the Institute of Noetic Sciences to undertake a deeper exploration of human consciousness, and to help map a territory that few yet even knew existed. Initially supported by a very small group of deeply committed individuals, the Institute sponsored studies on a variety of exceptional human abilities and raised questions concerning the adequacy of existing scientific paradigms for the study of consciousness.

Research was the cornerstone of the Institute's mission, and sponsored projects during the Institute's first decade of activity included: remote viewing research by Harold Puthoff and Russell Targ at Stanford Research Institute (now SRI International); research on anomalous interactions between consciousness and matter by Robert Jahn and Brenda Dunne at the Princeton Engineering Anomalies Research laboratory in Princeton University's School of Engineering and Applied Sciences; research on the use of visualization as an adjunct therapy for terminally ill cancer patients by O. Carl Simonton and Stephanie Matthews-Simonton at the Cancer Counseling and Research Center in Fort Worth, Texas; an invitational conference on human consciousness research that brought together more than 30

leading researchers and scholars; a public conference, *In Pursuit of Wellness*, at the University of California at San Francisco, which highlighted the new field of psychoneuroimmunology and other emerging areas of mind-body research.

During these early years, resources to support the Institute's programs were scarce and it was difficult to generate the institutional presence and momentum needed to reach large numbers of people. Yet by the end of its first decade, the Institute had begun to establish an international network of scientific and professional colleagues, the *Institute of Noetic Sciences Newsletter* reached some 2,000 members, and both a core staff and Board of Directors–with Paul Temple as Chairman–had been assembled. The critical mass necessary for organizational growth and broader outreach were in place.

The Second Decade

During the last ten years, the Institute's membership has grown from 2,000 to–as of this writing–more than 31,000 individuals. During the same period, the Institute's research programs matured and its publications program expanded.

During the 1980s, the Institute developed research programs in several major areas. The Inner Mechanisms of the Healing Response program seeks to identify the parameters of an innate healing system through studies in psychoneuroimmunology, spontaneous remission, spiritual healing, and bioenergy medicine. The Altruistic Spirit Program was designed to illuminate the nature and dimensions of creative altruism, while the Meditation Research Program aims to foster a deeper understanding of meditation in scientific terms and to explore the potential significance of meditation for the individual and society. The Emerging Paradigms in Science and Society program focuses on rethinking the fundamental assumptions that shape science, our social institutions and the global economy.

As the scope of our research expanded, our publications program grew to complement it and to serve the needs and interests of members more effectively. Members have always been concerned with understanding and integrating both the changes taking place in their personal lives and the changes occurring more broadly in society. Our publications have both tracked and helped lead change as the specific focus for members' interest has varied. In the 1980s, our *Newsletter* became the *Noetic Sciences Review* as members sought a more thorough and thoughtful exploration of the implications of consciousness research for health, education, business, spirituality and other areas of everyday life. At the same time, the

> How we respond to the challenges of this era will depend in large part on who we understand ourselves to be, on our relationship to the world we live in, and on the values we affirm. It is in the crucible of our individual lives that ideas are tested, insights given form, creative changes made. The most important changes are not likely to come from the top down, but to be the result of creative work by individuals and small groups addressing the needs of their community, profession or constituency. Finding effective ways to participate with others in the creation of shared meaning, the exploration of common concerns, and the evolution of committed action is a vital challenge. Equally vital is understanding how our individual efforts relate to the global dimensions of change in today's world. How we understand these broader dimensions of change, and how we learn to choose wisely in relation to them, are critical issues that we can explore through research, reflection and dialogue as well as action. Honesty is essential—honesty concerning the dimensions of our lives which are no longer working, and honesty concerning our deepest longing for change, fulfillment and meaning. We need not be ashamed of such longing, nor shy about expressing it. If we follow that longing, it may well lead us to lives richer and more meaningful than we dared to imagine.

Noetic Sciences Bulletin was created to facilitate member-to-member networking, and our mail-order catalog *An Intelligent Guide* was introduced to help members identify and acquire books and tapes in subject areas covered by the Institute. Selected research reports are also now available to members through a newly established monograph series.

The Institute has also published or helped to publish a variety of books that have helped introduce the general public to consciousness research, mind-body health and related fields. Included in that list are: *Psychic Exploration* by Edgar Mitchell; *Health for the Whole Person* by James Fadiman, James Gordon and Arthur Hastings; *Higher Creativity, Global Mind Change* and *Creative Work* by Willis Harman; *In the Footsteps of Gandhi* by Catherine Ingram; *Waking Up* by Charles Tart; *Drawing the Light From Within* by Judith Cornell; *The Home Planet* by Kevin Kelley; *The Feminine Face of God* by Sherry Ruth Anderson and Patricia Hopkins; *Spontaneous Remission: An Annotated Bibliography* by Brendan O'Regan and Caryle Hirshberg; and *The Heart of Healing* by the Institute of Noetic Sciences with William Poole.

While Institute members have always been interested in the relationship between emerging forms of inner awareness and the changes taking place in society, it is only recently that we

have come to fully appreciate the degree to which "inner" and "outer" work must go hand in hand. The central question for most of our members has shifted over the years from "What are the changes that are occurring, and how do they affect me?" to "How can I pursue my personal development without losing all touch with the world as I know it?" and, more recently, to "How can I more fully integrate my personal quest with service to fellow humans and the planet?" In recognition of this shift, a third dimension of our mission has evolved to complement research and publications–membership education and participation.

New Emphases

Twenty years after the founding of the Institute, we live in a much different world than we did then. The Soviet Union has disintegrated, as has our trust in leadership and our faith in many of our social institutions. It has become commonplace to note that we live in an era of transformative global change, though we can only speculate about the consequences of much that is occurring in the world today. Personal computers are everywhere, and interest in consciousness research and human potential is burgeoning–on June 6 of this year, four of the top ten titles on *The New York Times* bestseller list were concerned with noetic topics. Recognition of the need for a profound reappraisal of our values, beliefs and practices is growing.

As new needs and opportunities have emerged in the world, the Institute has responded with new initiatives. We now view the daily life of the individual as the central force in the changes occurring in society, and seek to serve and support members more fully. Consequently, our educational effort has broadened to include a variety of ways for members to participate with us in exploring and understanding the changes taking place in the world–and to enrich their own lives through inquiry, dialogue and action. Two recent initiatives are our annual international conference and increasing support for member study groups.

Cartoon courtesy of Sidney Harris

"Dr. Chambers is unscrambling messages from outer space, Dr. Waddell is working on computer language, and Dr. Saville has been conversing with dolphins, but perhaps you could all find a common form of *human* communication."

Our annual conference, held for the first time in 1992, offers members an opportunity for participatory learning, networking, and celebration. The first conference, *Global Mind Change–From Vision to Reality*, was held in Santa Clara, California, and drew over 1,400 participants. Our second conference, *The Heart of Healing: Exploring the Spirit and Practice of Wholeness* (co-sponsored by the Fetzer Institute), took place near Washington, DC, and involved almost 1,800 participants. Both conferences gave members an opportunity to hear thoughtful presentations on critical issues, to work with leading teachers and researchers, and, most importantly, to meet one another and share their personal stories and common visions. We discovered that when members of the Institute come together, a special magic results–the magic of discovering shared purpose, the magic of creating new partnerships, the magic of synchronicity. As one participant commented, "It was wonderful to be around so many people who believe that there is a better way to do things. It made me sure that I am not alone."

Most existing social institutions do not support the growth in awareness–and the corresponding shifts in identity–that an increasing number of people around the world are experiencing. As a result, we are witnessing a proliferation of self-help groups, study circles, salons, and other small, intimate groups that serve as crucibles for both personal change and social innovation. Such groups give participants an opportunity to tell their stories–as one coordinator of an Institute member study group observed, "For some, this group is a safe place to talk about experiences they've never talked about, to put names to experience"–and provide a deeply nourishing sense of connection. They help weave the fabric of community and create networks of mutual support. Emphasizing democratic processes (rather than reliance on experts or authorities), they promote collaborative inquiry and local action.

The Institute's expanding network of member groups is one expression of this broader trend. More than 125 member study groups are now active, in 40 states–plus Washington, DC–and four other countries. In living rooms and libraries, church halls and community centers, members and their friends come together regularly for networking, community building, study, and play. Participants are finding that indi-

viduals and small groups can be potent agents of learning and change, particularly the kind of change that involves exploring the fundamental values and beliefs that shape our experience and institutions. As Stephanie Mills observed in an *Utne Reader* report on the burgeoning popularity of study circles and salons:

> *Small groups have always been the locus of change. What they do, in a sometimes offhand way, is constellate new cultural forms and give birth to the unexpected. Sometimes the talk is the thing, sometimes the feeling. When we risk talking about something we really care about, it's infectious . . .*

The Institute deliberately avoids any attempt to control the activities of local groups. Member groups are self-organizing, self-directed, voluntary associations of members and friends. Settings are usually relaxed and highly interactive, involving presentations and experiential exercises that engage both the mind and heart. Beyond the personal benefits to participants, they may have a broader cultural significance hard to measure. As David Bohm in his book *On Dialogue* observed:

> *A form of free dialogue may well be one of the most effective ways of investigating the crises which face society. Moreover, it may turn out that such a form of free exchange of ideas and information is of fundamental relevance for transforming culture so that creativity can be liberated.*

This year, we have a special opportunity to encourage the development of study groups in relation to *The Heart of Healing*, a six-hour television documentary on the role of the mind and spirit in healing. Co-produced by the Institutue of Noetic Sciences and Independent Communications Associates, Inc. (InCA), the series will air on TBS Superstation in October. In approaching this broadcast, we found ourselves asking: Does television programming reflect cultural values, or does it actively lead and shape them? The answer may depend, in part, on how we as viewers relate to what we see on television. Television can best serve as a transformational medium if we critically examine the ideas it presents in relation to our own experience, or if we join with others in actively exploring their implications for our lives, organizations or communities.

When *Healing and the Mind with Bill Moyers* aired on PBS in February, thousands of IONS members participated in study groups to reflect on the ideas presented. This fall, the premiere of *The Heart of Healing* again creates a context in which members and other viewers can undertake a deep collaborative exploration of healing and wholeness. Using a Viewing Guide to *The Heart of Healing* that the Institute has developed, thousands of people will come together in study groups to explore "the heart of healing" and its implications.

Imagine hundreds of thousands of people actively engaged in thinking about the nature of healing, asking what healing really means in their lives, relationships, communities or organizations. Imagine a groundswell as people talk more openly about our innate self-healing capacities, and as they engage their health care providers in a new healing partnership . . .

Imagining, exploring and helping to realize such possibilities may be one of the most important contributions the Institute of Noetic Sciences can make. □

Membership Growth

More than 31,000 individuals in 46 countries are members of the Institute of Noetic Sciences. By the end of 1993, we expect membership to grow by another 13%, to 35,000 people. While the majority of members live in the United States—in all 50 states, roughly in proportion to the population of those states—our international membership has grown rapidly in recent years. Looking ahead, we anticipate the development of an increasingly diverse, global membership.

In many ways, Institute members are what trend analysts call "forerunners"—individuals who espouse values just emerging in the culture as a whole. Members' values include a strong interest in personal growth, concern for both the environment and human rights, diminished interest in accumulation of wealth and material goods, a balance between respect for the intellect and appreciation of spirit, an emphasis on personal responsibility together with a sense of social responsibility, and concern for the family, the community and the common good.

Most members are between the ages of 35 and 70. They tend to be well educated, and their incomes tend to be somewhat above average. At one time, significantly more women than men were members, but that ratio appears to be balancing.

The membership renewal rate has increased every year for the last decade, and is currently just over 70%. More than 10% of the membership voluntarily contribute at least $100 annually, and a significant number contribute much more than that in support of the Institute's goals. Many members have also included the Institute in their wills through our Codicil Circle program. This committed support from our growing membership provides a strong base for the Institute's overall development.

The Power of Love

The Institute of Noetic Sciences presents the Temple Awards for Creative Altruism annually. Recipients share a $25,000 award fund sponsored by Institute Board Members Paul Temple and Diane Temple. For information on how to nominate someone you know, contact the Institute of Noetic Sciences.

Since 1987, the Institute of Noetic Sciences has presented the Temple Awards for Creative Altruism six times, to 25 individuals whose lives and work embody the light of unselfish service motivated by love. In their lives are simple lessons with implications that can be radically transformative.

The first lesson is that *each of us can make a difference.* In a society which values professional expertise and training, many of us are tempted to think that without the proper qualifications we can never accomplish anything of significance. This is belied by the experience of ordinary people like Alice Harris, a 1987 Temple Award recipient. One evening some 30 years ago, from her living room in Watts, Alice watched as local gang members broke into a car across the street. "Somebody has got to do something," she thought–then realized that the "somebody" was her. Without any training or experience to support her, Alice founded Parents of Watts, a widely respected community organization that works to provide positive opportunities for youth and adults in one of the most depressed neighborhoods of Los Angeles.

Alice's initiative illustrates a second lesson–*individuals and small groups can act and effectively meet local, national and even international needs when more established organizations cannot.* In some cases, an emerging need may not have been recognized by others in the community. Ganga Stone, a 1988 Temple Award recipient, began hospice work to deliver spiritual solace to people with AIDS, then discovered that many of them had no food in the house. She founded God's Love We Deliver, a nonprofit organization that now prepares and delivers hundreds of gourmet meals twice a day to homebound people with AIDS–and delivers them with love.

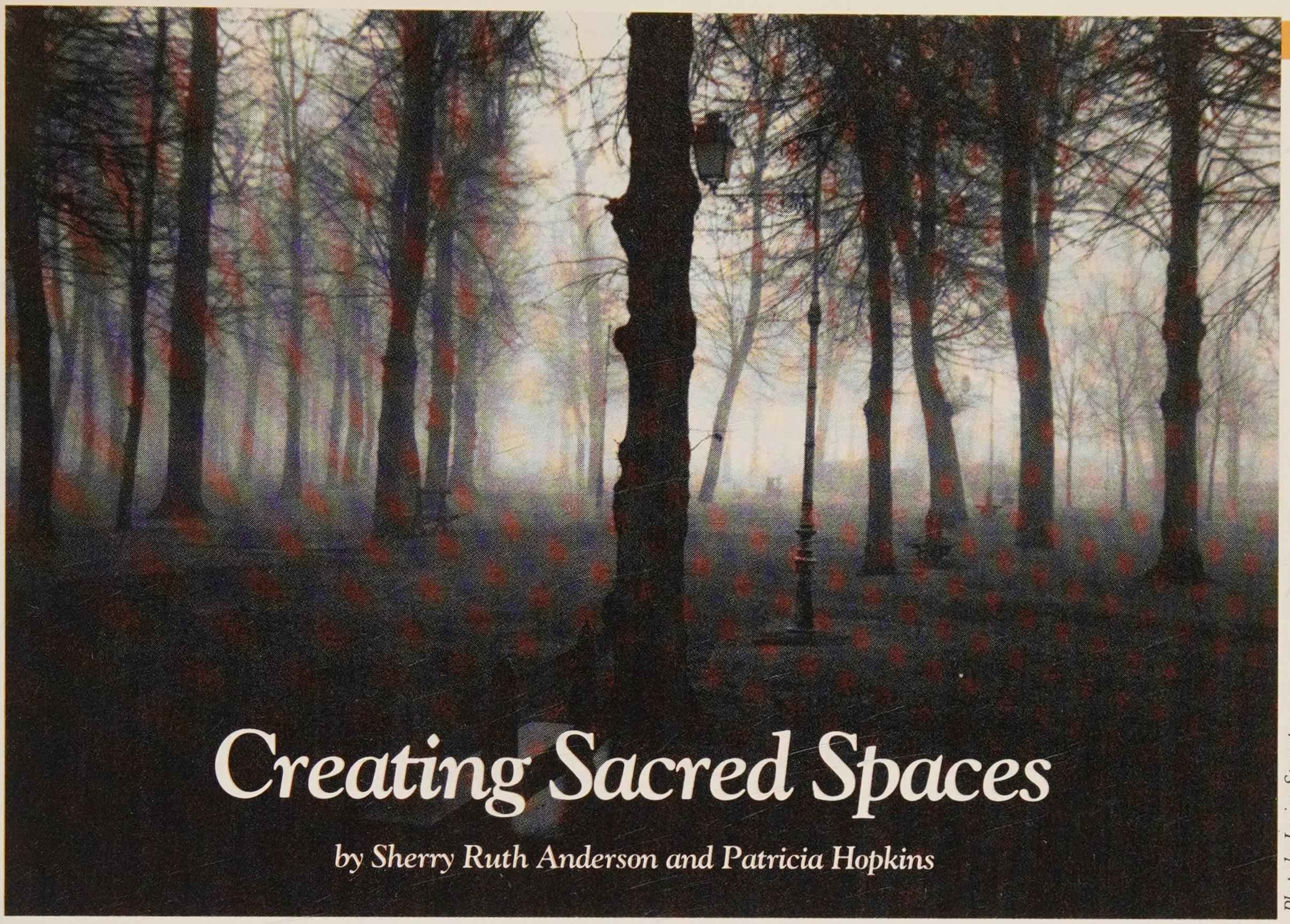
As Ganga's experience demonstrates, *you don't have to go out of your way to find opportunities to serve*–simply pay attention to the needs of those you already encounter in your life. Listen for that which calls to you. While handing out meal tickets at a soup kitchen, Guy Polhemus discovered that homeless people were trying to support themselves by collecting and redeeming empty cans and bottles–and that many stores, although legally required to redeem the items, found ways to discourage the homeless from coming in. A 1989 Temple Award recipient, Guy founded We Can, a center where the homeless can redeem, with dignity and pride, as many bottles and cans as they can collect. Like Alice and Ganga, Guy had neither special training, nor extraordinary courage, nor money or other resources to back him up–only faith, care, pluck and a willingness to learn.

Sometimes, the courage to venture into the unknown is important. When Falaka Fattah's 16-year-old son joined a gang, she and her husband responded by inviting the gang to move in with them. Thus began the House of Umoja, through which the Fattahs have provided a home and guidance to over 2,000 young men who have been convicted in Philadelphia's juvenile courts. The Fattahs were among the 1990 recipients of the Temple Awards for Creative Altruism.

The efforts of individuals like the Fattahs–or Clementine Barfield, a 1993 Temple Award recipient–involve the hard work of rebuilding lives and communities where the everyday circumstances of life continually threaten to destroy them. In Detroit, Clementine and volunteers at the organization she founded, Save Our Sons and Daughters, provide grief counseling and support to victims of urban violence and their families. Such work is not charity. It is education and empowerment; grounded in love, it provides the foundation for the transformation of lives.

These stories demonstrate a simple truth. *Caring comes first.* At the heart of creative altruism is the simple gift of recognition–recognition of every other person as an individual with dignity and worth. Challenging the norms that allow us not to care, creative altruists illuminate a vision of the possible both through their character and their work. It is a vision–and everyday reality–to which we all can contribute. As Ganga Stone said, "The decision to serve others is the highest impulse of the human heart and the rewards of such service are beyond measure. If you wish to taste this joy, then just do it. Just take one step … It doesn't really matter what you do, it only matters that you do it."

–Thomas J. Hurley



Creating Sacred Spaces

by Sherry Ruth Anderson and Patricia Hopkins

Photo by Janine Sprout

Editor's note: The Institute of Noetic Sciences helped support the authors during the early stage of preparing their book The Feminine Face of God: The Unfolding of the Sacred in Women *(Bantam, 1991). Since then it has become one of the most popular books in our membership renewal program.*

In the course of writing our book we often heard women express a longing for a sacred gathering place. "We need to set aside special places for ourselves," one woman urged a conference of her Buddhist sisters. "We need a place to grieve, a place to give solace, a place where we can come together in community." A rabbi put it this way: "Throughout Jewish history there have been sacred places for men to study, called 'yeshivot' from the verb 'to sit'. But we women don't need a place to sit, like dead weights! We need a 'rikudya', a place to dance the energy of holiness in ourselves and to bring through our bodies the sacred feminine Torah."

It was not only a sacred place that was longed for, we discovered, but a circle, a council, a meeting of women for prayer and meditation. One spiritual teacher we interviewed suggested that the unique gift of women's gatherings today is related to the newness of women's exploration of our direct experience of the sacred in our own personalities. "I think our spirituality at this time is like the life you find teeming in tidal pools in the shadows of oceans," she told us. "Once the life takes hold, it can sustain itself. But in the beginning, the sea anemones and the tiny crustaceans, the starfish and the plankton are fragile and must be protected from curious intruders. That is how it is for us right now. We're just developing, just finding our way, and we need deep, quiet, safe places in which to do this."

In our book we wrote about a small group we had started called "The Tuesday Evening Prayer Group". At the time we were writing, the group consisted of seven women who were on diverse spiritual paths. The one thing we had in common was that all of us prayed and/or meditated. We met on alternate Tuesday evenings, spending some time in sharing and some time in silence.

In the two years since our book has been published, we have been asked repeatedly how to form such a group. Women have written and telephoned, often citing a paragraph in our introductory chapter that begins, "A circle of women can

provide a container for emergence in a way that a woman alone or even a one-to-one relationship can not".

Even before we started receiving these requests we knew from the furrowed brows and questions that greeted us each time we introduced the topic of prayer in our interviews that prayer and praying were a source of confusion–and often guilt as well–for a number of women. What is prayer, really? How does one actually do it? Knowing this, why then did we not include a section or appendix on how to start a prayer group in our book? We talked about it a number of times, but finally decided against it for a couple of reasons. First, we did not want to set up our group as a model for others to follow. More importantly, we could not imagine how any step-by step description we could offer could be true to the exuberant spirit of exploration, deep listening, and deeper yearning that characterize circles where women share their spiritual reality. How could anyone prescribe a formula for this?

We have learned that inner truths come to us not only as we sit together in silence, but as we listen wholeheartedly to each other speak.

Nevertheless, the requests kept coming. So when the Institute of Noetic Sciences invited us to write an article on how to start a prayer group we accepted, feeling we could at least offer some guidelines based on our experiences with several different kinds of women's circles over the past six years. In relating the thoughts and suggestions which follow, however, we want to emphasize that each group that comes together to pray and/or meditate (and for the purpose of this article these terms are used interchangeably) will have its own distinct essence and energy. For this reason, its structure and process will evolve in response to the intentions, needs, and expectations of its members. If this article proves helpful as a reference point as you are getting underway, fine, we will have achieved our purpose. If, on the other hand, our suggestions seem irrelevant or inappropriate for your members, ignore them. Discover your own truths instead and trust them to lead you to your spiritual authenticity as a group.

Getting Started

First and probably most important, the prayer circle needs to be a safe place for deep attunement and sharing. The more this need is honored, the more authentic and meaningful the group's experience will become over time. Several factors work together to help members of a beginning prayer group feel intimate and safe with each other. The first is size. By keeping the circle small, preferably no more than six or seven, each member will have enough time to express herself in a natural, unhurried manner–something which is especially important in a group of this kind. Second, closing the circle to new members once a core group has come together allows for the continuity of in-depth sharing and the building of trust. Finally, like most groups in which there is personal exploration, guidelines for honoring confidentiality need to be discussed and agreed upon. In our experience, this has generally meant that what is talked about within the circle does not go outside the circle. However, each group needs to set its own standard of confidentiality and decide how it is to be maintained.

How frequently and where you choose to meet also need to be agreed upon, not just in terms of what is ideal, but what is realistic and possible given members' schedules and responsibilities. This is critical to the ongoing effectiveness of the group. In a small, closely knit circle each member's presence contributes to the unique synergy of the group and the absence of any one person is keenly felt by all. In order to build intimacy and trust, it is essential that each member make a commitment she knows she can keep to be regular in her attendance.

Listening • Speaking • Silence

Once the logistics have been worked out, how do you actually begin praying or meditating together as a group? It seems to us that "deep listening" is the place to start. As the journalist Brenda Ueland writes, listening is a magnetic and strange thing, a creative force. When people really listen to each other with quiet, fascinated attention, the "creative fountain inside us . . . begins to spring and cast up new thoughts and unexpected laughter and wisdom." You can call this creative fountain the spirit, or soul, or heart of yourself, she says. It doesn't matter. But whatever you call it,

once it is muddied over from too much talk to too many people, from not enough solitude, or from too much running around or worrying, you stop living from the center of yourself and live instead from the periphery, from externals.

In a circle that opens a sacred space the listening happens in two ways: It happens as we listen to each other speak, and it happens again as we enter the silence. For one of the things we have learned is that inner truths come to us not only as we sit together in silence, but as we listen wholeheartedly to each other speak.

When we were starting our "Tuesday Evening Prayer Group", it did not take us very long to discover that a simple sense of structure could be helpful in this alternation between listening and speaking The one we followed for several years was basically this:

- "Check-in", during which we told each other what was happening in our lives at the present moment.
- Silent meditation/prayer
- Sharing of thoughts or comments on our communal prayer.
- Closing, in whatever form, gave the group a sense of completion.

With the exception of "closing", however, we did not always follow these guidelines in the above order. Also, the time allotted to each varied as well, depending on our individual and group needs.

When we listen deeply to another, we open a spaciousness that lets the speaker unfold and expand, saying what she needs to say, allowing herself to pause, to wait, to not know what will come next. In the prayer groups we know about and have participated in, women are able to speak of what moves, inspires, or troubles them and ask that what they are saying be held in sacred contemplation.

For example, someone may bring up an ethical choice she is facing. "I have a chance to speak out about what I think is a violation of trust, but I've been wondering if I should do this," she may say. "Maybe it would be foolish of me to stick my neck out. Perhaps I'm too wrapped up in my own perspective to understand the bigger picture." If the speaker feels she can trust the circle, she may go on to reveal some of the details that are concerning her.

There are several ways the group can hold her inner questioning. The quality of listening can be so profound that simply by collectively hearing her concerns the speaker is able to consider her own thoughts and words more intuitively and wisely than she has before. In addition, during the time of prayer and meditation, the whole circle can again act as a container for her questions, perhaps generating a more expanded perspective from which insight, compassion, and guidance can come. Finally, the women in the circle can continue to include the speaker in their daily prayers or meditations.

In the groups we are familiar with, members would probably not give advice about what they believe the woman should do, nor would they probe her in a challenging way or analyze and interpret what they believe her hesitation to act might mean. A prayer group is not a therapy group. Rather, the circle feels its way along, seeking ways to develop meditative, compassionate support for what each person brings forward.

Not all circles limit the interjection of opinions and advice, but cross-talk is discouraged in many. Some groups formalize their intention to have uninterrupted speaking time by following the Native American tradition of passing a "talking stick", which allows the person holding the stick to speak without comments from other members of the group.

For women who for all of their lives may have served as listeners, containers, and receivers of others' stories, actually being listened to, contained, and received can feel like a revelation. When there is time to wait, to pause, to choose our words slowly and sense what is rising within us, we can tell the soul-story of our lives. We can speak of what we yearn for, what we doubt, what we never imagined we would be able to put into words.

And then, together with our companions, we can rest into the silence. As we enter the silence, the listening opens into the mystery of Being, into the Real. One longtime member of a circle put it this way: "We go into silence in order to hear the beat of our collective heart and it is in the heart of silence that we pray–each in our own way. We may pray for specific people, but not for specific results, for we cannot know what is best for anyone. Our prayers come from the silence and they tend to be simple: that a crisis someone is facing will bring her closer to the deep purpose that guides her life; that healing may be granted in a form that will best serve someone's spiritual growth; that a heart that is closed may be opened." As Mother Teresa has said, listening to the silence of our own heart is true prayer. ➢

Guidelines For Times Of Differences

In every intimate relationship, and in every circle, there are times of differences and possibly conflict. These can be times of valuable growth and change if they can be faced openly. What can inhibit or block these opportunities for growth, however, is the belief that personal differences are somehow not "spiritual" and the very fact that you are experiencing them means you have failed as a prayer group.

One comment which we hear repeatedly is the need for kindness in the way members of a circle witness each other. An attitude of judgment or criticism, even if it is not verbally expressed, is nevertheless felt, and circle members find themselves unwilling to speak freely as a result. Afraid of being perceived as "unspiritual", one person may feel she should not show her anger; another may be concerned that her confusion will be viewed with disdain, a third may feel compelled to suppress her laughter or tears. The overall effect is a kind of flattening of the group's experience–in the silence as well as in the personal sharing. So many of us carry such a severe inner critic, who is constantly telling us what is required in order to be good, or "holy", or acceptable to the Divine, that the very last thing we need in our fledgling efforts to find our own true spiritual center is a judgmental attitude from our prayer companions.

However, it is helpful and important to speak honestly with other members in the circle about differences that affect your feelings of comfort and safety. Remembering to express what you value and appreciate about the other person, as well as what is troubling or upsetting you, or what you feel you need and are not getting, can make this kind of communication less threatening and painful for everyone. In our experience, trying to sort through these differences in groups of two or three outside the meeting time undermines the opportunity for deepening and growing closer together as a circle.

What we have learned about dealing with differences during times of difference in our personal interactions is that each time we are courageous and honest enough to stay with our truth and not judge another's, more consciousness and love come into our lives and into our circle. One woman put it this way: "Although I believe that I participate in a mystery that lies at the heart of my being, I also know that prayer is not magic. Sometimes my relationships both within and outside the prayer group are going to be troubled and painful, and some of my greatest blessings and growth come from being able to accept this truth."

You may also find it helpful in the beginning to write out a statement of purpose and a few suggestions for remaining faithful to your intention as a group. Your statement can be as inclusive or narrow as you choose to make it. One circle we know about that has been meeting for five years refers to their statement periodically to realign themselves and renew their group commitment. As they went through this process recently, it became clear that it was no longer appropriate for one member to remain in the group and she left. Another circle's guidelines are very broad and inclusive as this excerpt from their statement of purpose illustrates:

> *We do unsolemnly declare: We are here to receive each other: the tender, rageful, sensitive, stupid; the mute, beautiful, erotic, selfish; the unformed selves–all are welcome!*
>
> *We are here to express ourselves authentically. We are here to dance on the edge.*

At this point, it is important to say that in the beginning weeks after your group has started to meet, there may be members who feel they "do not fit in". Almost everyone experiences this at one time or another and, for some, the feeling of "not belonging" can persist for months, or even longer. If your group is a safe one, this familiar fear of exclusion can be voiced by the person feeling it, met with compassion by other members of the circle and put to rest.

We live in a time when new ways of praying and sharing and celebrating are being discovered every day. Do we know the face of God that can come through us? How can we learn to be true to the sacred reality that we embody? Since many women have never had the experience of being received in a sacred place that does not demand or judge, but listens and welcomes, they are using their circles as places where they can go into the Mystery, the not-known, the new possibility. Naomi Newman, in her play *Snake Talk: Urgent Messages from God the Mother,* puts it this way:

> *Now we are going to make a new way path–up and down, in and out, right and left, not in a straight line. Nothing natural or interesting goes in a straight line. As a matter of fact, it's the quickest way to get to the wrong place.*

And she warns:

> *Don't you pretend you know where you are going, that means you've been there and you are going to end up exactly where you came from.*

Three Different Kinds of Prayer Groups

Each of the three women's groups we describe below has its own unique way of meeting. The one thing they share is that their members are willing to experiment with and change whatever isn't supporting their experience of communal prayer. We hope these examples will encourage you to be adventuresome and find your own spiritual integrity as a group.

The Tuesday Evening Prayer Group: This circle of seven women has been meeting for over six years on alternate Tuesday evenings. The group has been closed except for two intervals when old members left and new ones entered. During their years together, the women have developed a few simple customs or rituals for conducting their gatherings. At the beginning of the evening, seven candles–one for each woman–are placed in the center of the circle and lit. Members then take turns speaking in a relaxed way, rotating around the circle. Occasionally, one woman may speak at length and others only briefly, depending on the need of each individual.

After about two hours of sharing, there is silence. During this time each woman prays or meditates in her own way, taking care to include the concerns and prayers of each of the members who has spoken. In the past year this circle has introduced a way of focusing its prayers: One woman quietly says the name of the person sitting next to her. The whole group then holds that woman in prayer while she opens herself to all of those–inside and outside the circle–with whom she feels connected. Then she, in turn, repeats the name of the person next to her, and so on until everyone has had her turn.

"This form of prayer allows the one we are focusing on to truly feel our blessings, and to experience the resonance of our communal intention," one member says. "But," she adds with a grin, "of course we are entirely free to throw this form out any time we like, and go back to the old way or try something new. After all, it is our prayer group."

Following the silence, there is often some additional sharing. Then, taking hands, looking at each other, and smiling like children gathered around a birthday cake, the women blow out the seven candles together.

The Five Dakinis: Dakinis are "sky dancers", female deities in the Tibetan Buddhist tradition who are fierce, wild, courageous, and compassionate. The circle of five women who have taken this name do not like to sit still for long. Several of them are dancers and others like to sing and play music. They meet for an entire morning, beginning with breakfast, prayer, meditation, and celebration about every three or four weeks. There is usually a short period of silence before any sharing is done.

Silence is followed by a "check-in" time. What comes next varies from meeting to meeting. There may be movement to taped music or to drumming or chanting. At one point, a series of meetings was devoted to individual members. Each woman, when it was her turn, brought photographs and other meaningful mementos of her life and took most of the session sharing her life-story. The others listened and asked questions.

On other occasions, the group has spent its meeting time on healing–focusing energy on a member who lies in the center of the circle, or praying for the Earth, or celebrating or mourning a world-event. There is no particular closing ritual, although silence is often present.

Four Traditions: In this circle, four women from four different spiritual traditions meet. Each is, or has been, a teacher in her own tradition. Because of the distance between their homes, they meet every four to six weeks during the morning. There is no formal ritual for beginning their session. Members simply drink tea, eat coffee-cake, and talk fervently. Each one feels that this opportunity to inquire deeply and dialogue with others is invaluable to her.

"It is such a gift to be in this tiny circle," one of the women says. "In my challenging days as a mother, therapist, and priest, there is nowhere that I can speak so personally about my doubts and fears, as well as my experiences and insights from meditation. For so many of us now there is such a strong interconnection between the personal and the transcendent. Without this chance to speak intimately and listen to all of you, I would feel so isolated, so alone."

Once each person has spoken, there is usually about a twenty-minute meditation period. "It's brief as meditations go," another member told us, "but the depth and refinement of that silence can nurture me for days."

There is such a need for sacred spaces these days. Our sincere hope is that if you are feeling this need you will find a friend or two and begin to create a prayer group or meditation circle. One of the women we interviewed for our book defined spirituality as "acting on your knowledge of God or the Divine". Forming a prayer group is one way of doing that. Name it what you like, shape it to what fills your heart with gladness and responds to your deepest longings, but do go ahead. And let us know how it works out! □

Sherry Ruth Anderson was former Chair of Psychological Research at the Clarke Institute of Psychiatry in Toronto, Ontario. Currently she is in private practice in San Rafael, California. Patricia Hopkins works extensively with spiritual organizations and is co-author of Good-Bye to Guilt. *She lives in Denver, Colorado.*

THE FUTURE

TOWARD THE WORLD VIEW OF ECOLOGY: NOT BUSINESS AS USUAL

by Edward Goldsmith

Noetic Sciences Review

Editor's note: For 21 years Edward Goldsmith, editor of England's The Ecologist, *has been documenting trends that seriously affect the Earth's ecology. According to Goldsmith, if these trends persist they will make the planet uninhabitable in only a few decades. Because of human activity, there is now universal pollution, and even the Earth's magnetic field is being changed. It is probable that hundreds of species, only a fraction of which are known to science, are being made extinct each day, and soon, suggests Goldsmith, one of those could very well be humankind. His assessment of this situation, which follows, is adapted from Goldsmith's* The Way: An Ecological World-view *(Shambhala, 1993).*

Why is modern humanity so rapidly destroying the natural world on which it depends for its very survival? The answer is that our society is committed to economic development–a process which by its very nature must systematically increase the impact of our economic activities on an environment ever less capable of sustaining them, and ever more deeply degraded by them.

An idea of the gross mismatch between the impact of human activities and the environment's capacity to sustain them is provided by the fact that we now co-opt, for our own use and for our various economic activities, fully 40 percent of the biosphere's terrestrial net primary production (NPP). What is more, if economic activities continue to expand at the present rate, within no more than a few decades we would co-opt 100 percent of NPP–which, of course, is not remotely conceivable.

All of this is of little, if any, concern to our political leaders. In general, a major constraint on government action to tackle the serious environmental problems that face us is imposed by the lobbying efforts of powerful industrial groups intent on defending their petty short-term interests, come what may.

More surprising, however, has been the almost total indifference with which the academic world has viewed this critical problem. Its acknowledged role is to provide governments and society at large with knowledge that serves the public interest and maximizes the general welfare. But how can it achieve this task if it systematically ignores the fatal process that is rendering our planet ever less habitable and, unchecked, must inevitably lead to the extinction of countless species–including our own?

Anthropologists have shown that often a life-threatening challenge is systematically ignored because a prevailing worldview declares it to be inconceivable–indeed, is proved wrong if the challenge is shown to exist. Anthropologist A.F.C. Wallace[1] shows convincingly that some tribal peoples, for example, will go to any lengths to preserve their "cognitive structure", or "mazeway" as he refers to it. A scientist will go to equal lengths to do so–as Thomas Kuhn, Michael Polanyi, Gunther Stent and other enlightened philosophers of science have shown.

THE PRESENT WORLDVIEW: MODERNISM

The worldview which today's academics share with everybody else in our society–including our political leaders–I refer to as the worldview of modernism. It is faithfully reflected in the paradigms underlying the specialized disciplines, in terms of which modern knowledge has been divided–the paradigms of economics and of science, for example.

The two most fundamental tenets of this worldview are (1) that all benefits–and therefore our welfare and our real wealth–are derived from the man-made world, and (2) that to maximize these benefits we must maximize economic development:

1) That our welfare–and our real wealth–are derived from the man-made world means, in effect, that they are the products of science, technology and industry, and of the economic development that these make possible. Thus health is seen as something that is dispensed in hospitals, or at least by the medical profession, with the aid of the latest technological devices and pharmaceutical preparations. Education is seen as a commodity that can only be acquired from schools and universities. Law and order, rather than being natural features of human society, are seen instead as provided by our police force in conjunction with the law courts and the prison system. Even society is seen as man-made, having been brought into being by the "social contract". Not surprisingly, a country's wealth is measured by its per capita Gross National Product (GNP), which provides a rough measure of its ability to provide its citizens with all such man-made commodities, a principle faithfully reflected in modern economics.

Facing Page: Art by Phillip Lollar

For economists trained in these ideas, natural benefits–those provided by the normal workings of biospheric processes, that assure the stability of our climate, the fertility of our soil, the replenishment of our water supplies, and the integrity and cohesion of our families and communities–are not regarded as benefits at all. Indeed, our economists attribute to them no value of any kind. It follows that to be deprived of these non-benefits cannot constitute a "cost" and the

IN THE WORLDVIEW OF MODERNISM NATURAL BENEFITS FROM BIOSPHERIC PROCESSES ARE ACCORDED NO VALUE AT ALL—THE DESTRUCTION OF NATURAL SYSTEMS CARRIES NO "ECONOMIC COST" WITHIN THIS ACCOUNTING SYSTEM.

natural systems that provide them can therefore be destroyed with economic impunity.

Even economists who can see through this preposterous accounting system still deny that environmental destruction is a problem because they have been taught that the market system, in conjunction with science, technology and industry, can deal with any "resource shortage". For instance, the farmers of the San Joaquin valley in Southern California are faced with a serious water shortage which may put many of them out of business, but they do not seem unduly concerned and are making no effort to adapt highly wasteful water intensive practices to the new conditions. It is taken for granted that, sooner or later, some massive water diversion scheme will, as in the past, bring them the water they require from some other part of America, or even Canada.

The same argument is used to persuade us that the degradation of our agricultural land is not a problem. For our economists, agricultural land is just another "resource".

This aberrant attitude is further rationalized by mainstream scientists, who set out systematically to denigrate natural processes. Sir Peter Medawar[2], the brilliant British biologist and Nobel laureate, has talked about nature's "own artless improvisations". The American sociologist Lester Ward[3] has attacked nature's inefficiency:

> *Rivers, instead of flowing straight, and so delivering their water to the sea, with minimum expenditure of energy, lazily meander through plains and valleys.*

He complains of "the redundant fertility" of the organic world: The herring lays 10,000 eggs, of which only two will reach maturity, and a large chestnut tree produces up to a ton of pollen. Nature's shortcomings are an invitation to man to become nature's engineer and create a paradise on Earth, of his own design, whose functioning he can plan and direct in all its detail.

The truth is very different. The constituents of the living world are not here to provide us humans with short-term material benefits but rather to contribute in all sorts of sophisticated ways to maintaining the critical order and stability of the biosphere. In reality, there is no way in which they can be adequately replaced by human artifacts however elaborate they might appear to us.

Not surprisingly, even after one hundred and fifty years of industrial development, the vast bulk of the services required to keep our planet functioning are still provided by the self-regulating processes of the biosphere. This was recognized more than 25 years ago by Carroll Wilson[5] in his seminal report "Man's Impact on the Global Environment":

> *Almost all potential plant pests are controlled naturally. Insects pollinate most vegetables, fruits, berries and flowers. Vegetation reduces floods, prevents soil erosion, air-conditions and beautifies the landscape. Fungi and minute organisms work jointly on plant debris and weathered rock to produce soil. Commercial fish are produced almost entirely in natural ecosystems. Natural ecosystems cycle matter through green plants, animals and decomposers to eliminate wastes. Organisms regulate nitrates, ammonia and methane in the environment. On a geological time scale, life regulates the amount of carbon dioxide, oxygen and nitrogen in the atmosphere.*

No more than a minute fraction of these essential self-regulating biospheric functions can be taken over–very inadequately, at that–by the externally regulated, technospheric institutions and corporations of our modern world.

If the US government takes seriously the National Academy of Science's recent publication "Policy Implications of Greenhouse Warming",[6] then we may all be condemned to become astronauts on our own planet, deprived of even the most rudimentary ecological wealth and maintained only by the most sophisticated technological devices. Indeed, if we refuse to cut down global emissions of greenhouse gases, by 60-80 percent as recommended by the United Nations' Intergovernmental Panel of Climate Change (IPCC), the only method available to us for preventing a global climatic disaster may well be to install the appropriate technological devices for doing so. Among the "geo-engineering" strategies suggested by the National Academy of Sciences is the placing of "fifty thousand, one hundred square kilometer mirrors in the Earth's orbit, to reflect incoming sunlight". Another is

to "use guns or balloons to maintain a dust cloud in the stratosphere, to increase the sunlight reflection". Other strategies involve using aircraft "to maintain a cloud of dust in the low stratosphere to reflect sunlight" or decreasing the "efficiency of burning in engines of aircraft, flying in the low stratosphere, to maintain a thin cloud of soot to intercept sunlight".

But how do we know that such questionable geo-engineering strategies would work, or that we could continue to maintain them?

That our scientists should seek such substitutes for the homeostatic mechanisms of the biosphere that has so far regulated world climate is absurd. To me this only indicates to what extent they live in a world of their own–one that seems to be increasingly insulated against social, ecological and even economic realities.

2) *The second fundamental tenet of the worldview of modernism follows quite logically from the first: It is that to maximize all benefits and hence our welfare and our wealth, we must maximize economic development–a process we identify with progress.* To question its efficacy or to suggest that it might not be entirely beneficial is to blaspheme against the holy writ of the modernistic creed.

It is even more blasphemous to suggest that economic development, rather than solve our problems, is in effect the main cause of these problems, as it clearly is. Scientists will lift up their hands in horror if it is suggested that the terrible social and environmental destruction we are witnessing today is a result of this sacred process. Instead, it will be imputed to deficiencies or difficulties in its implementation–government interference, corruption among local officials, or freak economic or climatic conditions that are unlikely to recur.

More precisely, modern scientific man interprets problems, such as an epidemic, in terms of a cause and effect relationship on the basis of which it is attributed to a discrete event such as the action of a bacterium, virus or other pathogen, which must then be eliminated, usually by waging chemical warfare against it. To do this, we build factories for manufacturing the chemicals, shops in which to sell them, hospitals in which to administer them and universities in which we train the requisite chemical engineers, pharmacists, doctors and other specialists.

Thus we interpret our problems in such a way as to make them appear amenable to solutions that are dependent on scientific, technological and industrial development, or progress–precisely what our society is organized to provide. This may occasionally serve to cure individual sufferers; it will always serve the interest of industrialists and their political allies; but it will do nothing to reduce the incidence of the disease. Not surprisingly, the incidence of just about every infectious disease with the exception of smallpox and possibly poliomyelitis is increasing throughout the world today and will probably continue to increase, so long as current economic trends persist. All the other ever more daunting problems which confront our society today are interpreted in much the same way.

Thus poverty is seen to be primarily a shortage of material goods and technological devices and of the money required to purchase them. The claim is that economic development can solve this problem, since it will enable us to build factories which can manufacture these commodities, and provide jobs to enable people to earn the money required to pay for them.

The rapid degradation of the world's remaining agricultural lands is attributed by governments and international agencies to traditional agricultural techniques. Thus US aid attributes the rapid deterioration of "the soil resource base" in arid lands to mismanagement, based on the use of "traditional technology and agricultural practices"–though these techniques have been used sustainably for thousands of years.

Malnutrition and famine are also attributed to archaic agricultural practices and, in particular, to low inputs of fertilizer. A report based on a 20-year study, jointly undertaken by the Food and Agricultural Organization (FAO) and other organizations[7], insists that the amount of food produced in the world is a direct function of fertilizer use, without mentioning the diminishing returns on successive applications of fertilizer experienced wherever farmers have adopted modern agriculture methods. According to the FAO, malnutrition and famine are also due to poverty. People starve because they do not have the money required to buy food; it follows that "the income of the poor must be increased so that their basic food requirements can be translated into effective demand". Hence, more economic development is encouraged, even though, in spite of the unprecedented economic development of the post-war years, more people than ever now lack the money to buy food.

The population explosion is also primarily attributed to poverty. Poor people are insecure, which leads them to produce more children, who can be put to work to earn money for their parents. This means that to bring population growth under control requires rapid economic development which will provide them with the money they require to assure their

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Nothing that man has invented can conceivably replace the natural forests that once covered significant proportions of our planet's land area, in particular the tropical rainforests. One can draw up an almost endless catalog of the irreplaceable services that rainforests provide us. Thus by means of their elaborate root systems, they literally hold the soil together, preventing erosion from even the steepest slopes. Even in rainforests that are subjected to three hundred inches of rain a year, the water that runs off into the rivers is crystal clear. Their elaborate root system also insures that the earth beneath it is sponge-like and maximizes its capacity to retain the rains; by the same token, they control run-off to the rivers, releasing only a fraction of what they retain. Once the forests have been cut down and the roots have rotted, the earth hardens and ceases to be capable of retaining water. Most of the water runs off immediately into the rivers, whose beds have been raised by erosion from the deforested slopes, giving rise to ever-worsening floods below. In the meantime, beneath the deforested slopes, the water table sinks; rivers become torrents that only flow during the rainy season; streams and springs dry up.

Forests also provide the perfect habitat for living things—it is said that between 50 and 80 percent of the possibly hundreds of millions of different species of living things inhabit the tropical rainforests. Natives, even after they have become sedentary cultivators, still derive much of their food from neighboring forests. They also find there the materials required for houses or huts, weapons and tools, medicinal herbs and vegetable dyes—indeed, the forests provide the very material basis of their cultural pattern, which necessarily disintegrates once the forests go.

Forests generate the oxygen required for animals to breathe and also provide an important sink for carbon dioxide. The wholesale burning of forests that is occurring today is responsible for a significant proportion of the carbon dioxide released into the atmosphere to cause global warming. Forests via transpiration from their leaves give rise to much of the atmospheric moisture that will form into clouds and help reduce the sun's heat and give rise to precipitation. In addition, between 50 and 70 percent of the rain that falls on the three thousand square kilometers of Amazonian rainforest is generated in this way. Thus over this vast area huge amounts of water are constantly falling and rising—yet another way in which the forests act as a cooling system for our planet.

James Lovelock[4] has calculated the annual energy cost of achieving the same degree of cooling by mechanical means:

> *If the clouds made by the forests are taken to reduce the heat flats of sunlight received within their canopies by only one percent, then their cooling effect would require a refirgerator with a cooling power of six kilowatts per hectare. The energy needed, assuming complete efficiency and no capital outlay, would cost £1,300 per hectare.*

On the basis of this calculation, Lovelock regards "the refrigeration system that is the whole of Amazonia" as being worth about one hundred and fifty trillion dollars.

Needless to say, we could not afford to install all the technological devices required to perform the free services which the forests once provided for us, even assuming that it was technically possible to do so.

—E. G.

Photograph by Bambi Fullerton Rhodes

. . . *continued from page 55*

security, assuring in this way "a demographic transition" as has already occurred in the industrial world. No mention is made of the fact that this transition occurred in the industrial world only once per-capita income had reached a much higher level than Third World people can hope to achieve. Nor is it noted that economic development, by destroying families and communities, annihilating their natural environments and forcing them off the land and into the slums, is the greatest source of their present insecurity.

The population explosion is seen above all to be the result of a shortage of family planning devices–so much so, that the World Bank[8] has estimated that to achieve "a rapid fertility decline goal" in sub-Saharan Africa would mean increasing the amount of money spent on "family planning" twenty times by the end of the century–an extremely convenient approach to the problem from the point of view of manufacturers of birth-control pills, condoms and IUDs.

So it is with the other problems that confront us, whether unemployment, crime delinquency, drug-addiction, alcoholism, pollution, resource depletion, global deforestation and global warming. Each of these problems is interpreted in a way that rationalizes policies we have already decided to adopt: those that make the greatest contribution to economic development and hence best satisfy the requirements of the corporations and institutions that dominate our society. In other words, rather than interpreting our problems as the inevitable consequence of economic development or progress we interpret them as providing evidence that economic development has not proceeded far or fast enough.

This is the essence of the Great Misinterpretation–the ultimate manifestation of modern man's cognitive maladjustment to the industrial world that he has created. It has drawn us into a veritable chain reaction which leads to ever greater social and environmental destruction, from which we must waste no time in extracting ourselves if we are to have any future on this planet.

A DIFFERENT WORLDVIEW: OF ECOLOGY

To extract ourselves, we must learn to interpret our problems in the light of a very different worldview–one that I refer to as the worldview of ecology, and which I identify with the worldview of those vernacular peoples who practice a Chthonic or Gaian religion, a religion of the Earth. It seems certain that all vernacular societies at one time practiced such a religion and hence were imbued with the worldview of ecology. It is only in this way that we can explain

TECHNOLOGICAL SOLUTIONS TO SPECIFIC DISEASES ONLY DEAL WITH THE SYMPTOMS, NOT THE CAUSES.

their great stability, the fact that such societies could thrive for as long as they did without destroying the natural world on which they depended for their welfare and indeed for their survival.

Vernacular peoples in the classical world understood, as Donald Hughes notes, that "hunger, ill-health, erosion, poverty and general ruin" were only different forms "that the Earth's revenge could take for the terrible mistreatment meted out to her by man"–punishments for having diverted from what was called "The Way" in pursuit of the anti-Way or the *ou-Themis* (see sidebar, page 58). The only cure for these ills, therefore, was to treat the Earth with greater care, which meant to return to The Way of the ancestors who lived in the Golden Age when such ills were unknown.

Vernacular peoples invariably interpreted disease in particular in this way. Thus among the Tukanos of Colombia, as Gerardo Reichel-Dolmatoff[9] notes:

> *Illness is taken to be the consequence of a person's upsetting a certain aspect of the ecological balance. Overhunting is a common cause and so are harvesting activities in which some relatively scarce natural resource has been wasted. The delicate balance existing within the natural environment between nature and society, and within society itself, is bound to affect the whole.*

The shaman's task "is to cure a social malfunction". He does this by re-establishing the rules that "will avoid overhunting, the depletion of certain plant resources and unchecked population increase". Quite clearly, then, the shaman is more than a medical practitioner. He is a "truly powerful source in the control and management of resources" for he can really affect the incidence and severity of diseases over which the modern medical practitioner has no control whatsoever.

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THE WAY

The main tenet of the worldview of ecology is that our true wealth and hence real benefits are derived from the normal functioning of the world of living things. Those imbued with this worldview fully realize that our greatest wealth must be our favorable and stable climate, our forests, rivers, and fertile soil. If this is so, then their principal preoccupation must be to preserve the critical order and stability of the natural world rather than systematically destroy it as modern man is committed to do. It is easy to show that this was in fact the overriding goal of such vernacular societies. To achieve this goal meant following what many of these societies referred to explicitly as "The Way". This meant behaving in accordance with their society's traditional law.

The Way to be followed by all human beings was the same as that which must be followed by society as a whole, by the natural world, by the cosmos and therefore by the gods themselves. There is thus a single law which governs the behavior of the whole cosmic hierarchy.

- The Chinese concept of Tao refers to the order and to The Way of the cosmos. The term is applied to the daily and yearly "revolution of the heavens" and of the two powers of light and darkness, day and night, summer and winter, heat and cold. J. de Groot[11] tells us that: "It represents all that is correct, normal or right (ching or twan) in the universe; it does, indeed, never deviate from its course. It consequently includes all correct and righteous dealings of men and spirits, which alone promote universal happiness and life."

Tao represents the natural course of things. It was considered, Joseph Needham[12] writes, "not only as vaguely informing of all things, but as being the naturalness, the very structure of particular and individual things". Humans follow the Tao or Way by behaving naturally. In Taoist terms, this means abiding by Lao Tzu's principle of wu wei, for "when all things obey the laws of the Tao," as Wing-Tsit Chan[13] writes, "they will form a harmonious whole, and the universe will become an integrated organism."

- A similar concept existed in Vedic India. "The Processes whose perpetual sameness or regular recurrence give rise to the representation of order," writes Maurice Bloomfield[14], "obey R'ta or their occurrence is R'ta."

The great Vedic "Hymn to the Earth" clearly expresses the belief in human dependence on the order of the cosmos and the human role in maintaining it by observing the ancient law. The poet expresses his faith in the eternal order and in the human duty to preserve it. It is this order which has bound "rock, soil, stone and dust" in such a way that "trees, Lords of the Forest, stand very firm". "Whatever I dig from thee, Earth, may it have quick growth again. O purifier, may we not injure thy vitals or thy heart."

- In the Persian Avestas, The Way is also referred to as Asha, the celestial representative of justice on Earth. Later, the concept of Dharma was also used by the Hindus in the same way: "that regularity, that normality of the universe, which produces good crops, fat cattle, peace and contentment," A. M. Hocart[15] writes, "is expressed by the word Dharma which means etymologically 'support', 'upholding'."

- When a Buddhist Lama sets his prayer wheel turning he is performing a ritual that has deep meaning both in terms of the Dharma and the R'ta. Not only are the prayers printed on it repeated by his audience, but, as Jane Harrison[16] notes, "He finds himself in sympathetic touch with the Wheel of the Universe; he performs the act Dharma-Chakra-Pravartana, 'Justice-Wheel-Setting in motion'. He dare not turn the wheel contrariwise, lest that were to upset the whole order of nature."

If there is a notion of the right way to follow in order to maintain the order of the cosmos, there is, in all traditional societies, a notion of the wrong way, or anti-way, which threatens the order of the cosmos and must thereby give rise to the worst possible discontinuities. In the Vedas, as Chaitanya Aotes, we read that R'ta, though benign, can also be "stern and fierce" when it comes to transgressions.

Among the Greeks, the wrong way was referred to as "ou Themis", the opposite of Themis (which occasionally was used to mean "social order" and occasionally "the order of the pantheon" as well as the path to be followed to achieve such order). To follow the ou Themis could not be done with impunity. Among the Greeks, Themis would on such occasions take on a very different form, that of Nemesis, who may originally have been the woodland goddess, identified with Artemis, or Diana of the woods. She was also a goddess of fertility, closely allied with Fortuna, "the Lady who brings forth the fruits of the earth".

However, as Cornford[17] notes, *"She who dispenses good things can withhold them or dispense blights instead of blessings, the awful power which haunts the Nemos may blast the profane invader of her sanctuary."*

—*E. G.*

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Victor Turner[10] shows that among the Ndambu of East Africa the doctor "sees his task in very much the same way":

> *[It is] less as curing an individual patient than as remedying the ills of a corporate group. The sickness of a patient is mainly a sign that 'something is rotten' in the corporate body. The patient will not get better until all the tensions and aggressions in the group's interrelations have been brought to light and exposed to ritual treatment. The doctor's task is to tap the various streams of affect associated with these conflicts and with the social and interpersonal disputes in which they are manifested–and to channel them in a socially positive direction. The raw energies of conflict are thus domesticated in the service of the traditional order.*

In this manner, vernacular peoples diagnose diseases as the symptoms of social and ecological maladjustments brought about by diverging from The Way, thereby violating the laws of the cosmos and disrupting its critical order: maladjustments that can be eliminated only by correcting the divergence and returning to The Way.

I believe this interpretation is correct–the scientific one is not. Epidemics are generally caused by large-scale environmental changes, such as deforestation, the building of cities and huge water development schemes, that by their very nature must disrupt the basic structure of the natural world. These changes bring us into contact with living things, and with the parasites and pathogens of which they are the vectors, with which we have often had little previous sustained contact and to which we are highly vulnerable.

Thus malaria was originally a disease of monkeys living on the canopy of tropical forests. By cutting down the trees we entered into contact with them and inherited one of their parasites, the Anopheles mosquito that transmits malaria. By building large and ecologically disruptive water development schemes we created niches for the vectors of water-borne diseases, such as malaria and schistosomiasis, whose incidence is now spreading throughout the world.

The solution is correct too–technological solutions to specific diseases only deal with the symptoms, not the causes. It is only by repairing the damage we have done to the natural world that we can recreate conditions in which the incidence of these diseases can be reduced to a minimum.

And so it is with all the problems that confront us today, whether it be poverty, malnutrition, unemployment or armed conflict. Their increasing incidence can only be regarded as symptoms of social and ecological disruption. Science and technology can only mask such symptoms, rendering the problems correspondingly more tolerable, which can only serve to perpetuate them.

The solution can reside only in restoring the functioning of the natural systems that have been disrupted–which means returning to The Way, that cultural behavior pattern that assures the maintenance of the critical order of the living world.

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THE SKY'S THE LIMIT

by Sy Safransky

The same day I get the bad news about my gums, I find out the hole in the ozone layer is worse than anyone thought. It's not just that the hole is getting bigger. We're eggs on the griddle: Higher doses of ultraviolet radiation leaking through the fragile ozone shield mean more skin cancers, more cataracts, you name it. But now, scientists report that in the Antarctic, where the hole in the ozone layer was discovered, there's been a 12 percent decline in the growth of phytoplankton, the tiny, single-cell plants that are eaten by nearly all aquatic animals. According to one researcher, the effect eventually "could cascade through the food chain".

I read the story to Norma, who shakes her head. What's more, she says, those tiny, single-cell plants produce more oxygen than the rainforest. I nod. The ozone layer, the greenhouse effect, acid rain: I got them mixed up. I took biology when it was the study of life, not disaster; when "the sky is falling" was a line in a children's story, not a headline.

Maybe I'd understand more about the environment if I cared more. I tell myself it's people I care about: crowded, brawling cities; politics; literature; the life of the mind. I joke, like Woody Allen, about my "twoness" with nature.

Norma doesn't laugh. She understands more, she worries more, about the environment. I worry what to say about it. "None of this is funny," Norma says.

I sigh. "I thought you liked Woody Allen."

The dentist shakes her head. The tenderness in the gums, she says, the slight bleeding–most people consider these symptoms a normal sign of aging. They're not. They're a sign of sickness. Invisible and painless in its early stages, the disease is easy to ignore even as bacteria attack the gum tissue. Later, after the bones and ligaments that support the teeth have been damaged, after the foul breath and oozing pus, after the disease has turned into something called periodontitis, surgery may be required; tooth loss is inevitable.

Periodontitis: a word that sends you to your knees, begging for forgiveness. A word that dresses in black and smells of disinfectant. The dentists must have stayed up all night, tossing words back and forth like Frisbees, before they came up with this one. If we were told the world had periodontitis, wouldn't we be more alarmed?

Words, I tell Norma, are everything The environmentalists need to learn this. Their metaphors are too bland, too agreeable. On a chilly day, global warming sounds friendly, like curling up before a fire. The greenhouse effect? I think of ferns.

I picture the planet on the dentist's chair, getting the awful news. Periodontitis? The planet gulps. It can't be that bad. The pockets around some of the teeth are pretty deep, the dentist says. We meant to floss. Of course, the dentist says. We'll start tonight. Tonight, the dentist says. Like a priest who has listened to too many confessions, she smiles tenderly, wearily. She calls this the pleading stage. She knows that we're wedded to catastrophe, that we'd sooner argue over our epitaph than change our habits. Not me. No more jokes about recycled toilet paper, I promise Norma. I'm on my knees.

That night I floss. I brush. I read *A Healthier Mouth: It's Up To You.* I floss again. I think, maybe we're not more alarmed

because the hole in the ozone layer isn't a problem for most of us–the way the economy is a problem, or the car's run-down battery is a problem, or, let's face it, what to have for lunch is a problem. The ozone layer is remote, twenty miles up in the stratosphere: about as far away as the ice skating rink in Hillsborough, where my fifteen-year-old daughter asked me to drive her the other night. Get a ride with someone else, I said. But how I worried when she was late.

Yet what good is worrying, or pointing a finger? The newspaper says ozone depletion today is the result of emissions from thirty years ago. But thirty years ago I'd never heard of fluorocarbons or flossing. So who's to blame? Marilyn Monroe for using spray deodorant? John F. Kennedy for not putting a stop to it? We may as well blame our love affair with America, her tall buildings and long highways, her industrial sleek and shine. Or God, for giving us all this freedom, with only one stipulation, one tiny, nagging clause in the otherwise perfect contract: that we learn what freedom really means.

I work the floss along the curved surface of each tooth, like a shoeshine boy with his buffing rag. I floss carefully, because plaque is sticky, practically invisible, clinging to tooth surfaces as tenaciously as Exxon to its profits, oil to a dead bird's wing. I floss because I want to clean up the toxic dump I've made of my mouth. I floss because, as Wendell Berry says, one person who changes his ways is worth a hundred who talk about it.

Standing before the mirror, eighteen inches of nylon thread wrapped too tightly around my fingers, my mouth oozing blood, do I really imagine I'm healing the planet? Individual gestures are important, but why sentimentalize the power of the individual, as if each of us could be a Gandhi or a Mother Teresa? This is Earth Day rhetoric, nailing us to the wall while the real criminals slip away.

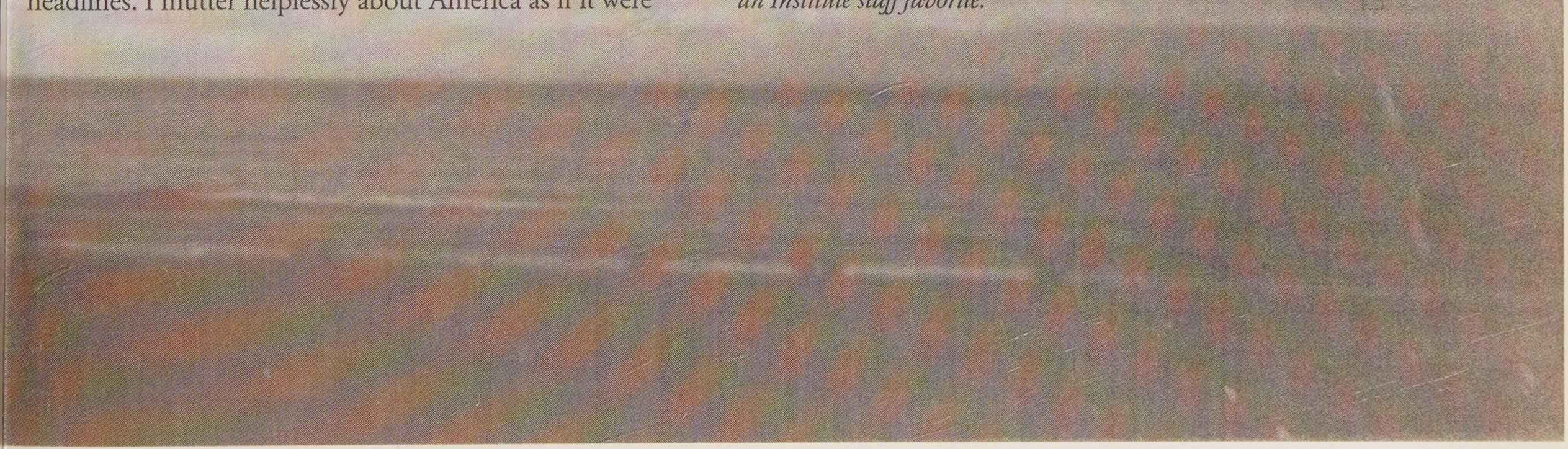
I swing between hope and despair on the vine of each day's headlines. I mutter helplessly about America as if it were something I accidentally stepped in. Still, every choice has implications I can barely imagine: walking to the store instead of driving, or boycotting a certain product, or growing some tomatoes, or marching in a demonstration, or demonstrating what it means to govern myself. The body, too, calls out for compassion; it doesn't want to be treated the way the polluters treat the rivers and the skies. Is my body mine, to do with as I please? Is it private property? After all, oneness isn't a lofty idea, something abstract and spiritual, but a bare bones description of reality, spun of individual acts.

Sometimes what matters is changing a habit. The only way I'm going to make flossing a daily routine–I know, because I've tried before and failed–is to floss right after dinner, instead of waiting until bedtime when I'm tired. But this means not snacking after dinner, not turning to food as consolation for sadness or boredom.

Sometimes what matters is paying attention to my resolve, which turns on itself, analyzes and mocks itself: Does the world depend on people like me? What a struggle to be present, completely present, with the dying oceans and the dying trees, with this mortal body on this mortal planet.

We had the recycling bins outside the office for months before I started separating my trash at the end of the day. It was too much trouble to sift through my wastebasket, separating the white paper from the yellow paper from the catalogs from the cardboard. From the apple cores. From the plastic container still sticky with cottage cheese. Who wanted to stand outside, in the cold, in the heat, picking through the detritus of the day? It was like flossing. I liked it better when healing the planet meant long hair and rock music and marching against the war, when it meant telling everyone else what needed to be changed.

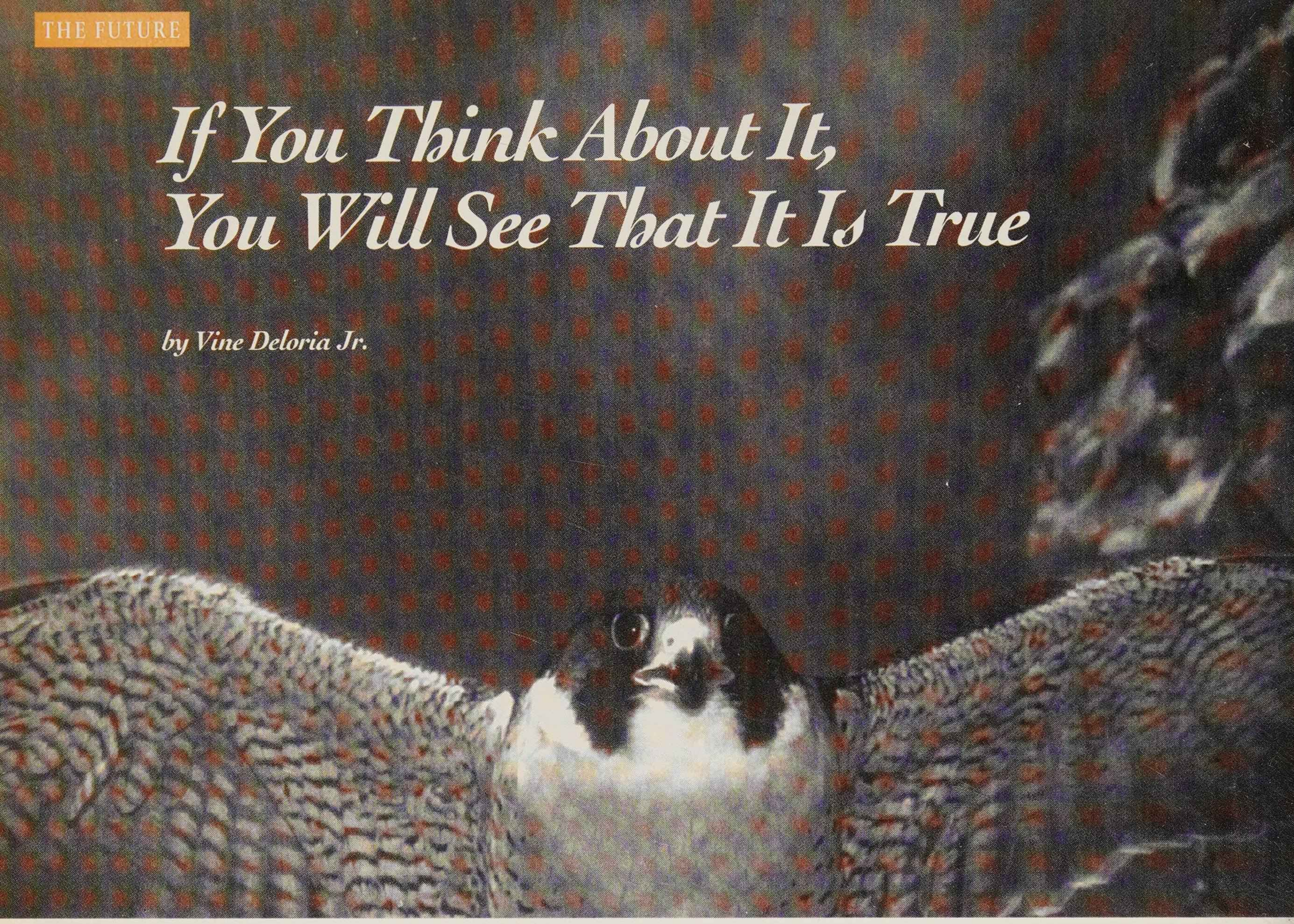
–Exerpted with permission from Four in the Morning *by Sy Sanfransky (© 1993 Sy Safransky, The Sun Publishing Company). Sy Safransky is editor of* The Sun, *a small magazine that is an Institute staff favorite.* □



Photograph by Jean Millay.

If You Think About It, You Will See That It Is True

by Vine Deloria Jr.



Editor's note: Vine Deloria Jr., of the Standing Rock Sioux Tribe, is Professor of History and of American Indian Studies at the University of Colorado. This article is exerpted from his paper viewing Western science from a native perspective, prepared for an Institute symposium titled "The Metaphysical Foundations of Modern Science". The collected papers from that symposium will appear in an Institute book in early 1994.

The movement toward a "science of wholeness" depends in large measure on the ability of philosophers and scientific thinkers to move beyond their comfortable and presently accepted categories of arranging and interpreting data–to glimpse and grasp new unities of experience and knowledge. In order to do this, we must first ask fundamental questions about the goals of science. Do we wish to predict or describe? At what level do we wish to do either of these things? What does it mean to have knowledge that is applicable to the world around us and to have it arranged in a systematic manner? What systems are applicable to the different kinds of data derived at the different levels at which scientific inquiry can be conducted? How is data derived from a causative-dominated methodology to be combined with insights or information created by simple observation or intuitive visions?

Photograph by Galen Rowell

Some Western thinkers have recently begun to examine the knowledge and insights which non-Western peoples had about the natural world. Part of this movement is a popular fad which romanticizes the primitive and his relationship to his pristine environment, but part is also a sincere attempt to reach out and gain new insights and perspectives. Even with the flexible scientific paradigm of relativity and indeterminacy, there are strong indications that we have reached a dead end in many sciences and perhaps need new insights derived from other sources. So why not tribal knowledge?

Most recent efforts have been limited to gathering specific information: plant knowledge, fishing practices, forms of pottery making, and irrigation and forest management burning techniques. In psychoanalysis, the Jungians are exploring similarities between Western archetypal figures and tribal legends and folk-heroes. More recent efforts have been made to gain knowledge of the use of plants which have certain

curative powers. Jurisprudence is examining new kinds of mediation techniques and different victim compensation theories for minor offenses to replace retribution as the theoretical basis for criminal law, thereby even modifying the concept of the social contract itself. Many approaches are being taken to incorporate tribal values and knowledge into Western thought systems, but as yet no systematic comparison of tribal and scientific knowledge of the natural world has been made.

One reason that scientists examine non-Western knowledge on an ad hoc basis is the persistent belief held by Western intellectuals that non-Western peoples represent an earlier stage of their own cultural evolution–often that tribal cultures represent failed efforts to understand the natural world (the Incas had wheels, why didn't they make cars?). Non-Western knowledge is believed to originate from primitive efforts to explain a mysterious universe. In this view, the alleged failure of primitive/tribal man to control nature mechanically is evidence of his ignorance and his inability to conceive of abstract general principles and concepts. Tribal methodologies for gathering information are believed to be "pre-scientific" in the sense that they are pre-causal and incapable of objective symbolic thought. This belief, as we shall see, is a dreadful stereotypical reading of the knowledge of non-Western peoples, and wholly incorrect.

In fact, tribal peoples are as systematic and philosophical as Western scientists in their efforts to understand the world around them. They simply use other kinds of data and have goals other than determining the mechanical functioning of things. A good way to determine the relevance of tribal knowledge and illustrate its potential for providing insights for the present body of scientific knowledge is to examine some of the knowledge of a particular tribe and discuss what they knew and how they gathered this information. I would like to take a few selections from a historical report on the philosophy of the Western Teton Sioux to illustrate my points.

The Indian Perspective

In late August of 1919, A. M. Beede, a missionary on the Standing Rock Sioux reservation in North Dakota, sent Melvin Gilmore, the Curator of the State Historical Society, a manuscript which discussed the beliefs of the Western Teton Sioux. This paper is regarded as an early and accurate account of the knowledge of the Western Sioux and Chippewa Indians. Beede's discussions with the Indians reveal their basic attitude regarding the knowledge they possessed and their response to the scientific knowledge which Beede and his friend Harry Boise discussed with them. The conversations have a startlingly modern ring to them. Beede wrote:

> *The Western Sioux believed that each being, a rock for instance, is an actual community of persons with ample locomotion among themselves, and such locomotion not regarded as circumscribed or restricted, save as the maker (oicage) of the whole gives to each species his own sphere. And, they reasoned, this limitation is merely in body (tancan), the mind, intelligence, and spirit of each is privileged to range, through and blend with totality by gaining a right attitude toward Woniya (Spirit). . . .*[1]
>
> *And, I should have said, the fact of a rock, or any object, being a community of locomotive persons, was based on, or concomitant with, the belief that not a few of their people actually had the ability to* ***see into and through*** *a rock discerning its make-up, similarly as we look into a community or grove of trees. I have known many Indians believing they possessed this ability–and not regarding it as anything remarkable–and there was no occasion for doubting their sincerity. . . .*[2]
>
> *Of course, the history of any people contains mythology (which is, perhaps, not quite so simple or invaluable as many a 'scientist' might assume), but is such a mythology composed entirely of myths added one to another, or is there beneath all and through all and in all an all-compelling something unexplained by our 'scientific' 'force and energy' which the Western Sioux thought of, sincerely claimed to know of, as Woniya (Spirit)? It does not bother the old Indians to understand, in an elementary way, what we mean by 'the modern scientific attitude' . . . .*[3]
>
> *There is no difficulty in leading an old Teton Sioux Indian to understand the 'scientific' attitude, and that the processes that give rise to phenomena may be more and more known by man and may be, to some extent, controlled by man, and that in this way the forces of nature may become a mainspring of progress in the individual and in the human race. The idea of atoms and electrons is easy and pleasing to an old Indian, and he grasps the idea of chemistry. Such things make ready contact with his previous observation and thinking. . . .*[4]
>
> *In the Turtle Mountains, North Dakota, Harry Boise . . . was with me eight months. At his request I allowed him to teach the old Chippewa and Cree Indians there the modern scientific attitude with its view of things. . . . The chief among his pupils was old Sakan'ku Skonk (Rising Sun). . . . But Rising Sun, speaking the conclusion of all, pronounced 'the scientific view' inadequate.* ***Not bad, or untrue, but inadequate to explain, among many other things, how man is to find and know a***

> ***road along which he wishes and chooses to make this said progress unless the Great Manitoo by his spirit guides the mind of man, keeping human beings just and generous and hospitable.***[5] *(Emphasis added.)*

The Similarity of Conclusions

These passages give something of the flavor of the knowledge of the old Indians, people who had known the life of freedom before they were confined to the reservations and subjected to Western religious and educational systems. Substitute "energy" for "spirit" in some of these passages, and we have a modern theory of energy/matter. But the similarity, although profound, hides a deeper truth which we must examine. For these two groups, the old Indians and the modern scientists, reach their conclusions in entirely different ways, using data that are completely incompatible if placed together.

The old Indians, as Rising Sun noted, were interested in finding the proper moral and ethical road upon which human beings should walk. All knowledge, if it is to be useful, was directed toward that goal. Absent in this approach was the idea that knowledge existed apart from human beings and their communities, and could stand alone for "its own sake". In the Indian conception, it was impossible that there could be abstract propositions that could be used to explore the structure of the physical world. Knowledge was derived from individual and communal experiences in daily life, in keen observation of the environment, and in interpretive messages which they received from spirits in ceremonies, visions and dreams.

In formulating their understanding of the world, Indians did not discard any experience. Everything had to be included in the spectrum of knowledge and related to what was already known. Since the general propositions which informed the people about the world were the product of generations of tradition and experience, people accepted on faith what they had not experienced, with the hope that during their lifetime they would come to understand.

The Nebraska poet John Neihardt interviewed Black Elk, the Oglala Sioux medicine man, about the beliefs and practices of the old days. During their conversations, Black Elk told Neihardt how the Sioux received the sacred White Buffalo Calf Pipe, the central religious object of the Plains Indians. The story involved the appearance of a woman who instructed the people in moral, social, and religious standards and showed them how to communicate with the higher powers through the use of the pipe in ceremonies. After finishing his story, Black Elk paused, was silent for a time, and said:

> *This they tell, and whether it happened so or not, I do not know; but if you think about it, you can see that it is true.* [6]

This is not only a statement of faith: It is a principle of epistemological method.

If the Western Sioux obtained their knowledge by accepting everything they experienced as grist for the mill, Western science has drawn its conclusions by excluding the kinds of data which the Western Sioux cherished. Western science holds that ideas, concepts, and experiences must be clearly stated, and be capable of replication in an experimental setting by an objective observer. Any bit of data or body of knowledge that does not meet this standard is suspect or rejected out of hand. Thus most emotional experiences of human beings are discarded as unsuitable for the scientific enterprise, or are pushed to the periphery of respectability and grudgingly given a bit of status.

Science further limits itself by insisting that all data fall within the reigning interpretive paradigm of the time. According to Thomas Kuhn, a paradigm primarily enables scientists to classify data and verify whether or not it falls within the acceptable mode of interpretation. One of the things a scientific community acquires with a paradigm, Kuhn explains,

> *is a criterion for choosing problems that, while the paradigm is taken for granted, can be assumed to have solutions. To a great extent these are the only problems that the community will admit as scientific or encourage its members to undertake. Other problems, including many that had previously been standard, are rejected as metaphysical, as the concern of another discipline or sometimes as just too problematic to be worth the time.* [7]

If science works within this severely restricted arena in which statements have such limited validity, how can we have faith that it is presenting to us anything remotely approaching a reliable knowledge about the world? And why do scientists, knowing these limitations, act so dogmatically about what they know?

Scientific knowledge also has the problem of internal politics, in which prominent scholars can force acceptance or rejection of theories based on wholly extraneous considerations, often a matter of personal preference or the desire for professional status. New research on the relationship between Charles Darwin and Alfred Wallace, for example,

shows that it is quite possible that Darwin simply stole Wallace's idea of natural selection and had the right political connections within the English scientific establishment to make good his theft.[8] Such revelations would indicate that there is considerable reason to be skeptical about the findings of Western science, since it excludes a substantial amount of data and allows cliques to determine what is acceptable theory and doctrine.

But how do we explain the Indian perspective on knowledge, which saw no need to engage in the process of developing interpretive frameworks, producing many anomalies, creating ad-hoc theories, and finally formulating new explanations? How do Indians handle anomalies, for there surely must have been anomalies in a worldview of such relative simplicity.

Indians believed that everything that humans experience has value and instructs us in some aspect of life. The fundamental premise is that we cannot "mis-experience" anything; we can only misinterpret what we experience. Therefore, in some instances we can experience something entirely new, and so we must be alert and try not to classify things too quickly. The world is constantly creating itself because everything is alive and making choices which determine the future. There cannot be such a thing as an anomaly in this kind of framework: Some things are accepted because there is value in the very mystery they represent.

Since, in the Indian system, all data must be considered, the task is to find the proper pattern of interpretation for the great variety of ordinary and extraordinary experiences we have. Ordinary and extraordinary must come together in one coherent comprehensive storyline. Sometimes this narrative will deal with human behavior and sometimes with the behavior of higher powers. But it will have a point to it and will always represent a direction of future growth. Finally, with the wisdom which old age brings, there will be time for reflection and the discovery of unsuspected relationships which make themselves manifest in consciousness and so come to be understood.

The Moral Universe

The real interest of the old Indians was not to discover the abstract structure of physical reality but rather to find the proper road along which, for the duration of a person's life, individuals were supposed to walk. This colorful image of the road suggests that the universe is a moral universe. That is to say, that there is a proper way to live in the universe: there is a content to every action, behavior, and belief. The sum total of our life experiences has a reality. There is a direction to the universe, empirically exemplified in the physical growth cycles of childhood, youth and old age, with the corresponding responsibility of every entity to enjoy life, fulfill itself, and increase in wisdom and the spiritual development of personality. Nothing has incidental meaning and there are no coincidences.

The wise person will realize his or her own limitations and act with some degree of humility until he or she has sufficient knowledge to act with confidence. Every bit of information must be related to the general framework of moral interpretation since it is personal to them and their community. No body of knowledge exists for its own sake outside the moral framework of understanding. We are, in the truest sense possible, creators or co-creators with the higher powers, and what we do has immediate importance for the rest of the universe.

This attitude extends to data and experiences far beyond the immediate physical environment, including the stars, other worlds and galaxies, the other higher and lower planes of existence and the places of higher and lower spiritual activities. If many Indian legends appear to be geocentric, to be restricted to the conditions existing on this Earth, it is because they are formulated in this manner to make the transmission of information easier. But there are many accounts of people traveling to other worlds, of people becoming birds and animals, living with them, and experiencing the great variety of possible modes of existence.

In the moral universe all activities, events, and entities are related, and consequently it does not matter what kind of existence an entity enjoys, for the responsibility is always there for it to participate in the continuing creation of reality.

What the Western Sioux sought was the moral content of entities and relationships; they tried to understand their role and function in the natural world, and to come to an understanding, often revealed by the entities themselves, of the actual physical composition of things. Coming from the opposite ends of the spectrum of knowledge and methodology—the Indian representing perhaps the extreme of subjectivity and the Western scientist the extreme of objectivity—these views suggest a middle meeting-ground where contradictions can possibly be resolved. But the content of whatever configuration may exist in the middle would seem to be, following the Western Sioux and Plato, a knowledge of the physical universe arranged or understood in such a manner as to call forth some form of moral response.

This conclusion is anathema to most scientists, whose fear (well-justified considering the history of warfare between sacred and secular forces in Western civilization) is that if such ethical dimensions are admitted, it would once again allow ecclesiastical authorities to gain control of social and political institutions and so prevent or inhibit investigative scientific activities. Thus introducing purpose and morality suggests for many people the existence of a higher entity which can become an object of worship and thereafter a source of continuing social conflict.

In fact, the old Indians did not see a specific higher personality who demanded worship and adoration in the manner in which we find deity portrayed in the traditions of the Near East. Rather they saw and experienced personality in every aspect of the universe and called it "Woniya" (Spirit), looking to it for guidance in a manner quite similar to Socrates obeying his "daemon".

I do not believe this perspective is pantheistic in the traditional sense that frightens scientists and religious peoples alike. Even those tribes who projected from the experiences of birds, animals and plants and personified these experiences did not make any particular entity a deity alone and apart from everything else. Most of the tribes were content to stop their description with a simple affirmation of the existence of Spirit. The Sioux, in fact, simply said the "Great Mysterious". Only later, when Christian missionaries attempted to link Sioux traditions to their own religious systems, did this mysterious presence begin to take on human forms and demand a groveling, flattering kind of worship.

The Structure of the Tribal Universe

The Plains Indians arranged their knowledge in a circular format–which is to say, there were no ultimate terms or constituents of their universe, only sets of relationships which sought to describe phenomena. No concept could stand alone in the way that time, space, and matter once stood as absolute entities in Western science. All concepts not only had content but were themselves composed of the elements of other ideas to which they were related. Thus it was possible to begin with one idea, thoroughly examine it by relating it to other concepts and arrive back at the starting point with the assurance that a person could properly interpret what constituted the idea and how it might manifest itself in concrete physical experiences.

The purpose of such an arrangement was to be certain that all known aspects of something would be included in the information that people possessed and considered when making decisions and reaching conclusions. There were, therefore, almost limitless ways of describing snow, rain, wind or other natural phenomena, since each particular manifestation of the general concept needed to be described accurately and placed properly within a spectrum of the possibilities of realization. Indian languages, and the Dakota/Lakota language which the Western Sioux used, had a very large vocabulary which enabled people to be specific in remembering and describing the ways that a concept could be realized within human experience.

In the rest of this section, we will try to unravel some aspects of the Sioux circle of knowledge, and make a list of the most important components of the Indian universe. Other interpreters of the Sioux worldview may differ considerably in the emphasis they place on certain concepts. I feel certain, however, that these principles would emerge if a consensus of the interpreters was achieved.

• *The Universe is Alive*

It cannot be argued that the universe is moral or has a moral purpose without simultaneously maintaining that the universe is alive. The old Indians had no problem with this concept because they experienced life in everything, and there was no reason to suppose that the continuum of life was not universal. The belief in a living universe raises hackles among many scientists today because it raises the spectre of subjectivity and calls to mind the religious perspective, in which the universe is seen as divine. On the other hand, within the Western religions, the idea of the "living universe" is often dismissed as "merely pantheism", as if labeling a belief could thereby explain it.

Recent controversy over the living universe has been particularized within science in the debate over the "Gaia Hypothesis", which I consider in detail in the final section of this article (see *A Re-examination of the Metaphysical Foundations of Modern Science*[9]). James Lovelock and a bevy of colleagues, admirers, and followers have raised the question of whether it is helpful to view the planet as a living organism.[10] But the debate has often centered on false arguments, with both the advocates and opponents of the theory restricting the definition of "life" to reactive organic phenomena that are observed primarily in the higher organisms.

Traditional Indians are quite amused to see this revival of the debate over whether or not the planet is alive. Long ago in ceremonies and visions Indians came to experience this truth. The practical criterion that is always cited to demonstrate its validity is the easily observable fact that the Earth nurtures smaller forms of life–people, plants, birds, animals, rivers, valleys and continents. For Indians, both speculation

and analogy end at this point. To go further and attribute a plenitude of familiar human characteristics to the Earth is unwarranted. It would cast the planet in the restricted clothing of lesser beings, and we would not be able to gain insights and knowledge about the real essence of the Earth.

Nor was there any reason to suppose that other forms of life did not have the same basic intelligence as humans. The Sioux, as well as other tribes, interpreted the scheme of life as leading eventually to the production of human beings. Unlike Western religion and philosophy, however, the fact that man had been the final product of the purposeful life force did not make him the crown of creation. Coming last, humans beings were the "younger brothers" of the other life forms and therefore had to learn everything from these creatures. Thus human activities resembled bird and animal behavior in many ways and brought the unity of conscious life to an objective consistency.

This idea that everything in the universe is alive, and that the universe itself is alive, is knowledge as useful as anything that Western science has discovered or hypothesized. When understood and made operative by serious and sensitive individuals, it is as reliable a means of making predictions as anything suggested by mathematical formulas or projected by computer programs. There are, however, substantial differences in the manner in which predictions are made. Because the universe is alive, there is choice for all things and the future is always indeterminate. Consequently predictions are based on the knowledge of the "character" of an entity. Statements about how an entity will behave have almost the same probabilities as the educated speculations made at the sub-atomic level in physics.

Here the Indian knowledge has an edge over Western scientific knowledge. A truly wise and gifted individual can appear to "cause" things to happen because that person can participate in the emerging event in a way that rarely occurs in Western science. Thus it is that people are said to have "powers", which is another way of saying that their understanding of natural process and their ability to enter into events is highly developed and sophisticated.

The living universe requires mutual respect among its members and this suggests that a strong sense of individual identity and self is a dominant characteristic of the world as we know it.[11] The willingness of entities to allow others to fulfill themselves, and the refusal of any entity to intrude thoughtlessly on another, must be the operative principle of this universe.[12] Consequently self-knowledge and self-discipline are high values of behavior. Only by allowing innovation by every entity can the universe move forward and create the future. This creative participation is always personal and has an aspect of novelty.

Respect in the American Indian context does not mean the worship of other forms of life, but involves two attitudes. One attitude is the acceptance of self-discipline by humans and their communities to act responsibly toward other forms of life. The other attitude is to seek to establish communications and covenants with other forms of life on a mutually agreeable basis. Developing responsible self-discipline is not difficult, but it cannot be done in a society in which equality is perceived as sameness and conformity. Sitting Bull, looking with disdain at the white man's educational style, remarked that "it is not necessary that eagles be crows." We would do well to cast a critical glance at our ideas and expectations of democracy, brotherhood, and equality in the light of the demand for self-discipline.

We want to have certain benefits from the physical world. In seeking something for ourselves, we must recognize that obtaining what we want at the expense of other forms of life or of the Earth itself is short-sighted and disrupts the balance which the whole fabric of life requires. Instead of the predatory jungle which the Anglo-Saxon imagination conjures up to analogize life, in which the most powerful swallows up the weak and unprotected, life is better understood as a tapestry or symphony in which each player has a specific part or role to play. We must be in our proper place and we must play our role at the appropriate moment. Mutual respect in many ways is a function of a strong sense of personal and communal identity, and it is significant that most of the tribes described themselves as "the people", a distinct group with clearly defined values and patterns of behavior.

The idea of the covenant, clearly articulated in the Old Testament theology of the prophets, is an early and important concept for tribal peoples. Stories explaining how the people came to hunt the buffalo, how the salmon came to be the major food supply, how bird feathers were incorporated into ceremonial costumes and medicine bundles, all derive from early interspecies communications in which other forms of life agreed to allow themselves to be used in ceremonial and economic ways. A covenant places responsibilities on both parties and provides a means of healing any breach in the relationship.

Thus it was that while Indians hunted and fished wild game, they made it a rule that unless they were starving and needed food for survival, they would not take the animals and birds until these creatures had enjoyed a full family life and repro-

duced their kind. Even today when taking eagles, the Apaches restrict the hunt to late summer or autumn to ensure that the eagles have the chance to mate, raise a family and go through the major cycles of life experiences.

• ***Everything is Related***

A living universe within which events and actions have moral content necessarily suggests that all things are related. Not only is everything related, but it also participates in the moral content of events, so responsibility for maintaining the harmony of life falls equally on all creatures. This principle of relatedness appears most often in the religious realm in the phrase "All My Relatives" which is used as an opening invocation and closing benediction for ceremonies. "All My Relatives", believed by many people, including many Indians, to be a merely devout religious sentiment, also has a secular purpose which is to remind us of our responsibility to respect life and to fulfill our covenantal duties. But few people understand that the phrase also describes the epistemology of the Indian worldview, providing the methodological basis for the gathering of information about the world.

Western science uses various methods for determining its truths. One of the most common methods is the experimental application of previously derived theories to new kinds of phenomena and the subsequent verification or modification of the theory. But modern science is interested primarily in the physical world and its structure, the search for the ultimate material constituent of the physical universe having been a constant quest since Democritus developed his theory of the atom.

American Indians, understanding that the universe consisted of living entities, were interested in learning how other forms of life behaved, for they saw that every entity had a personality and could exercise a measure of free will and choice. Consequently Indian people carefully observed phenomena in order to determine what relationships existed between and among the various "peoples" of the world. Their understanding of relationships provided the Indians with the knowledge necessary to live comfortably in the physical world, and to not unduly intrude into the lives of other creatures.

If we could imagine a world in which human concerns were not the primary value, and we observed nature in the old Indians' way, we would observe a plant (or a bird or animal) for a prolonged period of time. We would note what time of year the plant began to grow and green out; when it blossomed; when it bore fruit; how many fruits or seeds it produced; what animals and birds ate the fruit and when during the maturation process they appeared; what colors its leaves and fruits took on during the various parts of the growing season; whether it shed its leaves and needles and what birds and animals made use of them; and many other kinds of behavior of the plant. From these observations we would come to understand both the plant and its life stages. By remembering the birds and animals who made use of the plant–and when they did so during the calendar year and when in terms of their own growth cycles–we would have a reasonable idea of how useful the plant would be for us. This knowledge, however, would still be general and would need further refining. At certain times some men and women would receive, either in dreams or in visions, very precise knowledge on other ways in which the plant could be used by humans–information which could not have been obtained through experiment or trial and error use. Some knowledge was so precise that it might only be needed once in a human lifetime.[13] And of course tribes often shared their knowledge of plants or even traded medicinal plants back and forth across large distances so that the knowledge of plants took on an encyclopedic aspect.

• ***All Relationships are Historical***

Part of the experience of life is the passage of time, the fact of personal growth, and the understanding of oneself produced by reflective memory processes. Since the universe was known by the Indians to be alive, it followed that all entities had some memory and enjoyed the experience of the passage of time. Thus relationships were understood as enduring in time and were characterized by the same kinds of disruptive historic events as we see in human history. All covenants wore out and changes seemed to occur in the same way as they do in human experience. Thus plants might gather together for a long time but then suddenly disappear, beginning to grow in different areas or adapting themselves to new lands and climatic conditions. We call this kind of change evolution today, but the old Indians did not see it that way. They knew that any changes that occurred were already inherent in the creature, or within its potentiality for change–a possibility which some Western scientists are now beginning to accept.

Knowledge of the historical relationships can be exceedingly useful in modern science in providing guidance for ecological restoration projects. The appearance or disappearance of a certain plant can be used to predict similar behavior by related plants and animals. We must note, however, that the relationships established by the Indians are personal relation-

ships between and among other forms of life, and therefore they do not necessarily follow the definitions established by Western scientific systems of classifications. Thus the characteristics that modern botanists and biologists use to define species and genera are not comparable in many respects to the Indian classification by personality types. A good judgment of the accuracy of Indian knowledge and Western scientific knowledge might be made by allowing Indians and scientists to restore similar tracts of land according to different conceptions of what kinds of life can be sustained on the land.

• *Space Determines the Nature of Relationships*

Although the preliminary discussion of the living universe has emphasized spiritual/personality values, the idea that everything is related has definite space/time relevance. Here perhaps we begin to speak mysteriously and vaguely when we try to explain concepts. For most forms of life there appears to be a definite pattern of spatial existence. With plants it is not difficult to see that they are restricted to certain locations, although in fact they can move if they so desire. Most locations of plants can be easily explained by reference to soil, climate, and availability of water. But many medicine men spoke of the places which the various entities were *destined* to occupy, and of the beginning of a world age as a time when everything was in its proper place. Some of the language appears to be quasi-Aristotelian in that they attributed a sense of purpose to an entity without having evidence of it. But since each entity has a set of relationships with other entities, all of these relationships were established in a particular geometric pattern and manifested themselves in spatial arrangements. Thus people became concerned when a plant or animal was found in a place where it should not be.

There were basically three major manifestations of space in the Sioux universe: the ceremonial directions; the sacred places which define meaning for the life around them; and the particular place which each species, including particular groups of humans, comes to occupy and live in.

1) The Ceremonial Directions: These were the most abstract expression of the idea of space. Each entity, and by extension each place, was the center of the universe–thinking which fits well with scientific relativity theory. In ceremonies the object was to draw into participation all the powerful elements of the cosmos. So the sacred pipe was offered to the four directions, to the sky and the earth, and acknowledgment was made that at every ceremonial the center of the ritual action is the seventh direction–which is the "here and now". Since distance was not regarded as a meaningful obstacle when spiritual powers were invoked, each ceremony began with a representation of the whole cosmos, whether it was a vision quest pit, a sweat lodge, the bowl of the pipe itself, or a Sun Dance arbor.

The object of ceremonial is to make whole again what has now become disassociated and chaotic. In order to accomplish this goal, all possible elements of the universe must be brought within a harmony; sacrifices must be made to heal the injuries of each party, and a new beginning must be made.

Some observers are correct when they describe a ceremony as "world-renewing", since the object of ceremony is to cleanse the participants and offer them a new beginning. But they are wrong when they interpret renewal as simply symbolic in the Western sense of representation. Without the four directions, in the Sioux understanding, the world would not have its physical structure; sky and earth are necessary for human and animal existence, and the center itself represents all possible times taking place simultaneously. In practical terms relationships are renewed and restored and must be conducted in accordance with the structure of the human universe of the directions once again.

2) Sacred Places: The Sioux also understood the Earth to have special places of power and significance and these places were regarded as sacred in the sense that they required respect and human self-discipline. The Black Hills, for example, were sacred because they were at the center of the Sioux universe (as represented by Bear Butte on the eastern edge of the hills) and because they were set aside by the higher powers as a sanctuary for the birds and animals[14]. Scattered in many different locations throughout the Sioux lands were certain other places where revelations had been given to the people or they had experienced a spiritual presence.

3) Particular Places: Finally there was the idea that particular places were designed for particular species, and, in human terms, for particular peoples. Long ago, even before kinship relations were established, a Sioux man had a dream about the great island hill[15] towards which the people were supposed to migrate. In the course of tribal history, the people wandered through the southeastern United States, into Pennsylvania and west toward the Great Lakes, until finally they came to the Black Hills where they were destined to live. After finding the proper place, migrations ceased and the people took on ceremonial duties for particular locations.

The importance of finding the proper living space is illustrated by plants and animals. In the Pacific Northwest, for example, tribes would share a river and catch salmon at a bewildering variety of locations, from the mouth of the river to the final spawning grounds. Since the chemistry of the salmon was changing as the fish went upstream, different ways of preserving the catch were used at each location. Each place determined the various life forms it would support and these creatures then worked cooperatively at their chosen location.

The implications for Western science of the idea of a special place are tremendous. Knowing the sets of relationships between the various plants and animals enables one to predict what kinds of species will be present in a healthy environment, and so failure to locate a species in a particular location will alert people about the condition of the place. Within that place, however, one will also find the most precise examples of species since the place itself affects things.

• ***Time Determines the Meaning of Relationships***

Time is a complicated concept in a living universe. The basic pattern seems to be that of growth processes, which is to say that time has qualitative packets of quanta that are regulated by the amount of time it takes an organism or entity to complete a step in maturation. Thus all entities are regulated by the seasons, and their interaction has a superior season of its own which encompasses their relationship and has a moral purpose. Tribes broke human patterns down into several steps: pre-birth, babies, children, youth, adults, mature adults, and elders.[16] The idea of the "seven generations" was commonly used by the Plains tribes to describe the relationships existing within a genetic family. If a family was respectable and responsible, its members would be granted old age and a person could live long enough to see and know his great-grandparents and his great-grand children. Thus generations, and not decades, were the measure of human life.

Since there was interspecies communication between humans and other forms of life, people also became aware of larger cycles of time which can be described as the time jointly shared by all forms of life within a geographical area. This time line seems to have been dominated by the idea of vocation and/or the idea of the fullness of time. In some undetermined manner, the universe had a direction to it: Every entity had a part to play in the creation of the future, and human beings had a special vocation in which they initiated, at the proper time, new relationships and events.

In the experience of the Vision Quest, people were given the basic outlines of their lives, but not specific predictions as to when, in chronological time, certain events might occur. During the ceremonial experiences, as the years passed, humans would be told when and how the larger cosmic time was moving, and would at times be urged to hurry–or counseled to wait until conditions were right for them to play their particular role.

There was a profound sense of determinacy within this aspect of time, but there was also flexibility, so that sequences of action which people knew were to take place did not necessarily have to occur in a manner that people understood or could anticipate. This sense of a determined sequence of specific future actions was seen as evidence that the Earth was a living being and that smaller entities were her children and subject to the larger motions of the universe.

On more everyday levels, there was the recognition that over a long period of time human behavior itself changed as the people perceived, or had revealed to them through ceremonials, the occasional behavior of other life forms which indicated the depth of power contained within them. So, in general, it was recognized that not all information is available to us immediately; some things may simply come into being during the course of time.

Medicine men taught that plants and animals do not become extinct–they go away and do not come back until the location is being treated properly. This belief is being verified today in ecological restoration projects. Lands abused for generations, if treated properly and with respect, will see a flowering of plants which once lived there and which were believed to be extinct, and the birds and animals related to those plants will return. It is worth noting that the plants return first, then the animals, and finally the birds. (Thus antelope have returned to some portions of the Dakota plains but prairie chickens have still not made a complete return.)

Western science is committed to the doctrine of evolution and consequently sees changes in plants, birds, and animals as responding to the passage of time and changes in the environment. While science cannot adequately explain the mechanism of evolution, it regards changes as permanent. The Sioux traditional people say that the important thing is the spirit of the creature; that it can and does change aspects of its physical shape in order to deal with change, but that basically it remains the same entity. Since the Indian interest is in the spirit or soul of the other creature and not in its

morphology, some substitutions can be made in ceremonial objects providing the substituted materials have the same spiritual relationship to people that the former objects had.

In outlining the Sioux knowledge of the physical universe, and attempting to demonstrate the principles which govern it, we are able to see new applications and interpretation of our existing knowledge. We are also able to reach out and begin to bring emotion and logic back together again–this synthesis is necessary if we are to make sense of our world and our experiences.

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2. Ibid. p 4.

3. Ibid. pp 5-6.

4. Ibid. p 6.

5. Ibid. pp 6-7.

6. John G. Neihardt, *Black Elk Speaks* (University of Nebraska Press, 1972) p 4.

7. Thomas Kuhn, *The Structure of Scientific Revolutions* (University of Chicago Press, 1962) p 37.

8. See, for example, Barbara Beddall, "Wallace, Darwin, and the Theory of Natural Selection" in *Journal of The History of Biology*, No. 1, 1968. Also, John L. Brooks, *Extinction and the Origin of Organic Diversity*, (Connecticut Academy of Arts and Sciences, Dec. 1972).

9. Willis Harman, *A Re-examination of the Metaphysical Foundations of Modern Science* (IONS Research Report, 1992).

10. Readers should consult especially: James Lovelock, *The Ages of Gaia* (W. W. Norton, 1988); *Gaia: A New Look at Life on Earth* (Oxford University Press, 1979).

11. The strong sense of personal identity among the Indians can be exemplified by the frequent changing of names to keep track of the change in the personality as the individual went through life. Most Indians had several names by which they were called, each giving specific information on their talents or accomplishments. Within the family, people would refer to each other by kinship terms in order not to interfere with personality growth and to remind themselves of family responsibilities. Some Indians who did not want to shame their most personal name used secular names to sign treaties which they believed the United States would not keep.

12. Densmore records the explanation of Eagle Shield of the Crow Owner Society of the Teton Sioux regarding the self-discipline of the Indians on this point:

> *The Crow is always the first to arrive at the gathering of the animals in the Black Hills. The reason why the Black Hills were so long unknown to the white man was that Wakantanka created them as a meeting place for the animals. The Indians had always known this and regarded the law of Wakantanka concerning it.* ***By this law they were forbidden to kill any of the animals during their great gatherings****". (p 319) (Emphasis added.)*

13. The Lummi Indians who live near the Canadian border in Washington state have a Rain Dance. It seems ludicrous for people who live in a virtual rainforest to have a rain dance. This dance is used on those rare occasions when it snows so hard that the houses are buried in snow and the people cannot get out of them. The rain melts the snow and rescues the people.

14. See note 12.

15. John Neihardt, "When The Tree Flowered" in *Why the Island Hill Was Sacred* (University of Nebraska Press, 1970).

16. Indians placed considerable emphasis on the pre-birth stage of life, believing that it influenced everything else. Charles Eastman recounted the Indian attitude in his book *The Soul of the Indian* (Houghton Mifflin, 1911) explaining:

> *From the moment of her recognition of the fact of conception to the end of the second year of life, which was the ordinary duration of lactation, it was supposed by us that the mother's spiritual influence counted for most. Her attitude and secret meditations must be such as to instill into the receptive soul of the unborn child the love of the "Great Mystery" and a sense of brotherhood with all creatures. Silence and isolation are the rule of life for the expectant mother. She wanders prayerful in the stillness of great woods, or on the bosom of the untrodden prairie, and to her poetic mind the imminent birth of her child prefigures the advent of a master-man–a hero, or the mother of heroes–a thought conceived in the virgin breast of primeval nature, and dreamed out in a hush that is only broken by the sighing of the pine tree or the thrilling orchestra of a distant waterfall. (pp 28-29).*

17. Roman Nose, the great Cheyenne Dos Soldier warrior, was told that he would be invincible unless he had touched metal before he went into battle, since the metal in his body would then attract bullets. In one fight with the cavalry he deliberately rode three times across the whole line of cavalry in order to encourage them to fire at him and heat their guns. He was not wounded. At Beecher's Island, asked to lead the third charge against the Colorado Volunteers, he knew he would be killed because he had eaten food given to him with a metal spoon. The basic outlines of his life were already given to him in the Vision Quest. But he had a choice when his death would occur if it was to be in battle–and he deliberately chose to end it on behalf of his warriors at Beecher's Island.

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Vine Deloria's ideas on making traditional native ideas accessible to contemporary Western scientists will be addressed in IONS' forthcoming book A Re-examination of the Metaphysical Foundations of Modern Science (*available in early 1994). For a photocopy of the full paper from which this article was drawn, "The Conversation with Modern Science", send a self-addressed envelope to the Institute of Noetic Sciences, care of Nola Lewis.* □

How Do We Know What We Think We Know? Toward An Epistemology of Consciousness

An Institute of Noetic Sciences Report

—How does it happen that our powerful methods of scientific inquiry appear so ill-suited to the study of consciousness?

—If understanding our own consciousness is so central to understanding anything else, will we not have to take this question more seriously than has been the case so far?

If we desire to extend the realm of scientific inquiry to include a thorough exploration of experiences and phenomena relating to consciousness, what would be an appropriate epistemology to use? ("Epistemology", loosely translated as "rules of evidence", is basically the way we answer the question: "How do we know what we think we know [scientifically]?") This question has been a primary focus of the Institute's continuing Causality Project, involving a large group of scientists and philosophers from major universities in four countries.

The accepted epistemology of Western science has included such imperatives as restriction to "public" or "objective" data; search for inviolable, quantifiable "scientific laws"; replicability of findings through controlled experiments. To accommodate the subjective and volitional aspects of consciousness, it seems clear that some features, at least, of that accepted epistemology would have to be modified.

Out of a retreat at Tomales Bay, California, December 3-6, 1992, a statement regarding this matter was formulated which is intended to stimulate dialogue among the broader scientific community and the concerned public. This statement was drafted by IONS' President Willis Harman, with feedback and endorsement from the nineteen other scientists and scholars listed on the accompanying page.

The first portion of this statement appeared as an article in the Spring 1993 Noetic Sciences Review.[1] *This article discussed the fact that, contrary to usual assumptions about scientific "objectivity", all of science is based on the subjective experiences of scientists; also examined was William James' dictum of "radical empiricism", admitting the validity of all experience (whether "objective" or "subjective") as data for science. The remainder of the statement follows:*

It appears that the fundamental reason conventional science has been so minimally effective in increasing our understanding of consciousness is that the epistemology of physics, molecular biology, and neuroscience is not suited to the area of consciousness; a new scientific epistemology is needed.[2] Even cognitive science has thus far been limited in its achievements because it has failed to come to grips with this need.

Objectivity in Consciousness Research

Traditional scientists embrace an epistemology which argues that our knowledge of reality can be confirmed by matching our inner and outer worlds–and that changes in our inner world do not affect the item of our scrutiny.[3] It is assumed that if our theoretical, mental construction accurately describes and predicts the perceived outer world–and no instances can be found which falsify that construction–the constructed picture of reality is correct. However, to explore the experience and phenomena of consciousness, it is necessary to have an epistemology which takes the personal characteristics of the observer into account.

Modern science has, in the main, attempted to control observer bias by excluding the observer. "Scientific findings" were claimed to be independent of the person who does the scientific work. If findings prove to be replicable, the scientific community concludes that they represent a *discovery* about reality rather than a construction by the observer. However, this term "finding" conceals a metaphysical assumption that things can be found which exist independent of observers. As is well known, shared agreements among

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similarly trained observer-scientists may lead to pragmatically useful knowledge, but such agreements do not prove that their sense data are objective, in the sense of being independent of observers.

In considering what kinds of observations could or should be admitted as scientific data, considerable misunderstanding has resulted from the confusing of two meanings of the terms "objective" and "subjective". One meaning of "objective" is in the sense of *unbiased.* The other meaning is in the sense of external to the person, as contrasted with "subjective" meaning *inner.* The epistemology we seek is "objective" in the first sense, but includes the subjective in the second sense.

In consciousness research, the experimenter and the subject are in the same position with regard to data. Since both can offer up only their own private experiencing of their phenomenal worlds, neither one's observations are more objective than the other. In any research effort, they are collaborators at the same level.[4]

This point should not be misunderstood to equate the observation of a naive bystander with that of a highly trained scientist–which Michael Polanyi[5] has written about using terms like "art" and "connoisseurship". But the difference is a subtle one. We are only recently recognizing the special understanding of nature found with what we once called "primitive" peoples or "savages". Scientists have been slow to recognize the possibility that mystics and trained observers in other cultures such as the Tibetan, which focus more on inner realms of experience, might be capable of observations which are as foreign to Western scientists as the latters' trained observations are to the lay public.

The Unconscious Mind in Science

The above implies an intrinsic dilemma with regard to the epistemology of science which is too little noted. In order to have confidence in the scientific view of reality, we have to answer the epistemological question: How do we know what we believe we know? To answer that, the mind needs to step outside itself, so to speak, and observe itself at work. Our view of any part or aspect of reality comes inevitably from an interaction between what is "out there" and the mental processes through which we arrived at the view we have. However, to know about those processes we need a prior scientific study of the mind, for which we need a scientific epistemology–which, with a frustrating circularity, leads us back to the initial question.

This circularity implies that even if the results of generations of scientific inquiry appear to converge toward a particular picture of reality, a profound caution is advisable regarding how much faith is put in that picture. (This point has been made in another way by Thomas Kuhn.[6]) In any case, this dilemma suggests that as we search for the appropriate epistemology for a comprehensive science, we need to pay particular attention to what is known about unconscious mental processes.

Research on perception, hypnosis, repression, selective attention, mental imagery, sleep and dreams, memory and memory retrieval, acculturation, etc. suggests that the influence of the unconscious on how we experience ourselves

We seek not the ultimate epistemology, but an intermediate, provisional one—which will extend the present form of science to include that which it has heretofore excluded.

and our environment may be far greater than is typically taken into account. Science itself has never been thoroughly re-assessed in the light of this recently discovered pervasive influence of the unconscious. The unconscious enters importantly into the construction of science in at least two ways:

1. The creative/intuitive mind (an aspect of the unconscious) is intimately involved with all the important conceptual advances in science; and

2. The contents and processes of the unconscious influence (individually and collectively) perceptions, "rational thinking", openness to challenging evidence, ability to contemplate alternative conceptual frameworks and metaphors, scientific interests and disinterests, scientific judgment–all to an indeterminate extent. (Placebo and experimenter effects are two familiar examples.)

What is implied is that we must accept the presence of unconscious processes and contents, not as a minor perturbation, but as a potentially major factor in any society's construction of its particular form of science. (This consideration opens up the possibility that even logically constructing a science from a rational epistemology may itself be culturally biased.)

Some precedent exists for taking into account unconscious processes and contents in the training of the researcher. In training to be a psychotherapist, one has to go through inner explorations similar to those anticipated in his/her future clients; with this comes learning and personal change. Similarly, in training to be a cultural anthropologist, one must learn to experience being of another culture; this too brings personal change. In training for the bench, the future judge–at least ideally–goes through self-examination to uncover personality characteristics which could cause one to be unconsciously biased. In general, learning to be a faithful observer implies inner change–possibly profound inner change. The scientist who would explore the topic of consciousness (in the broad sense we are considering here) must be willing *to risk being transformed* in the process of exploration.

A Broader Scope of Inquiry

A word must be said about the tactic which we have discarded, namely that of limiting preliminary inquiry to common everyday consciousness, avoiding areas where the reports and the data are problematical, such as, for example, profound meditative insight or investigation of the paranormal. Would this not be in accord with much of the history of science, where preliminary inquiry has often and profitably been restricted to simple and limited cases?

We are advising the opposite, namely to seek an epistemology suitable for exploring even questionable areas of human experience. One justification for this comes from an analogy with the origin of the evolutionary hypothesis. There was much to be learned from studying separately the great variety of microorganisms, plants, and animals with which the planet is populated. But Charles Darwin boldly turned his attention to the synthesizing question: How can we understand *all of these together?* The result was the concept of evolution, around which practically all of biology is now organized.

That same kind of question is appropriate here. Much can be learned from research on accepted phenomena, and it may seem harmless to ignore or leave to others study of the lesser recognized and seemingly anomalous, but still persistently reappearing, reports of experiences and phenomena (many of which have a face validity stemming from the fact that they have been reported across cultures, and down through the centuries). But important insight may be gained from asking: What sorts of conceptual frameworks and organizing metaphors can be used to help us understand *all of these together?*

A More Careful Definition

The philosophically sophisticated reader will have detected a contradiction in what has already been said. We claim to be seeking an epistemology for the study of consciousness. Since all of our experience is in consciousness, that leaves nothing out. Thus in fact we cannot distance ourselves from the most fundamental question of all–the basic epistemo-

logical question of how we know anything. Since many generations of philosophers have been unable to agree on the answer to that question, it might seem unlikely that we would succeed where they have failed.

However, our goal is a more modest one. Science has an accepted epistemology, which has proven inadequate for dealing with various aspects of "ordinary" experience including conscious awareness, intuition, creativity, attention, intention and volition, as well as a wide range of "anomalous" experiences. We seek, not the ultimate epistemology, but an intermediate one, a provisional one–one which will extend the present form of science to include that which it has heretofore excluded. As we learn more, and as scientists become more adept at exploring the vast realms of inner experience, it may well be that this epistemology will itself have to be set aside in favor of a still more adequate one.

The intrinsic dilemma of science was identified above: In order to have confidence in the scientific view of reality, we need an adequate epistemology. But that implies a prior understanding of the mental processes underlying observation, and for that we already need the scientific epistemology. In our present endeavor we are attempting to break into this circle with a provisional answer to the epistemological question. If we can identify a provisional epistemology which avoids the known limitations of the epistemology presently guiding physics, molecular biology, and neuroscience, and which has the capability of furthering the exploration of consciousness, we may be able to give impetus to that research area. What is learned (including the further development of our "organs of perception" in the sense of Goethe and Rudolf Steiner[7]) may result in the discovery that our provisional epistemology is also limited, so that it eventually must be displaced as well.

Present science constitutes a base camp, so to speak. It competently deals with a certain kind of knowledge–that which aims at prediction and control. However, modern society's mistake was to believe that, with that base camp, the summit was in sight. We now see that a further advance camp–perhaps many–will be needed. Scouting parties have gone ahead, and we know something of what will be encountered. Two very different non-Western epistemologies–that of the inward-looking East and that of the indigenous peoples with their intimate relationship with nature–highlight areas of experience that fit in the present scientific worldview only unhandily, if at all. The enigmas of what the British called "psychical research" remain to be dealt with. Even though our knowledge from these advance scouts may be fragmentary, we get some clues regarding characteristics of the provisional epistemology.

There is a danger in this approach, to be sure. Just as today's scientists allowed themselves to be deceived by the apparent successes of the objectivist-positivist-reductionist epistemology, so we could be deceived through our attempts to promote a provisional epistemology of consciousness research. What will save us from deception is continual reminding that (a) any science we can share through words, formulas, and images is at best models and metaphors representing certain aspects of experienced reality, and (b) that the best we can do now will undoubtedly seem inadequate as our "organs of perception" are enhanced through personal transformation.

An Epistemology Of Consciousness

With all of these considerations in mind, we can now propose a number of characteristics of the sought-for epistemology for conducting a comprehensive exploration of consciousness in the broadest sense:

1. The epistemology will be *"radically empirical"* (in William James' sense) in that it will be *phenomenological* or experiential in a broad sense (that is, it will include subjective experience as primary data, rather than being essentially limited to physical-sense data) and it will address the totality of human experience (in other words, no reported phenomena will be written off because they "violate known scientific laws"). Thus, consciousness is not a "thing" to be studied by an observer who is somehow apart from it; consciousness involves the interaction of the observer and the observed, or, if you like, the *experience* of observing.

2. It will aim at being *objective* in the sense of being open and free from hidden bias, while dealing with both "external" and "internal" (subjective) experience as origins of data.

3. It will insist on *open inquiry* and *public (intersubjective) validation* of knowledge; at the same time, it will recognize that these goals may, at any given time, be met only incompletely, particularly when seeking knowledge that includes deeper understanding of inner experience.

4. It will place *emphasis upon the unity of experience.* It will thus be congenial to a holistic view in which the parts are understood through the whole, while not excluding a reductionistic approach that seeks to understand the whole through the parts. Hence it will recognize the

importance of subjective and cultural meanings in all human experience, including experiences–such as some religious or interpersonal experiences–that seem particularly rich in meaning even though they may be ineffable. In a holistic view, such meaningful experiences will not be explained away by reducing them to combinations of simpler experiences or to physiological/biochemical events. Rather, in a holistic approach, the meanings of experiences may be understood by discovering their interconnections with other meaningful experiences.

5. It will recognize that science deals with *models and metaphors representing certain aspects of experienced reality,* and that any model or metaphor may be permissible if it is useful in helping to order knowledge, even though it may seem to conflict with another model which is also useful. (The classic example is the history of wave and particle models in physics.)

6. It will thus recognize *the partial nature of all scientific concepts of causality.* (For example, the "upward causation" of physiomotor action resulting from a brain state does not necessarily invalidate the "downward causation" implied in the subjective feeling of volition.) In other words, it will implicitly question the assumption that a nomothetic science–one characterized by inviolable "scientific laws"–can in the end adequately deal with causality.

7. It will be *participatory* in recognizing that understanding comes, not alone from being detached, objective, analytical, coldly clinical, but also from cooperating with or identifying with the observed and experiencing it subjectively. This implies a real partnership between the researcher and the phenomenon, individual or culture being researched, an attitude of "exploring together" and sharing understandings.

8. It will involve recognition of the inescapable role of *the personal characteristics of the observer,* including the processes and contents of the unconscious mind. The corollary follows, that to be a competent investigator, the researcher must be *willing to risk being profoundly changed* through the process of exploration.

9. Because of this potential transformation of observers, an epistemology which is accepted now may in time have to be replaced by another, more satisfactory by new criteria, for which it has laid the intellectual and experiential foundations.

Which Worldview?–A Crucial Question

The question of what worldview is fit to guide personal and societal decisions may well be the most critical question of our generation. What is really at issue here is the modern mind and its creations–from microchips and biotechnology to sophisticated weapons and increasingly menacing global problems. Thus this is a matter deserving the attention of the thinking public as well as the scientist.

The scientific exploration of consciousness bears directly on this question. In the exploration of the farther reaches of human consciousness we may at long last resolve the tension between the two kinds of competing worldview in modern society–the scientific worldview which prevails in our powerful institutions, and the humanistic-spiritual outlook by which we guide our daily lives. Up to now, research in the consciousness area has been hampered by failure to agree on a suitable epistemology. It is now time for this issue to assume a central position in the dialogue in and about science.

References

1. "Two Liberating Concepts for Research on Consciousness", *Noetic Sciences Review*, Spring 1993, pp. 14-16.

2. It is relevant here that certain physicists have argued that the epistemology of quantum physics is consistent with an idealist philosophy, in which consciousness is held to be, in some sense, prior to the physical world. See, in particular, Amit Goswami, *The Self-Aware Universe* (Putnam, 1993) and Nick Herbert, *Elemental Mind* (E. P. Dutton, 1993).

3. This point, as well as many others made in this document, are discussed elegantly and more thoroughly in Robert Jahn and Brenda Dunne, *Margins of Reality: The Role of Consciousness in the Physical World* (Harcourt Brace Jovanovich, 1987).

4. For a more detailed discussion of the status of "experimenter's" and "subject's" observations, see Max Velmans, "A Reflexive Science of Consciousness", in *Experimental and Theoretical Studies of Consciousness*, Ciba Foundation Symposium No. 174 (Wiley, 1993).

5. Michael Polanyi, *Personal Knowledge* (University of Chicago Press, 1958).

6. Thomas Kuhn, *The Structure of Scientific Revolutions*, 2nd ed. (University of Chicago Press, 1970).

7. For a good modern discussion of the approach to science recommended by Goethe and Steiner see Arthur G. Zajonc, "Facts as Theory: Aspects of Goethe's Philosophy of Science", *Teachers College Record* Vol. 85, No. 2, Winter 1983, pp. 251-274. Steiner's approach to science is laid out in the two books *Truth and Knowledge* and *The Philosophy of Spiritual Activity*, originally published in German in 1894. (English translations published by Rudolf Steiner Publications, 5 Garber Hill, Blauvelt, New York 10913.)

Toward an Adequate Science of Consciousness

by Willis Harman
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Most of us have been inclined to leave basic issues of scientific methodology to the scientists, as we once left environmental protection to the politicians and leaders of industry. But when these issues become matters which obviously affect our lives, they become issues of public concern. Such is the case with the nature and application of science.

As long as science remains the single generally accepted cognitive authority in the world, as long as we are going to turn to science to validate and interpret our outer and inner experience, it is of general concern that science "gets it right". The critical question is the epistemological one: How do we—or scientists—know? Although this is now a major focus of research at the Institute, it has always been implicit in our vision and purpose since our founding.

Twenty years ago, Edgar Mitchell's new Institute of Noetic Sciences set itself the task of stimulating scientific attention to the topic of consciousness. Today, few of us would question that some progress has been made in that direction. At the same time, a dramatic shift of worldview has been taking place in a widening group of persons (including a good fraction of the 31,000 IONS members) which has in a sense leapt past the more cautious advance of science. I would describe the most essential features of that shift as:

1) *Increased emphasis on* ***interconnectedness*** and recognition that external and internal are only different aspects of the same oneness (particularly visible in the "deep ecology" and feminist-spiritual movements).

2) *A shift in the locus of* ***authority*** *from external to internal.* Whether in religion, politics, or science, we see growing disenchantment with external authorities and increasing reliance on intuitive, inner wisdom and authority (apparent in transpersonal psychology, the feminist movement, psychotherapy, and executive training, and in the assumption of inner divinity in the "new spirituality").

3) *A shift in the perception of* ***cause*** *from external to internal.* The weak meaning of a statement like "We create our own reality" is that the way we perceive the world around us (and ourselves) is affected by the contents of our unconscious and preconscious minds. The stronger meaning is that we are indeed co-creators of that world and that ultimate cause of any phenomenon is to be sought not in the physical, but in consciousness.

The Potential Extension of Western Science

This cultural shift implies a contradiction of the worldview presented by Western science. (Of course, the prestige of science is sufficiently impressive that "new paradigm" people often seek to authenticate their inner truth by reference to "the new physics", "quantum healing", "holographic theory", and "chaos or complexity theory". However, it would be a mistake to underestimate how completely the emerging worldview collides with the "official" worldview which prevails in all powerful modern institutions, from scientific and economic to educational and medical.) The emerging view in no way denies the power of Western science for the purposes for which it was devised—prediction, control, manipulation of the physical environment. It does hold in question the modern tendency to yield authority to the reductionistic scientific worldview as the reality by which we should guide our lives, individually and collectively.

Ken Wilber, in a recent article, offers a useful way of thinking about this cultural collision.[1] He notes that the worldviews of practically all societies, with the exception of Western modern, have agreed that the world of material things is somehow embedded in a *living* universe, which in turn is within a realm of consciousness, or spirit, and that it is the nature of human beings to potentially be directly, noetically aware of, and identified with, all levels, from matter to spirit.

One classical representation of these multiple realms of being is the continuum: matter–body–mind–soul–spirit. In this representation, causality proceeds downward as well as upward in the continuum; for example, in one sense certain chemical interactions in the muscle cells in my biceps cause my forearm to rise, but in another sense the cause is my intention to raise it. However, Western science (for valid reasons at the time) chose to focus on matter and body only, and on *upward* causation only. In this single fact lie both its power (basically, to create manipulative technology) and its limitation. As time went on, we became so impressed with the powers of prediction-and-control science that we were tempted to believe that kind of science could lead us to an understanding of the whole.

The notion of multiple domains of being offers an alternative perspective, a different basis for science. This way of

looking at things suggests a possible way of extending modern science to include consciousness, thus avoiding the collision. Retaining the open-minded scientific spirit, and the tradition of public validation of knowledge (that is, no priesthood), *we need only to open up the field of scientific inquiry to all five domains and to include downward as well as upward causation.*

Implications of a New Epistemology

If we think in these terms, the characteristics of a new scientific epistemology as presented in the foregoing article are far more revolutionary than might have appeared at first reading. For example, consider volition, or to use an older term, "free will". The assumption that reductionist kinds of "causes" should account for everything has been, it turns out, a prejudice of science in its present form. In the broader picture suggested above there is no unique causal explanation for any phenomenon. In one context (the current scientific), reductionistic "causes" receive the primary focus; in another (say the judicial), volitional factors take center stage. Both kinds of explanation (as well as others) may be useful; no one is uniquely "true".

For example, in my personal everyday life I find (as did Aristotle) four levels of cause:

Level 1: *Physical cause (scientific cause in the usual sense)*

Level 2: *Biological cause (will to live, reproductive drive, evolutionary drive, in human as well as other organisms)*

Level 3: *Volitional cause (conscious and unconscious will and choice in humans and perhaps other organisms)*

Level 4: *Intuitional cause, "inner knowing", spiritual yearnings.*

We experience all four of these operating in our lives all the time, and experientially they are all qualitatively different. They seem to lead to four different realms of science: physical, biological, cognitive, and spiritual. Each level has its own appropriate kind of cause; they operate simultaneously, and alone or together, they do not provide a "complete" explanation; that is a goal to be sought only in a deep understanding of the Oneness.

A comprehensive science capable of investigating such a multi-leveled reality would be guided by William James' approach of "radical empiricism"–validating all experience as suitable data for a science of consciousness.[2] An epistemology based on "radical empiricism" can accommodate the full range of human experience, including experiences of non-ordinary states of consciousness, as well as "meaningful coincidences" and other anomalies. (There are many subtleties, of course. Whole societies can perceive things that observers from other societies do not, so it is necessary to be very cautious about claiming that some class of experiences is universal, even in potential. There is a tendency among some persons today to regard it as a mark of New Age distinction to be willing to believe almost anything. It is not total gullibility we seek, but rather new agreements about consensual validation.)

From the vantage point of this new epistemology we see the limitations of attempts to explain the self-organizing tendencies of living organisms through reductionistic arguments, such as some kind of "program" encoded in the DNA. Similarly, we can no longer use reductionistic arguments to dismiss apparently teleological manifestations in the evidence of evolution.[3] For example, it is not necessarily naive anthropomorphism to see evidence of creative experimentation in the fossil evidence of the "sudden" appearance of new species, or phyla.

Looking at things from this extended point of view, such paradoxes as "mind over matter" and the "mind-body problem" have appeared so only because of the metaphysical assumptions of the modern Western view. In a broader scope, it is obvious that mind and matter are interacting all the time. The interesting question becomes how isolated situations can be set up (such as the usual technological applications) in which the effects of mind are negligible. The still more interesting question, sociologically, is how we ever persuaded ourselves that those situations represent the norm.

This may seem to be only a scientific or a philosophical issue. But in fact, it is one of the most important political issues of our time. Whatever controls our understanding of ourselves, and the worldview from which we operate, will exert a powerful if largely unseen influence on every other issue, from abortion and prayer-in-the-schools to health care and sustainable development. None of us can afford to be uninvolved.

References

1. Ken Wilber, "The Great Chain of Being", *Journal of Humanistic Psychology,* Vol. 33 no. 3, Summer 1993, pp. 52-65.

2. William James, *Essays in Radical Empiricism* (Longmans, Green and Co., 1912).

3. Nobel laureate biologist George Wald ("Cosmology of Life and Mind", *Noetic Sciences Review,* Spring 1989, p. 10) has presented the case for consciousness not being the product of evolution leading to the human cerebrum, but, rather, having been present from the very beginning.

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We have much to learn from the incredible knowledge of our ancestors which was gained long before reading and writing came about. From time immemorial every bit of their intelligence and senses was used. Humans knew and felt relationship to all that lived and moved. Somehow that relationship must be regained. We are faced with crucial times. Changes need to be made beginning now, for our life-support system is being severely abused and mismanaged.

Many people of peace have been persecuted through the centuries. I believe that the time of persecution has passed. The energies of the people are now being directed in search of ways to save Mother Earth.

The founder of Haudenosaunee government, whom we call the Peacemaker, intended that there be social justice in the world. No man was to be more privileged than any other man. All were to be accorded respect. A healthy human mind respects the gifts of life–all nature gives life.

There is no word for "nature" in my language. Nature, in English, seems to refer to that which is separate from human beings. It is a distinction we don't recognize. The closest words to the idea of "nature" translate to refer to things which support life.

It is foolish arrogance for humans to think themselves superior to all of the life-support system. How can one be superior to that upon which one depends for life? Humans have invented marvelous technologies. The result has been that parts of the world live in unnecessary and debilitating surplus while people in other parts of the world are dying for lack of food, water, and shelter. Priorities need to be directed so that people who have plenty need not feel shame while others hunger and die. There should be no homeless or hungry people anywhere in the world. Those in power need to address this deplorable situation. As a mother I demand that our sons not be raised to die in war. War is irrational, its causes suspect. If we are to live on this planet we must eliminate warfare, which is harmful to all living things. . . .

I would urge that the whole concept of nature be rethought. Nature, the land, must not mean money; it must designate life. Nature is the storehouse of potential life of future generations and is sacred. Human societies already possess the technologies necessary to provide food, clothing, and shelter for everyone. The organization of distribution of wealth needs to be repaired, for that imbalance destroys both contemporary and future human life and nature. Western society needs to prioritize life-supporting systems and to question its commitment to materialism. Spirituality should be our foundation.

–Audrey Shenandoah
Onondaga

. . . from a keynote address to the Global Forum on the Environment and Development for Survival, Moscow, January 1990.