THE PARADOX OF HOLISM¹

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ABSTRACT

The obsession with the objective in recent scientific research has resulted in the denigration of the subjective. Fortunately, this view is being questioned by the very scientists who were enamored by the objective. Holism could be a revolutionary concept in some circles, but the practice of holistic medicine has been with us for a very long time. Recently, new ideas have been presented in an attempt to understand the philosophical underpinnings of holism. Unfortunately, few have tried to go back to the ancient sources to clarify the insights that had given rise to holism in the distant past. Further, questions regarding consciousness and Reality should be answered in a logical and aesthetic manner. In this presentation, an attempt is made to focus on the main issues in concepts related to holism. Can and should we measure effects of a holistic therapy? If we postulate mechanisms of a holistic therapy, does the holistic therapy become mechanistic? And, ultimately, can consciousness be measured? While such questions might sound trivial, the philosophical outlook that searches for answers to these questions are important. This paper focusses on some of these issues and tries to provide a framework for continued discussion in clarifying the paradox that presently permeates holism.

KEYWORDS: Consciousness, energy medicine, holism, holomovement, interconnectedness, subtle energies, Reality

INTRODUCTION

am here today as the President of your Society. This, by the way, is my last day of Presidency. I am here to talk about paradoxes in paradigms, both new and old, ancient and modern paradigms. Since it is useful to review the thoughts and philosophical underpinnings of any new movement so as to become aware of our shortcomings and possible adaptations for survival, it is important at this time, I believe, to talk about holism. I would like to present some of the important ideas that are coming to the fore in trying to define and understand holism.

Concepts related to body, mind and, consciousness are presented from many recent sources. It is felt that a synthetic view is still to emerge in the ideas presented so far. Definitions of holism, in my view, should be grounded in a world view, with hypotheses related to evolution, human predicament and transcendence. Concepts of consciousness and Reality are presented that might be useful in dealing with holism. It is hoped that these concepts are useful in pursuing discussions about defining holism. Holism has been interpreted in many ways, the important one to me being that it is an all encompassing concept which includes body, mind and Spirit, in whatever way a person interprets these.

The concepts that emerge out of a critical analysis of holism need to be looked into from a perspective that is different from the mechanistic view that still prevails in this post-Descartian era. In the prevalent paradigm biology, especially human biology about which we are most concerned, is assumed to be biochemical wherein independent systems can be manipulated for achieving homeostasis.

Unfortunately, this philosophy of independent systems has had wide following resulting in disastrous results in almost every sphere of individual and social activity; for example, in the negative impact on personal and social life of individuals, mismanagement of our environment and distortions of such diverse activities as in the expression of arts and in the pursuit of pleasure. Thus, this philosophy of independent systems which could work in a world of isolation and exclusion, needs to questioned as we move into a world of concern and cooperation in helping people around the world. If holism is to replace or transcend this doctrine of independent systems, we need to be cautious to avoid the pitfalls that results in following the above view.

There are, of course, advantages in dealing with isolated systems, especially if the organism is very complex. For example, if a trauma occurs, the human body is split into many subsystems and each treated in an independent manner. Further, the trauma is often said to be localized with specific functional deficits. In such cases, and in an emergency, we take an idealized approach of independent systems and prescribe a treatment regimen. However, it is necessary to realize that this is an artificial situation; once the trauma is past, we need to work with a global view to restore homeokinesis between the diverse systems.²

Many new models are coming into vogue for comprehending the mind/matter interactions seen in experiments conducted in many laboratories.^{3,4} Briefly, these experiments relate to how thinking could affect the outcome of a physical system, which could be any random event generator such as a radio-active source, an electronic system generating random number or, even a massive mechanical system. Even though effects observed due to intention are very small, persistent and significant changes in the outcomes have been reported in these experiments. Further, remote viewing studies with data obtained over separations of several thousand miles indicate that perceptions of targets are reported many hours, or even days, before or after the target is selected! To understand these atemporal and paraspatial connections, we need better theories, either in physical or in metaphysical sciences.

ne popular idea which seems to attract attention in holistic circles, is the so-called 'interconnectedness' hypothesis. Here it is postulated that the universe is a single whole and all individual parts are interconnected with one another. The interconnections could occur in some unknown way, transcending the present concepts in physics in the generation and transmission of energy and/or information. Since, in this model, all subsystems interact with one another in myriads of ways, action at a distance, telepathy and such other stuff that life is made of, is indeed possible. Almost instantaneous communication between two minds, or mind effecting a change in matter, seems to fall into place with this hypothesis.

Thus, this interconnectedness hypothesis seems to give us the notion that through some as yet unknown physical law, all humans are interconnected and

hence, we can affect each other, for example, through prayer or through healing. Dr. David Bohm seems to imply this when he talks about the "implicate order." Here the order that lies below the one we perceive around us seems to drive the world, and the implicateness somehow provides us with a world where subtle mind-matter interactions are possible. More about Bohm's postulates later.

H owever, the physicist opposes interconnectedness since there is no physical law to explain it; the biologist and medical professionals are unhappy with it since it could give rise to 'unapproved' therapies, and philosophers condemn it since it fails to break new ground in epistemology.⁵ And I feel that the "interconnectedness" hypothesis is totally inadequate if we wish to integrate healing reports with spiritual ideas found in many ancient texts. If one looks at the interconnectedness hypothesis closely, it seems to be merely an extension of the traditional scientific view of separateness of humans and events under observation.

Interconnectedness, as I see it, implies there are many independent systems that are connected with each other. Thus, we are still talking about separateness. This love for separateness is perhaps due to the fact that modern psychology promotes identity of *self*, recovery of the self and the Promethean extrication of the ego which is lost in the process of transactions in the world around us. There is perhaps a fear of losing the identity of the ego and oneself if this separateness is not somehow maintained. We need to reassure ourselves that self identity is not lost if we turn away from interconnected separateness. At this point, it is fair to say that the interconnectedness hypothesis has many inherent difficulties and may not stand the test of careful analysis.

Let us move on. Another concept that is related to most research in the area of subtle energies is the one referred to as "upward causation," or what our eloquent friend Stephen Braude calls "the small-is-beautiful" assumption.^{5(p. 32)} In looking for an explanation of an observed phenomenon, we tend to assume there is always an underlying cause for the observation. This cause is thought to be microscopic which underlies the macroscopic behavior. This assumption seems to pervade all thinking whether we are looking for a small virus killing the host or, quantum mechanics manipulating the macroscopic world. This touches many of us working in the field of holistic health and hence, we need to listen carefully to the critics. Those of us working with experiments to understand the manifestation of subtle energies in healers and other people, tacitly assume that the observed phenomenon could always be analyzed in terms of underlying minute processes. This is prevalent in all physical and biological sciences and hence, an unquestioned method in trying to explain the effect we observe. In short, many therapists and scientists working in the holistic field, are looking for a mechanical *modus operandi*, thus making a mechanistic approach.

Physics of the quantum world reflects this desire to search for the microscopic to explain the macroscopic, and this has a limit at some point beyond which we may not be able go. We are unable to penetrate the electron and other fundamental particles; in other words, we are unable to understand their inner structure. In the same way, the factor that may cause a disease is by no means entirely clear. Searching for the underlying cause for an observed event is by all means legitimate. However, acceptance of macroscopic observation itself as a primary phenomenon would make this small-is-beautiful principle unnecessary. Braude goes on to explain how this search for the microscopic could be counter-productive while trying to explain such events as ESP, and even more common events such as memory retrieval. He says:

For example, one can argue that analysis of most cognitive phenomena (*e.g.*, memory and volition) in terms of lower-level processes or mechanisms presupposes one or more deeply unacceptable theses. The most glaring of these are: (a) the Platonic or essentialist view that the relevant classes of observable phenomena (*e.g.*, mental or psychological kinds) can be specified by some set of necessary and sufficient conditions, (b) the view that specifiable kinds of microstructures (*e.g.*, brain states) can be functionally unambiguous—that is, that structure determines function, and (c) the view that a brain state (or some other kind of microstructure) can be intrinsically isomorphic to the state of affairs it represents or produces. . . 5 (p. 33)

This position is clearly important if we do not want to run into logical inconsistencies and philosophical tribulations. It is not necessary to assume that Nature will always have a hidden level of organization other than the one observed. It is possible that the entire research could turn to "a less experimental and mechanistically analytic, and more naturalistic and descriptive mode of inquiry." $^{5 (p. 33)}$

his does not imply that the inquiry becomes unscientific. We need to extricate our thinking from the three hundred-odd years of scientific isolationism and separateness hypothesis and work towards understanding complimentarity and wholeness within which individuality and uniqueness can still be expressed in a myriad ways.

Dealing with the subject of combining separateness and wholeness, Dr. Willis Harman, President of the Institute of Noetic Sciences has the following to say:⁶

Once we recognize the non-necessity of the separateness assumption and its reductionistic corollary, there is no reason to assume that the biological and the cognitive sciences can be reduced to the physical sciences (materialistic, reductionistic, deterministic), let alone to physics. The biological sciences involve more holistic concepts (for example organism, function of an organ) which have no counterparts at the physical sciences level. Similarly, there is no reason to assume that the characteristics of consciousness are reducible to biology. In other words, while theory reduction (as for example, the laws of optics explained through electromagnetic theory) will be welcomed whenever it proves to be possible, it is not a dogma of wholeness science that it must, in general, be possible.

Thus, both within the physical and biological sciences, as we look deeper and closer into new phenomena, we find that we need to move away from the small-is-beautiful assumption. Further, as we investigate to understand concepts in the holistic realm, it becomes even more important to keep in mind that the small-is-beautiful assumption might lead us completely astray. Let me give an example I am familiar with, namely, electrical measurements in acupuncture. An acupuncture point or acupoint seems to have specific electrical characteristics not based on observable anatomical distinctions. We know, for example, the acupoint has a lower value of electrical resistance in comparison to neighboring tissues,⁷ but no amount of dissection and observation under a microscope has revealed any anatomical differences from tissues at non-acupoints. Dr. Robert Becker has the following to say:⁸

The biggest problem Western medicine had in accepting acupuncture was that there were no known anatomical structures corresponding to the meridians, those live wires supposedly just under the skin.

Here then is a case of the existence of physiological processes without any anatomical correlates. One of the basic tenants of biology, namely, form and function are inextricably interrelated, is in question.

Perhaps, something else is more important than both form and function. It is possible that the relation between form and function breaks down under certain types of observations. Other questions arise: Is the energy concept that is postulated in acupuncture more complete and holistic than the correlates of form and function. Do fields (morphogenetic or otherwise) give rise to form and/or function, as required in any particular situation? This seems to be one of the points raised both by Braude and Willis Harman.

ENERGY AND CONSCIOUSNESS

any discussions have gone on regarding the 'energy' of healing and the measurable physical energies such as acoustic and electromagnetic. I am not going to dwell upon the excellent papers of Dr. Larry Dossey and others who have discussed the inappropriateness of the energy metaphor in healing. However, I would like to discuss another perspective, of possible relationship between energy and consciousness. Of course, I am NOT talking about the consciousness a medical doctor deals with in a patient, a person being either unconscious or else reacting to the environment. Rather, I am talking about the state of supreme consciousness that many ancient traditions have talked about. I would like to introduce a view given by John White in one of his papers.⁹ The paper opens with a statement:

There is a widespread notion among New-age oriented people and spiritual seekers that consciousness is energy, and that working with energy will *per se* changes one's consciousness and bring enlightenment. This is a fallacy, and a spiritually dangerous one at that. States of consciousness can be *correlated* with states of energy but they cannot be *equated*.⁹ (p. 73)

This is a paradoxical statement considered from the old paradigm of linear thinking. This is another way of saying that consciousness is uncreated; indeed, it permeates all creation. It is the efficient and material cause of what is called creation. This ancient position is represented by the teachings of Da Free John who has talked about the two primal, manifest aspects of the transcendent Being as consciousness and matter/energy. In this view, matter/energy is distinct from consciousness. It is matter that gets involved in exchanges of energy, not consciousness. Though consciousness permeates all matter, it is only indirectly involved in energetic interactions. John White continues:

Some spiritual seekers, failing to understand this distinction, become "energy junkies." They learn with fine detail how to manipulate energy inside themselves or attract energy to themselves from outside. They may generate effects in the body/mind that are often very dramatic, even overwhelming. They may, for example, experience great bursts of internal light, ecstatic mind-states, loss of body awareness, blissful celestial sounds, skyrides of unearthly colors, and so forth. Yet when the experience is over, their consciousness has not changed a whit. They don't understand what occurred, nor do they seem to care to *radically* understand. After the internal pyrotechnics have subsided, it is consciousness alone that can bring understanding to the person. Without that reflection upon experience, without self-awareness of what it is that can observe experience or energy at all, they are not mystical—they are merely mystified.⁹ (p. 75)

Reperience are not egocentric acts intended merely for analysis and mental satisfaction. And transcendence is not withdrawal, dissociation, sleep, or other physical acts. It is not seeing light, either inside or outside of oneself, nor hearing voices, piped, channeled, or otherwise. Further, according to White, any transaction at the physical-material level needs energy, but it does not necessarily mean that consciousness is taking part in this energy transference. Energy could have polarizing effects, positive or negative, yin or yang, male or female. However, energy in its pristine form has no polarity. Energy when it operates in the phenomenal world, produces positive or negative effects. Healing is an aspect of that energy which produces a change in state in either the physical or the mental substrate. That healing could go unnoticed and might seem to have no effect

on spiritual insight is seen from the story of Jesus curing ten people who were afflicted with leprosy (Luke 17). While all of them seem to have been healed, only one responded spiritually to Jesus' use of healing energy. Nine out of ten did not undergo any spiritual insight or outlook through this healing experience.

Thus, while energy could produce profound changes in the psychophysiology of individuals, consciousness is not necessarily changed by these energy manipulations. In short, says Mr. White, consciousness could and will change the body/mind continuum while energy changes need not change levels of spiritual awakening. In the above definition, consciousness is beyond phenomena; hence expansion in consciousness could be achieved not by operating on energy but, by techniques that take us beyond all phenomena.

Let us now turn our attention to two scientist-philosophers, both of whom have spent much time thinking about the metaphysical implications of science, namely, Pierre Teilhard de Chardin and David Bohm. Teilhard, in his book *Phenomenon of Man* says:^{10 (pp. 62,63)}

There is no concept more familiar to us than of spiritual energy, yet there is none that is more opaque scientifically . . . The difficulties we still encounter in trying to hold together spirit and matter in a reasonable perspective are nowhere more harshly revealed . . . Without the slightest doubt, there is something, through which material and spiritual energy hold together and are complementary. In the last analysis, somehow or other, there must be a single energy operating in the world. And the first idea that occurs to us is that the 'soul' must be, as it where, a focal point of transformation at which, from all points of nature, the forces of bodies converge to become interiorized and sublimated in beauty and truth.

eilhard proceeds to propose a line of solution to avoid the dualism of mind/material which he says is "at once impossible and unscientific."¹⁰ (p. 64) He proposes that all energy is 'psychic' which has two distinct components, one the tangential and the other, radial. The tangential energy links a material element with all other elements of the same order whereas the radial energy draws it towards a greater complexity. The tangential energy is the one understood by science. The tangential and the radial energies interact with each other moving the material to higher complexity and

evolution till the Omega point is reached in humans. At that point:^{10 (p. 258)}

Only one reality seems to survive and capable of succeeding and spanning the infinitesimal and the immense: energy—that floating, universal entity from which all emerges and into which all falls back as into an ocean; energy, the new spirit; the new god. So, at the world's Omega, as at its Alpha, lies the Impersonal.

hile Teilhard's conclusion is aesthetically appealing, his science is that of an anthropologist trying to understand and simplify in an inadequate way, the many advances in quantum theory of matter and mind. However, his description of the Omega point is very similar to that of Dr. David Bohm's implicate order.

Let us now turn our attention to the writings of Dr. David Bohm. To Bohm, implicate order is the most fundamental aspect out of which the entire physical world "relevates," or is lifted up. He says:¹¹ (p. 177)

We proposed that a new notion of order is involved here, which we called the *implicate order* (from a Latin root meaning to 'enfold' or 'to fold inward'). In terms of the implicate order one may say that everything is enfolded into everything. This contrasts with the *explicate order* now dominant in physics in which things are *unfolded* in the sense that each thing lies in its own particular region of space (and time) and outside the regions belonging to other things.

Dr. Bohm then turns his attention to matter and consciousness:^{11 (p. 208)}

It follows, then, that the explicate and manifest order of consciousness is not ultimately distinct from that of matter in general. Fundamentally these are essentially different aspects of the one overall order. This explains a basic fact that we have pointed out earlier—that the explicate order of matter in general is also in essence the sensuous explicate order that is presented in consciousness in ordinary experience.

Not only in this respect but, as we have seen, also in a wide range of other important respects, consciousness and matter in general are basically the same order (*i.e.*, the implicate order as a whole).

This explanation of consciousness is related to brain function and, to memory consolidation and retrieval. Again, at this level, it is possible to postulate that matter (of the brain) and its function (as consciousness) are interdependent and may not be separated. While Bohm expects an implicate order in the explicate world of matter and consciousness, he does not define it in any particular way. This is unfortunate since his views of implicate order are very important both in the realm of physics and in the understanding of holism.

Summarizing the contributions of Dr. Bohm in the area of New Physics, Fritjof Capra has the following to say:¹² (p. 96)

To express the essentially dynamic nature of reality at this level he (Dr. Bohm) has coined the term "holomovement". In his view the holomovement is a dynamic phenomenon out of which all forms of the material universe flows. The aim of his approach is to study the order enfolded in this holomovement, not by dealing with the structure of objects, but rather with the structure of movement, thus taking into account both the unity and the dynamic nature of the universe. To understand the implicate order Bohm has found it necessary to regard consciousness as an essential feature of the holomovement and to take it into account explicitly in his theory. He sees mind and matter as being interdependent and correlated, but not causally connected. They are mutually enfolding projections of a higher reality which is neither matter nor consciousness.

The ground from which the unfoldment occurs is the plenum on which the drama of 'unfoldment of consciousness' takes place. Without defining the ground itself (perhaps due to very good reasons), Bohm says:¹¹ (p. 212)

Our overall approach has thus brought together questions of the nature of cosmos, of matter in general, of life, and of consciousness. All of these have been considered to be projections of a common ground. This we may call the ground of all that is, at least in so far as this may be sensed and known by us, in our present phase of unfoldment of consciousness.

CONSCIOUSNESS AND REALITY

Perhaps the 'Ground' that Bohm talks about in the above quote may be considered as something that is beyond the phenomenal world which we sense in our interactions around us. Let us call this Reality. In John White's language, this is consciousness; however, instead of redefining consciousness, it is better to avoid confusion by using a new word and I am using Reality as the 'ground' that Bohm introduces. This Reality is the background from which all of the physical worlds arise. This is the 'Screen' that one of the great sages of India, Sri Ramana Maharishi, talks about in his teachings:¹³

Which is the screen and which, the paintings? . . . The Self is the screen, and the body and the world are the paintings. And what one needs to do to become aware of the Self is to erase the paintings.

his is the Reality we are discussing now. The body and the world referred to above are the evolutes of that Reality; other evolutes include the mind, ego, and all else that we see around us. As indicated earlier, this Reality is beyond space and time, not localized, not divisible into parts, indeed, not even measurable. A doubt might arise why this is not measurable. All measurements are ultimately by the material mind (called mind henceforth). Mind is bound in space and time; thus, measurement of a thing beyond space and time is not possible with a thing (mind) that is bound in these. Moreover, measurement of the characteristics of an object is possible only if there is a difference between itself and the surroundings. For example, a white dot painted on a white wall cannot be perceived. If Reality is unchanging in time and space, then it can not be observed, however subtle the measurement.

Thus, even understanding implies using the tools of the mind and hence, Reality is beyond comprehension. Thus the saying "He who talks does not know; he who Knows, does not talk." Lao-tzu, in the fourth century, B.C. wrote of this:¹⁴ (p. 188)

The Tao which can be expressed in words is not the unchangeable Tao; for, if a name be named it is not the unchangeable name. Without a name it is the beginning of Heaven and Earth.

Further, let us meanwhile remember the advice of the great Tibetan Master, Milarepa:

Do not mistake understanding for realization; and do not mistake realization for liberation.

It is difficult, if not impossible to study (in the formal sense) the nature of Reality that was introduced. However, since Reality is the basis of all else in this universe, it is necessary to understand some aspects of it so we can place holism and healing in a broader perspective. Let us see what method is useful in trying to understand the characteristics of this Reality.

One method of study is the objective way, whereby we reduce Reality as an event in space and time, take it apart into its components, examine each in detail, and finally, assemble the parts into a whole, hoping that the whole is no more than the sum of its circumscribed parts. However, Reality as introduced above, can not be taken into parts, it is an antithesis of action and transformation. Thus, the objective method is inappropriate in the study of Reality.

he second method of study is a subjective one. Here we do not take Reality into parts; however, we try to understand It through a process which is reverse of the one used in the objective method. Professor Chethimattam has the following to say in such a study.¹⁵ (He uses the word Consciousness in this quote which is synonymous with Reality):

The right way therefore to understand Consciousness is to make use of a procedure, as it were, in the reverse gear. In other words, to make use of a method of approach that will be opposite of what is employed in dealing with objects. The object is constituted in our knowledge through affirmation and construction. Consciousness is realized by negation and abstraction. The object is understood by addition and synthesis. Consciousness is reached through elimination and detachment.

These processes of negation, abstraction, elimination and detachment are all well enunciated in various orthodox and heterodox philosophies. For example, in the philosophy of Raja Yoga, practical methods are discussed if we care to proceed towards Reality.

Now, how is this Reality connected with holism and healing? Well, Reality, being the efficient and material cause of all creation, is intimately connected with both holism and healing. Holism, as I see it, is understanding the basis of all things, events and life itself; holism is in understanding Reality intellectually and then, approaching it through methods prescribed in all the esoteric

literatures of the world. And if healing is to become whole, then this again points to the realization that nothing is really interconnected, for nothing is separate necessitating this interconnection. This is not simply a convenient concept to be realized and practiced amongst humans; this is a realization that all things we see around us, all matter, all peoples and the entire universe is just one and one only. Only this realization and consequent actions based on this realization could help us in surviving the onslaught on environment, indiscriminate killings of species and the bleak future that we have succeeded in bringing upon ourselves.

CONCLUSIONS

In summary, it is essential that we do not propose new theories and models to explain mind-matter and mind-body phenomena without looking into those available, both from far and near, modern and ancient. It is egotistical to assume that mind-body phenomena have never been investigated adequately before our times; after all, when people did not have elaborate laboratories outside, they resorted to the inner laboratory of mind and body. All ancient civilizations around the world as well as intellectuals of all countries at all times have experienced this mind-body connection and expressed it in many ways. Further, there are people who exercise control over what we now call subtle energies, for lack of a more appropriate expression. While the healer using the subtle energy, or the recipient of the subtle energy, may not be linking to Reality (God, if you prefer) in some way during therapy, it does not imply that the energy is an isolated event taking place at that particular time. It has profound impact all around, as implied in chaos theory in the material world.

Holism should, in my view, be grounded in a world view, with hypothesis related to evolution, human condition and transcendence. As in any scientific area, this hypothesis can be tested, with an understanding that any 'testing' will reduce holism into convenient parts. Then, we need to assemble such studies in some meta-analytical manner.

How do we, mere mortals who are not scientists, deal with holism? It is often thought by some therapists that holistic therapy, for example, is to offer blood tests, massage, cranio-sacral therapy and some prescription medicine. Again, if a disparate—sometimes totally unconnected—set of therapies are offered, it is presented as holistic therapy. Perhaps it is. But then, perhaps it is not as simple as that. Further, many holistic practitioners bask in the dubious glory of a "more holistic than thou" attitude. This attitude may provide a healthy competition, in this age of free enterprise; but perhaps, we do not really know what others are doing in their own practice of holism. Perhaps our cosmology and definitions of Reality and Consciousness are obscure. If so, is it not appropriate to try iron out such difficult concepts in a conference such as this?

Finally, holism, in my view, is neither new nor is it age related. It is timeless. It has nothing to do with mind/body techniques nor with pumping energies by known or unknown methods. Holistic medicine, for instance, cannot be limited to treating a patient, or empowering him or her for healing to take place. These are useful procedures to restore equilibrium in the body-mind complex of a person. However, in the holistic experience, there is no patient, no doctor, not even a holistic practitioner in such confluences and manifestations. At this timeless moment, we are all seekers in the unfolding of consciousness which alone is eternal, both in ourselves and in all that we see around us.

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REFERENCES AND NOTES

- 1. This paper is based on a talk given at the 4th Annual Conference of the International Society for the Study of Subtle Energies and Energy Medicine at Monterey, California, June 23, 1993.
- 2. The word 'homeokinetics' is used rather than the more common homeostasis, since the interactions and their results are complex, time dependent changes seen in the activity of the organism.
- 3. Helmut Schmidt, Mental Influence on Random Events, New Scientist and Scientist Journal (1971), pp. 757-758.
- 4. Brenda Dunn & Robert Jahn, Experiments in Remote Human/Machine Interactions, *Journal* of Scientific Exploration 6 (1992), pp. 311-332.
- 5. Stephen Braude, Getting Clear about Wholeness, In *Cultivating Consciousness* (Ramakrishna Rao, Ed., Praeger, Westport, CT, 1993).

- 6. Willis Harman, Towards a 'Science of Wholeness,' In *New Metaphysical Foundations of Modern Science* (Willis Harman with Jane Clark, Eds. Institute of Noetic Sciences, 1994), p. 381.
- 7. M. Reichmanis, R. O. Becker, et. al., IEEE Trans. Biomedical Engineering (1975), pp 533-535.
- Robert O. Becker & Gary Selden, *The Body Electric* (William Morrow, Inc, New York, NY, 1985), p. 235.
- John White, Consciousness and Substance: The Primal Forms of God, Journal of Near-Death Studies 6, 2 (1987), p 73-78.
- 10. Pierre Teilhard de Chardin, *The Phenomenon of Man* (Harper and Row, New York, NY, 1959), p 62.
- 11. David Bohm, Wholeness and Implicate Order (Routledge and Paul, London, 1980), p. 177.
- 12. Fritjof Capra, The Turning Point (Simon and Schuster, New York, NY), 1982.
- 13. Who, Maha Yoga (Sri Ramanasramam, India, 1984), pp. 203-204.
- 14. F. David Peat, Synchronicity: The Bridge between Matter and Mind (Bantam Books, New York, NY, 1987), p. 188.
- 15. John B. Chethimattam, Consciousness and Reality (Orbis Books, London, 1987), p. 85.

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