THE CHALLENGE AND THE PROMISE OF SUBTLE ENERGIES AND ENERGY MEDICINE RESEARCH

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We are an organization whose membership covers many disciplines, everything from psychology to biophysics. Seventeen per cent of us are MD's, 28 per cent Ph.D.'s, and 20 per cent hold Masters Degrees. We are exactly what those of us who began the organization hoped for, a broad-based interdisciplinary collegiality of men and women interested in energetic and informational interactions, what is colloquially called consciousness. Our binding interest places us either on the cutting edge of science, or on the fringe, depending on one's perspective. As we begin the second volume of *Subtle Energies,* it seems worthwhile to spend a little time considering how change occurs in science and the kinds of criticism, based on historical precedent we are likely to face as a society, some of the strategies and tactics we might employ to face them, and to consider, briefly, where this area of inquiry may be headed.

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Facts are only part of what is needed to understand both the real nature of subtle energies and the implications they hold for science and society. We also need context, and this requires shifting focus from the details of specific research or clinical approaches to the larger, often unconsidered principles that lie at the heart of modern science, the world from which ISSSEEM springs. To perceive that context, we must first unburden ourselves of myths and folklore, perhaps the most fundamental of which is the assumption that science has, by the gradual accumulation of information over the centuries, consciously and purposefully moved toward the basic "truth" about the universe and everything in it. There are two things wrong with this idea.

The first difficulty stems from what I will call The Myth of Gradualism, the assumption that change comes as the result of incremental evolutionary discoveries. The evidence from the history of science makes it clear that *fundamental* change takes place not as evolution but as *revolution*, a conceptual leap which sweeps the past away.

Second, as Thomas Kuhn argues: "The developmental process has been an evolution from primitive beginnings—a process whose successive stages are characterized by an increasingly detailed and refined understanding of nature. But nothing . . . makes it a process of evolution toward anything. Does it really help to imagine that there is some one full, objective, true account of nature and that the proper measure of scientific achievement is the extent to which it brings us closer to that ultimate goal? . . . The entire process may have occurred as we now suppose biological evolution did without benefit of a set goal, a permanent fixed scientific truth of which each stage in the development of scientific knowledge is [an improved] exemplar."[1]

Those who are drawn to science and who become scientists are a special community dedicated to solving certain very restricted and self-defined problems whose relevance is defined by a world view or paradigm. Kuhn, who is the father of that concept explains it, thus: "{paradigms are} universally recognized scientific achievements [in a given field] that *for a time* provide model *problems and solutions* to a community of practitioners" [emphasis added].[1] For scientists who are immersed in it, a paradigm is their world view. Its boundaries outline for them both what the universe contains and, equally important, what it does not contain. Its theories explain how this universe operates.

There is a notable difference here between a science and a discipline. A group may call themselves by a name, and society may come to acknowledge both their name and their mission, but this acceptance does not make their practice a science. To become a discipline is a social phenomenon, not a scientific one. The thing that differentiates a discipline from a science is paradigm. A discipline is either paradigm—aspiring or paradigm-achieved—at which point it attains the status of a science.

Without the set boundaries provided by the paradigm no observation has any greater importance or weight than any other. Without this differentiation, western science is impossible. The benefit it offers is that with boundaries comes depth, and with depth comes detail. The narrowness of this definition increases as a science matures, and manifests itself in increased subspecialization; one is not simply a chemist but an *organic* chemist. It should be obvious then, to quote Kuhn again, that "one of the reasons why normal science seems to progress so rapidly is that its practitioners concentrate on problems that only their own lack of ingenuity should keep them from solving . . . intrinsic value is no criterion for a puzzle, the assured existence of a solution is."[1] This efficiency in puzzle solving collectively is "normal science." Obviously, this normal science is accumulative, but does it also seek the Copernican leaps, the insights that will change the course of history?[2] No. Normal science is specifically not interested in the very thing it is popularly supposed to be obsessed with doing.

The reality is that the efficient solution of problems requires an agreed-upon limit to what is attempted. To reach such an agreement the paradigm demands a special kind of education, one that does not so much teach the student about "truth" as condition the aspirant, through the academic degree stages of initiation, into a commonly shared body of experience. Anthropologically, socially, it is not much different from initiation through man or womanhood ceremonies into an Amazonian healing cult. Like his non-technological Amazonian cousin, the fledgling scientist concludes such an education only after demonstrating his competence, in this case through examinations and papers, showing that he has learned what enterprise, and only what enterprise, is supported by his group's world view. But achieving this acceptance always, and everywhere, comes at a cost. For the modern scientist it requires the acceptance of some fundamental compromises, not the least of which is a highly selective presentation of the past. For example, few young Ph.D.s in physics today would know of Newton's interest in alchemy. Yet it was from that interest and context that much of modern mathematics and physics sprang.

Western science has very little relevant past, excepting the careers of the teachers of those now practicing. What is even harder to admit is that there is no real intellectual need in science for the past. This is especially true if a science's paradigm has changed. Past research, particularly if it operated under different rules, is unscience by definition. Under the terms of the present paradigms of science alchemy, Newton's sovereign fascination, is nonsense. The only thing the past has to offer are the laws or rules that have crossed the borders separating one world view from another; and these can be expressed in their most condensed form since the context in which the researcher who formulated them lived, or the philosophy that motivated him, is of no interest or help to a present-day investigator. Also, because a paradigm is a world view specific to a discipline, anyone outside of that paradigm-attained discipline is a layman. An M.D. is no more a member than is a plumber of the paradigm community of quantum physics.

To seek the discovery of new phenomena unaccounted for by the paradigm, or to attempt the breaking of new theoretical ground, threatens the paradigm, which, obviously is almost a synonym for the word science. A researcher engaged in threatening activities is practicing antiscience and is soon isolated to the status of nonscientist. Even the most prominent can be destroyed when a critical collegial consensus emerges against them. While they may be performing scientifically such tasks as measuring accurately or experimenting and recording results carefully, if their basic premise lies outside of the paradigm what they are doing is not science. The critical difference is paradigm, and history is replete with researchers and clinicians, whose careers were ruined or stunted when they threatened the prevailing world view. Revolutionary advances and normal science are often socially incompatible, and to pursue radical lines requires real professional bravery.

How a scientist communicates his research to others is also worth considering in charting the future course of subtle energies research. Until well into the twentieth century scientists usually presented their major findings in books issued to the public, lay and scientist alike, and it is a popular myth that they still do so. The fact is, however, that the days of Darwin's *The Origin of the Species* or Newton's *Philosophiae Naturalis Principia Mathematica* are over. One development which characterizes twentieth century science is that ideas and propositions are communicated to peers not by books but through papers, seminars, and professional journals. And a corollary has followed, which many interested in subtle energies know personally:

This development is also a very effective way for the established collegial critical consensus to police its communities.

If one must publish to survive, papers which vary from the paradigm stand little or no chance of being published and professional survival becomes problematic. In recent years this has meant that those interested in subtle energies and energy medicine, as well as other fields such as chaos physics, either circulated never-to-be-published "pre-publications", or wrote a non-paradigm book which, by its form, was suspect. Practically, this meant either limited circulation, or the risk of loss of standing. (It was in part to remedy this problem that *Subtle Energies* was begun.) The fact that in the social sciences, books debating philosophy and publicly proposing new theories are still being written, is an indication that here the paradigm-achieving process continues.

All this does not mean that books have no place in science, for they most definitely do. If the book is no longer the primary vehicle for the presentation of original work, it has another equally critical task. The book, in the form of the textbook, is currently the main processing mechanism used to condition aspiring scientists. It is essentially pedagogical propaganda, and for this reason textbooks are molded to a very specific pattern. They report only the research that supports the paradigm and its normal science techniques; rarely are alternative explanations of reality and the research that produced those explanations presented. These volumes deal with the past in only a slightly more charitable manner; it is usual practice, for instance, for textbooks to fail to address the full complex of developments which led to present understanding. Textbooks also help in another aspect of initiation. As the paradigm-oriented disciplines have matured, one sign of their maturity has been the development of jargon that might be considered a sacred language. The language that is used is often difficult to understand for anyone outside the paradigm, even though the material itself might not be.

How does the paradigm-achievement process occur? After a period in which a variety of points-of-view compete, certain theories begin to draw adherents and schools (of thought) are formed. Gradually, this "school-of-thought" phase begins to give way to a next stage of development when one school "gains status" by being more successful in solving what the discipline has set up as its most acutely pressing task of the moment. This does not mean that this school's theory and techniques are more "truthful" or that they can solve all problems. It only means that the school is more efficient and successful at solving the critical problems in question. Indeed, since by definition a paradigm is a set of boundaries, the victorious school and its theories are only designed to solve a selected, and limited, list of puzzles.

Once a view has proved successful, the school it represents draws adherents from the other schools until a kind of critical mass—a critical consensus—is achieved. At this point one set of theories predominates and becomes the entire discipline's paradigm. Obviously, though, not all members of a discipline are willing to accept the dictates of the dominant school; some have a vested interest in their alternative theories. What happens to them? If they persist in clinging to their now "unscientific" views, they are drummed out of a community increasingly uninterested in what they have to say.

Having achieved paradigm, a discipline becomes a science and begins to practice normal science. At this plateau, as Kuhn points out, "The scientific enterprise as a whole does from time to time prove useful, opens up new territory, displays order, and tests long-accepted belief. Nevertheless, the *individual* engaged on a normal research problem *is almost never doing any one of these things* [emphasis Kuhn]."[1] He finds himself instead working from a different motivation, the desire to demonstrate that he is capable of solving a problem within the paradigm that no one has ever solved before, or has not solved as elegantly. "On most occasions any particular field of specialization offers nothing else to do, a fact that makes it no less fascinating to the proper sort of addict... Scientists normally [do not] aim to invent new theories, and they are often intolerant of those invented by others."[1]

Where, then, does an Einstein, a Newton, and, in a slightly different way, a Jung come from? And how does an extraordinary researcher's work, which is genuinely radical and not simply an extension of normal science, get into the mainstream? The answer is that the seed of innovation lies within the dynamic of normal science. There is a kind of Metamorphosis Mechanism contained within the very being of a paradigm.

Since it is by nature narrow and rigid—and this should not be construed as a pejorative description because the vast bulk of research could be practiced in no other way—normal science always produces anomalies in the course of its work, and as it proceeds inevitably to reach its boundaries, the encounters with anomalies increase.

The reason is simple: before paradigm is achieved, clearly nothing can be anomalous; after paradigm, a great deal will be; and, as the limits of paradigm are reached, the anomalies which lie beyond are that much closer.

Normal science, however, abhors anomalies since they are not tailored to the scheme by which it defines the universe. At first, then, anomalies are ignored on the assumption that later normal science research will deal with them when either instrumentation or theory articulation or both are improved.

If this does not happen, an attempt is made to extend the endangered theory in the hope that an extension of the paradigm's accepted propositions will bring the anomalies back into the fold.

In the beginning of a paradigm's lifespan better instrumentation or theory extension does eliminate most of the anomalies by making them conform; some, though, will not conform, no matter how artful the experiment or ingenious the development of the original premise. In the beginning most scientists are happy to leave these anomalies in a state of limbo. Everyone knows they are out there, lurking on the edges of the paradigm like hungry beasts around a campfire, but most scientists assume, correctly, that since most problems can still be contained within the paradigm, and so for a time at least normal science continues, and the paradigm provides a reasonably secure framework.

As normal-science research continues to get closer to the edge of the "known", however, it pushes so intensely, and with such specific focus, that its explorations produce just the opposite effect from that desired. Not only do they fail to strengthen the paradigm, which was their original purpose, but they produce still more anomalies. Ironically, at the end of the paradigm's lifespan the better the instrumentation the more intractable the challenge presented by anomalies. These begin to cluster until so many exist that not only theory but the paradigm itself is called into question. When this happens, the science enters a state of crisis from which there is no turning back.

There is extraordinary resistance in the scientific trenches to this final phase—in an individual it might be called denial. Scientists hate paradigm crisis even more than anomalies. Researchers delay retooling as long as they can, since it is expensive, involves much aggravation, and threatens careers and hard-won status. Paradigm crisis is the last stage in a process of scientific death. When it becomes irresistible, and the limits of the paradigm's lifespan are acknowledged by a critical consensus of its practitioners, several significant events take place.

First, the perception of the universe espoused and represented by the paradigm begins to go out of focus. As this happens, the rigid restrictions that have dominated normal science go slack because researchers in the community become less dogmatic and secure in what dogmatism does remain. This insecurity is reflected in the papers and seminars that normally reinforce the community's perception of itself and what it can and cannot do. Books again appear. Debates on the philosophic foundation of the community take place—an activity that is almost nonexistent in the normal science period, since a steady-state philosophy is taken to be a given.

Most of all, crisis allows the reexamination of problems that were formerly assumed to be either unsolved or unscientific. To do this, what Kuhn calls "extraordinary research" is begun. This research, as in the preparadigm period, begins to cause fragmentation and then a reassertion of schools.

When this stage is reached, two segments of the community become its critical practitioners: the most senior and the most junior. The latter are important because they will probably be the ones to engage in the extraordinary, indeed, revolutionary, research that will relieve crisis. They have been in the community the shortest length of time, have the smallest vested interest in the past way of doing business, and are most open to alternate perceptions. They may also, although there is only mixed evidence for this, be at their creative peak intuitively, as well as physically and intellectually.

Seniors are important for very different reasons. The fact that extraordinary research can articulate a new paradigm does not mean that it has solved all the puzzles that its formulation represents. By definition it cannot, since that more mundane task lies within the domain of *normal* not extraordinary science. Consequently, although juniors may make the breakthroughs, it is the graybeards around whom the emerging crisis schools will form. Because there are few answers, and only new puzzles, practitioners within the community align themselves with new theories not only on the basis of intellectual scientific merit but also (and this is almost never admitted even when it is recognized) on faith.

Because seniors are respected and securely placed within the profession, their association with one of the new schools carries great weight, even though the research that created the school may have come from a junior. The great bulk of the community, the middle group, responds intellectually to the juniors only after a new theory has been made emotionally secure through allegiance by seniors.

One other source can produce the revolutionary innovators. Occasionally, researchers from one paradigm group find themselves attracted to puzzles that have primary significance for another group. Because they are not fully conditioned to the paradigm of this field, and have less vested interest in its maintenance, these investigators function very much like juniors; but, they have a great mastery of research skills. Extraordinary advances are often the result of this interdisciplinary contact. Consider the impact on archaeology and anthropology that resulted from the development, by two researchers from outside of those fields, of Carbon-14 dating by Frank Libby, a professor of chemistry, who won the Noble Prize in 1960 for his discovery, and the dendrochronological correction, developed by Charles Ferguson, which followed.

Regardless of whether the innovators are juniors or investigators from other paradigms, however, the final result is the same. Gradually, as in the preparadigm days, one school emerges supreme, the world is redefined, a new paradigm is established, extraordinary research is suppressed as "unscientific," and normal science can begin "the mopping up operations [that] are what engage most scientists throughout their careers."[1] Revolution is over and the cycle begins again. And although to an outsider it may appear that things are much the same (and they are in the sense that the same words in most cases are still used and many of the old solutions are still valid), there has been the most fundamental change possible. The world of that scientific community has profoundly altered; its universe, and how that universe operates, is radically different.

The change is not without price, however, because one of the first orders of business under the new paradigm is the rewriting of all the textbooks, and the obliteration of much of the past, and many reputations; revolutions are therefore invisible except as highly distorted hero-worshipping of a select few past researchers—many of whom are the very people who caused the paradigm change. Ironically, they are presented not as the revolutionaries they are, men and women who tore an earlier world apart, but simply as evolutionary practitioners whose vision made their science's knowledge move more rapidly forward—but still in the same channel.

It may be pleasant and good for morale that paleontologists, for instance, trace their professional genealogy back through the twentieth-century Kenya-born Englishman Louis S. B. Leakey, to the eighteenth-century Frenchman Georges Cuvier, to the fifteenth-century Italian Leonardo da Vinci, to the sixth-century B. C. Greek, Archelaus, assuming an unbroken continuum of research. But this is a fiction made possible only by distorted hindsight. In truth, these men operated either under no paradigm or under radically different paradigms. The only valid continuum is that they each represent an attempt to solve similar puzzles in the context of their own age.

With this as background, how do we, as clinicians, experimentalists and theorists interested in subtle energies and energy medicine chart our course? First, we must recognize that we are in the paradigm-attaining phase. This is not a time for delusions of certainty. Our principal challenge is the issue of mechanism. We can measure effects but we can not explain how they are achieved. We do not even know whether there is one mechanism or several. Second, there is no universally accepted theory about what we are trying to do; third, we do not all agree on what constitutes the significant facts.

To achieve paradigm, these are the tasks I see lying before us:

- Determination of what the significant facts are. The reality is that we don't know what all the significant facts are, in fact in some cases, we don't know any of the significant facts.

- Development of competent working theories that can be tested through competent experimentation.

- Matching facts with theory. If there is common acceptance here, we can move out over our agreed upon playing ground. If facts are not acknowledged as matching theory then the cycle of searching for the match must begin again.

Based on these three points, there are certain strategies I propose we take a look at, as well as some tactics that flow from those strategies.

- The first strategy is identifying and acknowledging anticipated criticism; rather than shying from criticism we should see it as a guide to the potholes on our road.

- The second strategy is the incorporation of critical considerations into research and clinical protocol design, and discussion through peer-review of what those critical considerations are. The greatest strength ISSSEEM offers is interdisciplinary peer-assistance in the development of experimental protocols and hypotheses prior to a study's execution.

If we incorporate and work within the dynamic tension, that exists not only among our disciplines and sciences, the synthesis coming out of such research will give us levels of insight that might otherwise be unattainable. The great test that we, as an organization, will face is the successful resolution of our interdisciplinary dynamic tension. What happens if it is not successfully resolved? Organizations schism. We have an opportunity here to learn from past experiences, to offer and incorporate those strategies that lead to really excellent experimental and clinical work.

Based on what we have learned about the nature of scientific progress and paradigm shifts, and predicated on much discussion with ISSSEEM colleagues, if I were asked to advise the kind of interdisciplinary research team I envisage, my principal suggestions beyond those points I have already made would be:

First, pay attention to all possible variables, even those that seem irrelevant, or seem to be assumed. It cannot be over-stressed in looking at anomalous subtle energy phenomena, that you record everything you can quantify. For instance, recent insights into the effect of geomagnetic field strength on human performance would have been both delayed and far more difficult if a few researchers in the past had not recorded the exact date and time at which they carried out their experiments—even though, at the time, the information was of only marginal significance to them.

Second, include a careful description of the people who are involved in producing subtle energies phenomena, as well as those who may be affected by them. Who are they? What do they think is happening? How do they explain what they are subjectively experiencing? From what tradition, if any, does the practitioner come? To the degree that one can do so, a complete picture of all human factors ought to be a standard procedure in subtle energies research. We must also recognize and report everything we can concerning the full spectrum of researcher/participant interactions. We are only at the threshold of understanding the full nature of these interactions, and we must always be conscious of the possibility that there may be operative channels of informational and energetic interaction of which we are not now aware. Where these things are not described in the formal record the legacy for the future is compromised. Why? Because one can never know, in the beginning, when one first enters terra incognita, what will prove to be significant in the end.

The only way we can meet the demands of those who will come after us is to give them the gift of accurate and comprehensive reportage, even when it doesn't seem to make any sense or be relevant. It is amazing if you go back through the literature in this field, and I would incorporate the whole area of subtle energies, how difficult it is to figure out exactly what people did when they carried out their research. What was that piece of equipment they used? Exactly what model, with what modifications?

Third, as soon as—but not before—an avenue of research has proved its worth I would urge the development of common procedures, consistent procedures, something which is common in more mainstream arenas of science, but not as prevalent in the subtle energies field. One of the most significant tools to emerge recently in anomalous research is the retrospective meta-analysis; the capacity to look across many laboratories, many clinics working in a worthwhile, i.e., theory enlightening, avenue of research and say, 'overall, this is what this line of experimentation has produced.' Such analyses are impossible or, at least, immeasurably more difficult, with less confidence in the end product, when consistent and common procedures are not present.

Finally, let me touch on a critical consensus so pervasive and powerful that for most of us it is taken as a given; the tacit understanding which lies at the core of all sciences—for by now it should be clear that science is not one thing, but many—as well as the culture which is their collective context. While each discipline which has achieved the status of science has a world view distinctly its own, chemists varying slightly from biologists and so forth, there is also what might be called the metaparadigm. For although each science has apartness, it also shares certain primary assumptions with all the other disciplines that recognize one another as having attained paradigm level.

There is an entire hierarchy of science one that begins with the individual researcher; goes on to the school (sometimes literally the institution with which the researcher is affiliated); then to a discipline; then a paradigm-achieved discipline (or science);

finally, a multiscience community made up of the disciplines that have achieved paradigm and share in a metaparadigm. Each level of membership in the greater whole implies agreement on several critical assumptions and, like the Mobius strip, the paradoxical twist is that the metaparadigm is at once the pinnacle and the base of this consensus. In the case of the current metaparadigm—which, because it is the scientific expression of materialism, I will call the Grand Material Metaparadigm—there are at least five of these critical assumptions. They are: (1) The mind is solely the result of physiological processes. (2) Each consciousness is a discreet entity. (3) No communication is possible except through the defined physiological senses. (4) consciousness dwells entirely within the time/space continuum. (5) Organic evolution moves toward no specific goal but simply flows according to Darwinian Survivalism; that is: there is no plan.

Western science in its present form can be practiced because it accepts these world perceptions; without them, it could still be science, but not as most scientists accept it today. Essentially, all sciences which accept the limitation of a metaparadigm are, in aggregate, that metaparadigm's normal science.

Under the rules, then, by which the metaparadigm's normal science is practiced, though specific techniques may vary from discipline to discipline, it is always presumed that: (1) the researcher and the experiment can be isolated from affecting each other except in controlled and understood ways; and (2) since the experiment exists in a time-space continuum, the conditions under which it is carried out can be duplicated and the experiment replicated by any other researcher.

All of this, the common techniques, the various levels of the collective, the fundamental assumptions which often go unspoken seem to irresistibly argue for the conception with which I began this essay, the Myth of Gradualism. Yet both that myth, and the materialism it supports are refuted by the undeniable reality of scientific change, and how it actually comes about. Those individuals who produce extraordinary research do so not by force of intellect or will alone, although these are important, but because they have had intuitional insights *at the same time that there was a paradigm crisis.*

It is on this point, that most commentators describing the development of scientific breakthroughs are uncomfortably silent. John Mihalasky, invokes intuition as an overt explanation, but tentatively,[3] and Kuhn notes only that it represents a change in gestalt, a change in "beingness." "Normal science," he says, "ultimately leads only to the recognition of anomalies and to crises. And these are terminated not by deliberation and interpretation, but by a relatively sudden and unstructured event like a gestalt switch. Scientists then often speak of the 'scales falling from the eyes' or of the 'lightning flash' that 'inundates' a previously obscure puzzle, enabling its components to be seen in a new way that for the first time permits its solution."[1] To someone interested in subtle energies research this wording is virtually identical to the reports of healers and remote viewers.[4]

Kuhn is also willing—since the evidence is so great that it cannot be denied—to invoke the inspiration of dreams, although how this actually works he does not venture to say. In fact, he seems so uncomfortable with the moment of genius that he makes only one speculation on the nonintellectual aspect of puzzle solving. He notes, "No ordinary sense of the term 'interpretation' fits these flashes of intuition through which a new paradigm is born. *Though such intuitions depend upon the experience, both anomalous and congruent, gained with the old paradigm, they are not logically or piecemeal linked to particular items of that experience as an interpretation would be.* [emphasis added]"[1] What makes these key figures revolutionaries, then, is not just the quality of their work. They are also revolutionaries because of the source, mechanism unknown, from which their information derives. At the deepest level the process by which the information is obtained is as revolutionary as the information itself.

However, it would be a mistake to see intellectual excellence, and intuitive insight, as the only criteria for success as a "paradigm shifter". A careful analysis of the process also suggests that some kind of inter-connectedness between breakthrough researchers and their peer communities is involved; a kind of interactive collective awareness that comprises the critical consensus.

As Gunther Stent shows if an intuitive researcher is premature, no matter how great the insight, the response of peers is indifference at best, and martyrdom at worst.[5] Only when intuition and crisis are correctly juxtaposed can the necessary change in gestalt occur. I believe we are seeing the first stages of this process at the metaparadigm level. If I am correct, how might this new metaparadigm be defined? What kind of world view will it represent? What contributions can we make towards exploring the new realms which may lie before us?

Based on research being carried out across the spectrum of the sciences, I believe there are five descriptors relevant to the issues of subtle energies and energy medicine. They are: (1) Only certain aspects of the mind are the result of physiologic processes. (2) Consciousness is causal, and physical reality is its manifestation. (3) All consciousnesses, regardless of their physical manifestations, are part of a network of life which they both inform and influence and are informed and influenced by; there is a passage back and forth between the individual and the collective. (4) Some aspects of consciousness are not limited by the time/space continuum. (5) The ultimate goal of organic evolution cannot now be scientifically defined. We simply lack the necessary data to reach such a conclusion, but Darwinian Survivalism may be only one aspect of evolution's totality.

How we respond to the task of proving—or disproving—these ideas will determine whether ISSSEEM is, in fact, on the cutting edge of science, or its fringe. Being cognizant of the process of scientific development as we make research program decisions may help us make insightful choices.

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