

HOW LIMITS INTERACT WITH KNOWLEDGE—EVOLVING OBSERVATIONS AND THEORIES

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Studying the interplay of subtle energies in energy medicine requires multilayered observations. Topics explored in this issue of our journal range widely across this multilayered landscape.

Naohiro Nagayama and Hiroshi Motoyama are continuing their use of Motoyama's AMI technology, to explore electrical behaviors of the body, and their relationship with the subtle energy model of chi flow; in their investigation of Electrical Properties of the Extremities Along the Meridians in Patients with Unilateral Pulmonary Tuberculosis.

Francesca McCartney presents a most surprising investigation, in the tradition of William Tiller's studies on conveying intention via a technological device. Her subjects, healers trained at the Academy of Intuition Medicine, tested their ability to detect the presence of one of three specific intended healing energies or a null condition, using whatever methods they personally chose, to evaluate a subtle energy imprinted word processing file, sent and then returned via email. The statistically significant results of these discriminations are remarkable.

Norman Shealy, Vera Borgmeyer and Paul Thomlinson report on a small study looking at some of the energetic consequences of intentional nutrition, in their report on the Reduction of Free Radicals for Health Enhancement. Eating plenty of vegetables and fruit has been shown to decrease the presence of free radicals in biochemical assays. This study looks at the use of a specific fruit and vegetable concentrate, to evaluate this nutritional supplement's effect on free radical assays in a small population.

Peter Rubin provides a review and critique of the weaknesses inherent in taking an allopathic approach to research on acupuncture, and suggests that a research focus on the energetics of acupuncture processes offers a better prospect for deepening our understanding in his paper, *Acupuncture Studies: Where do we go from here?* As the paper by Nagayama and Motoyama in this issue demonstrates, our community has begun to pursue aspects of Rubin's prospectus for research, and we should expand these investigations.

We have a brief historical presentation in Ronald Matthews paper, *Harold Burr's Biofields; Measuring the Electromagnetics of Life*. Burr's work at Yale demonstrated that embryonic development in the salamander is directed by the polarity of the electromagnetic field present with the fertilized egg. The measurements to observe these electrical voltage patterns required new instruments that pushed the limits of observation in his era.

An historical paper such as Ron Matthews' highlights some of the difficulties in providing proper peer review for our multidisciplinary field. Some referees noted that Matthews has not revealed any new understanding of Burr's work, and the basic information he explores can already be found in other sources. Other reviewers noted that they themselves had not been aware of the depth and sophistication of Burr's achievements, and would not have known they should even seek out Burr's work.

So, I decided our readers would benefit from Matthew's historical discussion, and invited Garvin McCurdy to write a companion piece to Ron's paper, locating Burr's sophisticated work within Garvin's views of how we are coming to study more subtle processes than Burr was able to realize, and looking at even more subtle energies than Burr would envision. Garvin has offered a series of discussion papers at various meetings in recent years, and I asked him to provide an orientation to the syncretic theorizing he is pursuing. Garvin's paper, *Harold Burr, Subtle Energies and the Insufficiency Theorem*, explores the limits to rational methods of knowledge, and shows how these very limits can free our investigations to push beyond old paradigm restraints.

Christian Hallman's paper, *A Multidimensional Model of the Dreaming State of Consciousness*, also had a difficult time evolving a consensus during the peer reviewing. Some of the referees, coming from the perspective of physical theory, observed that Christian has not provided the "nuts and bolts" of a mathematical theory, and so he is "only" using physical theory as metaphor in his model. Other reviewers, also coming from the perspective of physical theory, proposed that while speculative, this is a very interesting extension of theories of space and time into the subjective domains of "state specific sciences," as proposed by Charles Tart. Reviewers coming from the perspectives of dream research recommend Christian's work as being a good synthesis from the innovative literatures in dream studies, including the interesting work of

oneironautics—dream exploration, such as pursued by organizations like the Lucidity Institute. As the title of Christian’s paper shows, this is Part I of his extended theoretical development. I expect subsequent installments to be just as interesting and just as difficult to find a peer consensus. I am looking forward to that task.

Just as seeking a consensus on the uses of physical theory plagued our refereeing process with Christian Hallman’s paper, Richard Blasband’s book review shows that physical theory has been plagued by continuing disputes about what constitutes the proper approach. This puzzle loops us back into Garvin McCurdy’s discussion of the limits to rational knowledge.

David Lindley’s book, ***Uncertainty: Einstein, Heisenberg, Bohr, and the Struggle for the Soul of Science***, digs into the disputes about proper modeling and the meaning of what eventually came to be called quantum mechanics. Richard Blasband provides a masterful distillation of Lindley’s explorations, and highlights the importance of this history for our own attempts to push further into even more subtle problems, possibly beyond (or perhaps still deeper within) quantum processes.

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