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THE EXPLORER

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SSE'S 24th ANNUAL MEETING

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FULL ARTICLE FROM *TIME MAGAZINE*

Science on the Fringe

ESP, UFOs and reincarnation are treated with respect at the world's most bizarre scientific conference

By MICHAEL D. LEMONICK/GAINESVILLE

Posted Tuesday, May. 24, 2005

Roger Nelson's formal credentials are in the respectable field of experimental psychology, but the project he has been working on since 1998 would make plenty of scientists cringe. Nelson heads the Global Consciousness Project, which is based on the theory that emotionally charged world events will cause blips in the output of random-number generators scattered around the globe. He and his colleagues believe they have already documented that effect in the aftermath of Princess Di's death, the 9/11 attacks and, more benignly, in the wave of international optimism that seems to settle over the world each New Year's Day. The simple electronic devices that generate the random numbers, he argues, may be picking up some sort of planetwide field of consciousness.

Preston Mack for TIME

SSE Member Roger Nelson in the foreground.
Councilors Brenda Dunne and Bob Jahn in the background.

TIME'S Caption: OUTSIDE THE BOX: In this room, Nelson's theory of a planetwide field of consciousness is no laughing matter.

Nelson would have a tough time getting this stuff published in a major journal like *Science* or *Nature*. But he doesn't have to, thanks to an organization called the Society for Scientific Exploration, or S.S.E., which held its annual meeting outside Gainesville, Fla., last week. The location--a Best Western overlooking Interstate 75—wasn't quite so lavish as the conference centers where neurologists or physicists routinely meet. Yet that didn't seem to matter for the hundred or so researchers who came to hear learned talks on, among other things, consciousness physics, astrology and parapsychology. Here, and in the society's *Journal of Scientific Exploration*, such topics are standard fare, alongside research on reincarnation, UFOs, and near-death experiences. Pretty much anything that might have shown up on *The X-Files* or in the *National Enquirer* shows up first here.

But what also shows up is a surprising attitude of skepticism. "We get plenty of nonsense," admits Charles Tolbert, an astronomer at the University of Virginia and the S.S.E.'s president. "Sometimes you know just five minutes into a talk that it's absurd. But you also hear things that make you think." Like Tolbert, many of the scientists here are on the faculty at major universities, and were doing fine at conventional research. But sometimes that gets boring. "I was plodding along, adding a little to a large body of knowledge," says Garret Moddel, an engineering professor at the University of Colorado. "Doing experiments on parapsychology is a lot more interesting and potentially much more important."

At the back of their minds, those researchers always remember that the scientific establishment has a long history of scoffing at big, implausible ideas that ultimately turned out to be correct: the assertion that the Earth orbits the sun, the idea that brain-wasting diseases are caused by misshapen proteins, the proposition that handwashing can prevent doctors from transmitting disease, the claim that continents can drift across the surface of the world—all these and more were scorned at first.

While S.S.E. members know that scorn doesn't prove that a controversial idea is right (people laughed at Darwin, after all, but they also laughed at Bozo the Clown), it doesn't prove an idea is wrong, either. "What we do," says Nelson, "is give everyone a respectful hearing. If we think a speaker is doing bad science, we consider it our duty to criticize it. We get our share of lunatics, but they don't hang around long."

Given this remarkable mix of acceptance and skepticism, it's not so surprising, then, that Henry Bauer, the editor of S.S.E.'s journal and a dean emeritus at Virginia Tech, wrote the definitive treatise debunking Immanuel Velikovsky, whose best-selling books in the 1950s argued that Old Testament miracles were triggered by close encounters with Venus. But it's also not surprising that that same Henry Bauer has published papers arguing that scientists have ignored powerful evidence that the Loch Ness Monster is real. ■

SOCIETY NEWS

2006 SSE Annual Meeting in Utah

The 25th Annual SSE Meeting will be held in May, 2006, in Orem, Utah (near Salt Lake City), at Utah Valley State College. See http://www.ScientificExploration.org.

JSE *Is Now Searchable*

Search JSE issues by going to http://www.lexscien.org The text is fully searchable, and the hit pages can then be viewed in text or html form with the search terms highlighted. The pages can be toggled to view the PDF version of every page, allowing readers to resolved any ambiguities or OCR errors. Any continuous sequence of pages can be selected and downloaded as either text or PDF files.

Remembrance of Charles Yost

Long-time SSE member and NASA scientist and researcher Charles Yost died in March of pancreatic cancer. He had chosen to die naturally. He was owner of Dynamic Sytems in North Carolina and Executive Director of the ***Electric Spacecraft Journal***, and author of the book ***The Tesla Experiment***. At NASA, he was the inventor of memory foam. Donations may be made to The Charles A. Yost Scholarship Fund, c/o The Sunlight Foundation, 235 Sunlight Drive, Leicester, NC 28748; or to Hospice of Madison County, 745 Carl Eller Road, Mars Hill, NC 28754.

SSE Brochure Available On-Line to Introduce Colleagues to SSE

A new SSE brochure is available at http://www.scientificexploration.org for you to use to invite new members to join SSE.

New members to the SSE are like Oxygen is to our body: necessary for life. SSE must continually seek out new members to maintain its intellectual vigor and vitality and to pursue its mission. You can help. The most effective way to gather new members who will contribute not only their annual dues, but also their time and energies, is by face-to-face introductions and invitations. Each of us knows at least one or more prospective SSE members. Let's introduce the SSE to them and invite them to join.

From the SSE web site, you can download the SSE brochure in pdf format, which you can then print and distribute. Both Letter size and A4 size are available there. They are designed to be tri-folded to a size convenient to carry in a jacket pocket. You could even have a larger amount printed up for an event. The SSE Mission Statement is printed on the brochure. So breathe deeply and carry a few brochures.

— Marty Cawthon, SSE Communications Officer

Call for Nominations for the SSE Tim Dinsdale Memorial Award 2006

The Society for Scientific Exploration calls for nominations for the 2006 Tim Dinsdale Memorial Award. Nominations should include a clear description of the relevant efforts and their significance, together with appropriate documentation (publication lists, reviews of published books), and the names of people who can speak authoritatively to the value of the contributions. Previous awards *"recognizing significant contributions to the expansion of human understanding through the study of unexplained phenomena"* were given to:

Helmut Schmidt in 1992 for electronic and computer techniques for the study of human-machine interactions

William Corliss in 1994 for unique and comprehensive cataloguing of scientific anomalies

Halton Arp in 1996 for work on non-Doppler red-shifts and their import for cosmological theory

Ian Stevenson in 1998 for distinguished studies of cases suggestive of reincarnation

Kilmer McCully in 2000 for elucidating the role of homocysteine in arteriosclerosis

William Roll in 2002 for studies of "recurrent spontaneous psychokinesis," e.g., poltergeists

Robert Rines in 2004 for founding Academy of Applied Science and for major discoveries concerning Loch Ness

Nominations will be considered and ranked by a committee comprising Robert Jahn, Henry Bauer, and Charles Tolbert (ex officio). Please send your nominations and supporting material by 15th December 2005 to: Robert G. Jahn, Chair, Dinsdale Award Committee for 2006, D-334 Engineering Quad, Princeton University, Princeton, NJ 08544–5263.

Thank you for your participation in this important process.

New Members

The Society welcomes **Full Members** Joanne Ashley, Charles Baran, Soong T. Chiang, Dancing Dolphin, Larry Goldberg, Neal Grossman, Francesca McCartney, and Chudley Werch.

Welcome to new **Student Members** Nelson Abreu, David Acunzo, Josef Karthauser, Michael Lydon, and Chiel Reemer.

SSE welcomes **Associate Members** Catherine Adachi, Warren Ayers, Michael Baigent, James L. Bennett, Robert Beutlich, Catherine Carstarphen, Ulises Castillo, Albert Chilenskas, Linda Crook, Robert Davis, Johannes G. de Beer, Laura Folse, Pauline Goodman, Jessica Gugino, Suzanne K. Guinn, Gordon C. Harrison, David Hawkins, Glenn Hayashi, Robert Keith, Frank Kiefer, Steve Kornegay, Sam Mandelbaum, Dorothy McCarthy, Mary Means, Auguste Meesen, Douglas K. Pinner, Ron Reich, Mario Rigato, Jason S. Rose, David Rosignoli, John Rowse, David Russell, Edoardo Russo, R. E. Sawchuck, Linda Sherman, J. D. Stillwater, Dean Story, Gary Stuart, Johann Summhammer, James E. Thompson, Michael True, Michael D. Turner, Valerie Van Halteren, Lester Ventner, Mark Victor, and Laurel Kelly Young.

Local Media Coverage of the SSE Annual Meeting:

Astronaut Says Some Events Are Unexplainable

By BRITTANY RAJCHEL, SPECIAL TO THE SUN, Gainesville, Florida, May 20, 2005, 6:01 a.m.

The sixth man to walk on the moon spoke about his experience with unexplainable phenomena Thursday to a skeptical audience of about 100 scientists. Edgar Mitchell, an astronaut on Apollo 14, talked of the experiences that led him to research the unexplainable, at the 24th annual meeting of the Society for Scientific Exploration at the Best Western Gateway Grand Hotel in Gainesville. "It isn't science, but personal experience, that stimulates you to do good science," he said.

Mitchell, who holds a doctorate in aeronautics and astronautics from the Massachusetts Institute of Technology, worked on the first extended research trip to the moon in 1971. He founded the Institute of Noetic Sciences to sponsor the study of unconventional scientific models, such as intuition and feeling, and he was inducted into the Space Hall of Fame in 1979 and the Astronaut Hall of Fame in 1998.

His interest in the unexplainable began on his way back to Earth aboard Apollo 14. He gazed out the window and realized he was connected to the stars, his colleagues, and the planet through his own molecules, he said. "You could see the Earth, the moon, and the stars with each rotation of the spacecraft," Mitchell said. "The stars were literally brighter for me. It was an awesome, awe-inspiring view of the heavens."

He could not find scientific literature on his experience, and he had to delve into Sanskrit literature to define his personal moment, inspiring him to begin scientific research on unexplainable occurrences. Further incidents spiked his interest in topics that traditional science labeled as hoaxes.

Mitchell said a telepathic partner "teleported" tie pins from a jewelry box Mitchell had lost years before, and a Tibetan healer cured his mother's glaucoma. As a scientist, he had a hard time believing it, he said, but he could not deny it either. "I was used to looking at science in theory and in abstract, not in what I was experiencing personally," he said. Further research showed him that all cultures have unexplainable occurrences, but most have been attributed to religion instead of science, causing confusion and misunderstanding, he said.

Audience members were willing to acknowledge Mitchell's controversial opinion. Granted, his anomalies are hard to understand," said Marilyn Schmidt, an SSE member from San Diego. "If we understood them, we wouldn't be here. Trying to understand them gives us a way to look at life's meaning and go into deeper issues." SSE wants to provide a forum for discussions as controversial as Mitchell's experiences, said Thomas Dykstra, society secretary and host of the meeting. Still, Mitchell's speech is not to be taken as fact, Dykstra said. "Scientists normally come up with reasons to deny or ignore Mitchell's experiences," he said. "In this setting, we're willing to accept it as a topic of conversation, not necessarily as truth. The Society doesn't want to endorse any of the speeches given today. It simply hopes to provide a forum."

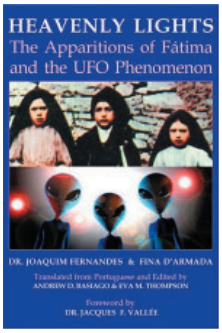
MEMBERS FORUM

Scientific Investigation of Survival of Physical Death Conference

The Second International Conference on the Scientific Investigation of Survival of Physical Death with Special Reference to Instrumental Transcommunication (ITC), organized under the auspices of the ***ITC Journal***, will be held in Vigo, Spain, April 28-30, 2006. For information on program and registration, see http://eureka.ya.com/cadernostci/congresotci/ or contact itc1conference@yahoo.es or itc2conference@yahoo.es or telephone (0034) 660274635. The first conference was held in April 2004. Dr. Anabela Cardoso is the Conference Organizer and President, Professor David Fontana is the Co-Organizer, and Carlos FernáÏdez is the Technical Director.

Book on Fatima and UFOs

Heavenly Lights: The Apparition of Fatima and the UFO Phenomenon by Joaquim Fernandes (SSE Member) and Fina d'Armada (EcceNova Editions, 2005, $22.95, tr. Andrew D. Basiago and Eva M. Thompson) tells the story of the Fátima visitations for the first time by Portuguese historians, based on their 25 years of research. They contend that the three children interacted with a hologram of an extraterrestrial projected on a beam of light from a hovering spacecraft at Fatima in 1917, the first major UFO phenomenon of the 20th century.



Hoax Computer Gibberish Paper Accepted at Scientific Conference

According to Reuters, a computer-generated pseudo-paper, "Rooter: A Methodology for the Typical Unification of Access Points and Redundancy," was accepted for the World Multiconference on Systemics, Cybernetics and Informatics (WMSCI). Jeremy Stribling, one of the MIT pranksters who submitted the nonsensical paper, said they questioned the standards of some academic conferences and had received many e-mails soliciting submissions. "We were tired of the spam." They raised more than $2000 over the Internet to go to the conference to give their "randomly generated talk."

ABSTRACTS OF THE 24TH ANNUAL MEETING OF THE SOCIETY FOR SCIENTIFIC EXPLORATION, May 18-21, 2005, Gainesville, Florida

SSE Councilor John Reed and SSE Member Astronaut Edgar Mitchell

Abstracts in Alphabetical Order by Author

(Invited speakers in all capital letters)

Passing the Baton to the Future You: Prospective Research on Reincarnation through the Time Capsule Project

Nelson Abreu
University of Florida
Sponsor: Brenda Dunne

Reincarnation or existential series remains one of the most difficult aspects of consciousness to verify. A brief introduction to the Existential Series Theory will describe progress in terms of objective and subjective support of the birth-intermission-rebirth cycle. The Time Capsule Project is one of the first prospective approaches to studying existential series, because it anticipates future investigation by accumulating self-relaying data and objects in a repository. It consists of an electronic database and a time capsule for artifacts that can be recovered in a posterior Terrestrial existence. Individuals will be able to search the databases based on several types of parameters including: chronological, geographical, conscientiometric (integral personality testing), groupkarmic (close circle of relations), energetic (comparison of morphic fields of the stored information and the user), and biographical keyword searches. One could inspect, analyze, and energetically read (through psychometry) the artifacts of the time capsules corresponding to the closest matching scores.

If a sufficiently convincing quantitative and qualitative match is obtained, the individual could discover where s/he left off in the last physical existence by recovering objects and data such as: handwriting, original work, favorite objects, a lock of hair, nicknames, idiosyncrasies, video clip with instructions to self, biography, journal with in-depth self-analysis including shortcomings and accomplishments, accumulation of knowledge from parapsychic experiences, and preliminary planning for the next life. The energetic rapport with these items could even trigger spontaneous retrocognitions. Most people, even if quite lucid before birth, experience a tremendous restriction of acuity and access to integral memory with the trauma of physical birth. However, this system could help the reborn understand how they arrived at their current condition and understand, decide, or recall the best course of action for personal to collective evolution. After all, to avoid repeating our mistakes, it helps to remember them!

Crystal Irradiation Stimulation of Enzyme Reactivity (CISER): A Possible Paradigmatic Explanation

George E. Bass
College of Pharmacy,
University of Tennessee Health Science Center

About 30 years ago, a Romanian scientist, Sorin Comorosan, set out to find experimental evidence of the widely hypothesized "quantum biological observable." He reasoned that a highly sensitive biological instrument would be required, and he selected enzymes for this role. His thesis was that an enzyme, via its reaction rate, would reveal quantum biological states of the small biochemical molecule whose reaction it catalyzed, i.e. its "substrate." To produce excited states of the substrate, he exposed crystals of the pure compound to X-ray, UV, or visible radiation for precise periods of time (e.g., 5, 10, 15, . . . seconds). Enzyme reaction rates were found to be increased, but only for certain precise, periodically recurring irradiation times. A total of 27 different enzymes along with 34 different crystalline materials have been investigated and found to exhibit this behavior. To this date, no suitable explanation has been advanced.

In the past, experiments have been designed almost exclusively with the presupposition that the substrate molecule per se was activated during irradiation. However, it has been found that irradiation of non-substrate crystalline materials, soluble and insoluble (NaCl, NaBr, KCl, diatomaceous earth), can produce identical results in the enzyme reactions. So what is the initial photoactivated species? A notable common circumstance applicable to all studies reported to date is that they have been conducted in the open atmosphere of the laboratory. Similar oscillatory free-radical mediated chemical reactions involving some of the common atmospheric gases have been reported. It is proposed here that the CISER phenomenon may be associated with related photoproducts cyclically formed on the crystalline materials. If this model is correct, it may hold implications for early evolution of enzyme architecture.

THE TWO-EDGED SWORD OF SKEPTICISM: OCCAM'S RAZOR AND OCCAM'S LOBOTOMY

HENRY H. BAUER
Virginia Polytechnic Institute & State University

Skepticism views the probability of a proposition as always less than 1, whereas belief or disbelief are absolute, asserting that the probability equals 1 or 0. The proper spirit of skepticism is constructive: It seeks to improve knowledge by stimulating better estimates of probability. That means micro-skepticism, questioning the soundness of every detail of fact, method, logic; it is empirical. By contrast, macro-skepticism is deductive; it relies on current scientific knowledge, which makes it backward-looking and destructively rather than constructively critical. It appeals commonly to Occam's Razor: It is always "simplest" to explain things in the way we are used to doing. But knowledge advances through change; so the Razor becomes a Lobotomy as people forget Einstein's insistence that theories should be as simple as possible, but no simpler.

Strong skepticism about new claims safeguards science against error. But the failure to maintain skepticism after a theory has been incorporated fosters dogmatism. There are a mounting number of contemporary examples where the native conservatism and dogmatism of science have become tyrannies—knowledge monopolies and research cartels—because science has become so much governed by official bureaucracies.

Energy Emissions From An Exceptional Subject

Stephen B. Baumann, William T. Joines, Jeremy Kim,
& Jonathan M. Zile
Department of Electrical and Computer Engineering
Duke University

Findings are reported from an ongoing study of electromagnetic phenomena associated with alternative medicine practitioners. A 10'x 12' aluminum enclosure

was erected within an 18'x 20' laboratory space, and the enclosure was sealed to shield the interior from stray light. Four pieces of monitoring equipment were placed within the enclosure: 1) a Hughes Probeye thermal video system to record infrared emissions; 2) a Keithley 6514 system electrometer with a 7001 switch system to record charge buildup from up to 10 electrodes attached to the body; 3) a Sypris/F.W. Bell model 7010 gauss-meter to record magnetic fields from dc to 20,000 Hz with a resolution of 0.001 gauss; and 4) a Thorn EMI photomultiplier tube (PMT) model S20 (9658) to record photons of light with maximal sensitivity in the near ultraviolet to the visible blue range. To date there have been 32 recording sessions involving 6 control subjects and 19 alternative practitioners engaged in bioenergy transmission or focused meditation. Data collected from the experimental subjects generally could be mimicked by the control subjects and explained on the basis of thermal effects, with one striking exception. One subject was able to produce brief, large bursts of photons on two occasions that were accompanied by negative voltage surges from an arm electrode. A narrative of these events and the effects on the subject are similar to descriptions of kundalini phenomena, especially in inexperienced practitioners.

The Physics of Encounter

Roderick Boes
Sponsor: Robert Jahn

The paper proposes an overarching conceptual construct for the physical conjugates of mind. The need for such a construct has become increasingly apparent because a growing number of physicists now accept the implications of experimental data that consciousness can collapse quantum mechanical wave functions. The proposed geometric description of this mind/matter interaction accommodates what Robert Jahn and Brenda Dunne have called "resonant couplings between the mind and its environment" and builds upon current theories which posit, in Hal Puthoff´s words, "an all-pervasive energetic field called quantum vacuum energy, or zero-point energy . . . that exists even in so-called empty space." Puthoff argues that quantum vacuum fluctuations "put our minds in physical touch with the entire universe because we share the fluctuating fields with it." The paper describes the hypothesized relationship between these fluctuating fields and the emergence of sentience, or consciousness, from physical processes. It bridges what has been called the "ontology gap" between the physical reality of processes in the brain and the disparate, subjective reality of qualia. The paper suggests that the processes underlying quantum vacuum fluctuations can be geometrically described as a pre-manifest reality of expanding and collapsing spheres, interacting through resonant coupling at points of encounter between their surfaces. The effects fluctuate as the spheres collapse at points of encounter, and a new sphere expands from the point that absorbs the effects of the encounter. I will argue that the effect simultaneously absorbed and exerted at a point of encounter (a zero-point field) is either the origin of an elementary mind event (a quale), or a participant in the creation of an elementary matter event (a particle), depending on whether the absorbed effect is experienced inside the sphere or exerted by the outside of its expanding surface. The proposed conceptual construct shows that mind and matter can be assumed to arise, as emergent reality, from a common substratum of interacting, hidden effects.

Data Selection and Optional Stopping

York H. Dobyns

Optional stopping and data selection are criticisms frequently invoked against anomalous quantitative results, particularly when effects are small so that databases must be large. It can be shown, however, that data selection characteristically imposes a statistical signature on the resulting data, and that there is an unavoidable tradeoff between the visibility of this signature and the "file-drawer ratio" of discarded data. Similarly, data produced by optional stopping strategies display a characteristic signature of outcome vs. length distributions, which can readily be compared against actual data. The martingale theorem shows how to identify meta-analytic statistics for multiple experiments which are immune to potential optional stopping effects within experiments. Theoretical arguments are illustrated with pragmatic examples from simulations and from actual data generated in the PEAR lab's human/machine experiments.

Extending the Ecologically Motivated Paradigm of Perception: An Examination of Perceivable Information in Functional Altered States of Consciousness

Igor Dolgov, Arizona State Univ., Dept. of Psychology
Sponsor: Brenda Dunne

Ecological Psychology takes the position that perception is direct, immediate, and undistorted. Yet, typically followers of this position only consider information that

is utilized in a narrow range of basic activities such as navigation. I propose that in more complex tasks, the ecological assumption that normal perception is direct, undistorted, and optimized specifically for action in the world may be shortsighted. I compare basic principles of Ecological Psychology to those of other cultural philosophies, such as Buddhism, that treat perception as immediate and direct. I then discuss how certain ancient and modern cultures offer a different perspective, in which practitioners take advantage of intentional alterations of their consciousness in order to gain access to traditionally unavailable sources of veridical information. This implies that in some instances perception in functional altered states of consciousness should be viewed as shifted or even improved, rather than distorted or impaired, as proposed by the current ecological model of perception. I conclude by noting that awareness of enhanced perceptual states in other cultures can illuminate and refine the ecological model of perception to include more complex real-world phenomena.

FORMATION OF A SCIENTIFIC THEORY: LESSONS LEARNED FROM INSECTOLFACTION

THOMAS M. DYKSTRA
Dykstra Laboratories, Inc.

The formation of a scientific theory is based first on an educated guess. After that, evidence is presented which may or may not support the theory. Evidence that does not support the theory either refutes the theory outright, or it becomes incumbent on scientists to explain the apparent discrepancy.

In the case of insect olfaction, a theory for how insects' "smell" has been widely accepted, in varying degrees, for about three decades. This theory explains smell as being similar to the lock and key model, which is well established for neurotransmitters and other endogenous chemical messengers. However, this model does not work well as a theory to explain insect olfaction. Many entomologists are reluctant to let the theory go, and most still hang on in an effort to conform conflicting data with this predominant theory.

The theory states that a given odorant (chemical messenger in the air) deposits itself on the antennae of an insect, concentrate somehow on the sensillae found on the antennae, migrate to holes in these sensillae, bind to an odorant binding protein (ODP) which ferries it across a sea of lymph inside the sensillae thus protecting it from odorant degrading enzymes (ODE), arrives at a sensory neuron membrane protein which possibly produces a rapid change of pH causing dissociation between the odorant and the ODP, and finally the odorant binds to a neuronal receptor which has not yet been proven to exist. Rough estimates show this process to take from between minutes to never, despite the fact that odorants have been well-established to evoke a response in insects in a matter of milliseconds.

Conclusions will point out the unlikelihood of this theory being valid while expressing a claim that insect olfaction is most likely mediated by electromagnetics involving antennas and energy from the odorant.

Skepticism versus Belief: A Pedagogic Method Invites New Insights

Charles Eisenstein
Department of Science, Technology, and Society
Pennsylvania State University

In my Penn State classes, I require each student to describe an experience that they (or someone they know) has had that "does not fit into scientific reality." The students take turns sharing their stories, which I mercilessly debunk along standard "skeptical" lines of argumentation. However, as we go around the room, something unexpected occurs. The charges of selective memory, confabulation, attention-seeking, fraud, hallucination, coincidence and so forth—along with a little character assassination when necessary—appear perfectly reasonable at first, but soon it becomes clear that the debunker himself is blindly committed to his own dogmatic worldview that is impervious to any evidence. Moreover, this worldview has a necessary emotional component, one that is consonant with a certain personality type. The debunker must buy into a world full of frauds, dupes, and the mentally unstable, where most people are less intelligent and less sane than he is, and in which apparently honest people indulge in the most outrageous mendacity for no good reason. Given that belief and disbelief can, with the right interpretation, both be made to fit the evidence, the choice of whether to believe comes down to a statement about one's own relationship to the world. Suspicion or trust? Cynicism or sincerity? To believe or not believe is no mere matter of intellectual opinion, but carries vast implications for how we live our lives, our view of human nature, and how we relate to other people. Perhaps that explains why a shift of opinion on these matters often accompanies personality changes and life changes associated with a spiritual awakening. And conversely, a spiritual awakening might herald the entrance of "anomalous" experiences into life. In the end, there is no separation between what we believe, what we experience, and who we are.

Quantum Mechanics, Complexity, and Consciousness: Toward a Science of Conscious Systems

Larry Goldberg
Sponsor: Garret Moddel

Could a science of conscious systems, one that integrates the contributions of quantum mechanics, systems theory, the cognitive sciences, and energy medicine, make methodological sense? Individually, these potential contributing disciplines have all had their own methodological challenges. Quantum mechanics has achieved remarkable precision and predictive value, but has generated a variety of alternative interpretations of "quantum reality." Systems science has helped us to temporarily divide our study of the world into "levels," but in analyzing systems with strong interlevel interactions, it has left us with the challenge of finding a basis for explanation beyond the laws or theories defined at levels of organization, and a basis for collaboration beyond the methodologies of the disciplines that study those levels. Cognitive neuroscience has identified brain correlates of different kinds of consciousness, such as the 35-75 Hz brainwaves associated with working memory in visual perception. The new field of energy medicine has also made a contribution to the study of consciousness by extending the focus on brain process to include the entire "living matrix" of the many forms of information and energy transfer in the body. Yet neither the cognitive sciences nor the study of "subtle energies" have been able to guide us in distinguishing between conscious phenomena caused by "the body" and bodily phenomena caused by consciousness; or in explaining the basis for the relationship between (or integration of) consciousness and the body. Remarkably, however, the collaboration of all these disciplines in an interdisciplinary science of conscious systems promises to enable their synergistic progress in the resolution of their respective problems in the context of their cooperative development of testable "interlevel" models of possible quantum gateways between consciousness and electromagnetic phenomena. If this program is successful, its integrated interpretations of quantum reality, complexity, and consciousness will have tremendous implications for our worldview.

Exploring the Formative Dynamics of Dream State PSI (DSP) and Conscious State Psi (CSP)

Dale E. Graff
Sponsor: Harold E. Puthoff

A detailed comparison of a psi source's data to the content of a target picture can provide an understanding of certain aspects of the psi process. This comparative approach considers the psi target as providing a sensory type input stimuli and the psi source's reaction to it as an output or response.

The psi data examined are primarily from experiments with pictorial material such as photographs, paintings, and sketches serving as the psi target. The distances between the psi source and the target varied from several meters to thirteen thousand kilometers. Psi data produced during the sleep and dreaming state of Dream State Psi (DSP) and the awake state of Conscious State Psi (CSP) are examined for differences and similarities.

Observations from this input-output evaluation include: (a) a form-meaning duality process influences how input "form" data are interpreted; (b) response data distortions can occur that correlate to ambiguities in the target picture's composition; (c) a psi target observer can significantly influence the psi source's response; (d) formative dynamics occur that provide insight into how the target information is assembled within various levels of memory; and (e) integrating DSP and CSP responses for the same pictorial target stimuli enhances the correlation between response data and the target picture.

These observations provide insight into how target pools for psi experiments can be selected for improving stimuli-response correlations and why presentation and evaluation of response data should be based on a form-memory or meaning duality consideration. Perspectives on how to evaluate or understand unusual spontaneous experiences are considered. A research approach using combined CSP and DSP data can provide new insight on how psi information is detected, interpreted, and presented to subconscious or conscious awareness.

THE "PEAR" PROPOSITION: "CHANGE THE RULES!"

ROBERT G. JAHN AND BRENDA J. DUNNE
Princeton University

For more than a quarter century, the Princeton Engineering Anomalies Research (PEAR) laboratory has engaged in a broad range of experiments on consciousness-related physical anomalies and has proposed a corresponding selection of theoretical models that have combined to illuminate the fundamental nature of the provocative phenomena that emerge. Some of the insights gleaned from the work are objectively specifiable, such the scale and structural character of the anomalous effects; their relative insensitivity to objective physical correlates, including distance and time; the oscillating sequential

patterns of performance they display; the major discrepancies between male and female achievements; and their irregular replicability at many levels of examination. But many others are intrinsically subjective issues, such as the responsiveness of the effects to conscious and unconscious desire and to individual and collective resonance; the relevance of ambience and attitude in their generation; and the importance of uncertainty as a source of the anomalies. This blend of empirical features predicates radical excursions of the dedicated models, and therefore of the more general scientific paradigms, to allow consciousness and its subjective information-processing capacities a proactive role in the establishment of objective reality, with all of the softening of standard criteria regarding objectivity, causality, quantifiability, and reproducibility that entails. The attendant complexities of conceptualization, formulation, and implementation notwithstanding, the advent of such a "Science of the Subjective" is at hand, and its pragmatic applications in many sectors of public endeavor now can be foreseen.

A BRIDGE BETWEEN SKEPTICISM AND BELIEF

ERIC KRIEG

Exchanges between skeptics and believers are often ad hominems hurled across a hostile divide. The great questions of our age deserve a higher level of debate than found on *Jerry Springer.* There is actually much benefit to be traded between an honest skeptic and a sincere believer. Though the speaker has a long history of connection with all corners of organized skepticism, he admits that he would rather be a believer. All facets of the world benefit if we do better avoiding belief in falsehood, while avoiding disbelief in something actually true. In this talk, he'll offer some inside dirt on the skeptic movement and some of the motivation that inspires people to defend the mainstream position. He'll take an honest look at the question: "Are skeptics still reacting to childhood shock of discovering no Santa?" There are a number of useful questions to be explored as well:

- What level of evidence should it take to convince a skeptic?
- What kind of claims don't even lend themselves to investigation?
- What kinds of claims can be safely dismissed out of hand?

On a positive note, he will propose a common set of tenets that should be shared by reasonable truth seekers on either side of the belief chasm. He will concede areas of extraordinary claims that hold some promise of really changing paradigms.

BIO: Eric Krieg is an electrical engineer working for JDS Uniphase. He has long been interested in science and paranormal claims. 10 years ago, he helped found PhACT, the Philadelphia Association for Critical Thinking, a skeptics group with 100+ members, of which he is president. Eric likes to think of himself as a nice skeptic rather than a predatory kneejerk naysayer. He has participated in investigations of paranormal claims. Yet, he is in the minority of skeptics who presume a deity to exist.

What Produces Organized Skeptics?

David Leiter

Although there are strong similarities in the scientific and technical backgrounds of SSE members and members of skeptics' groups, there is a dramatic difference in the philosophical perspectives of members of those two types of organizations, and especially in their consideration of various anomalies. Although far from demonstrated conclusively, it appears that members of skeptics' groups, almost without exclusion, have been psychologically damaged by involvement with a faith-based philosophy during their formative years, say up to their mid-twenties, that they then strongly repudiate. Most often that philosophy has been a conventional major religion. The speaker's 14 years as an Associate Member of SSE, and more than a decade of direct engagement with a local skeptics' group, and various other self-professed skeptics, and what that experience indicates, will be discussed in detail.

Why Reporters Don't Do Stories on Your Research

Michael Lemonick,TIME Magazine

Most of the research being discussed at the SSE conference is on topics the mainstream media don't ever cover—unless it's to poke fun at. It's understandable that this should be a fact of frustration and distress to SSE members. But it can also be seen as a rational act on the media's part, given the limitations reporters work under. I will present that media perspective, in hope of bridging the gap between non-mainstream science and those who report on science.

The Conscientia Paradigm
A New Paradigm for Studying Consciousness

David Lindsay

This paper analyses the roots of the current Newtonian-Cartesian mechanistic paradigm that forms the basis of many scientific disciplines, and examines whether that paradigm is outdated. Invoking Kuhn, it proposes that the current paradigm blocks the possibility of meaning-

ful progress in consciousness research in particular. It proposes a new paradigm, the consciential paradigm (a paradigm based on consciousness), which reformulates the nature of reality based on findings obtained through voluntary induction of out-of-body experiences. Under the consciential paradigm, a central tenet is that we have real, subtle bodies with which we can separate from our physical body to visit other dimensions of existence. Self-experimentation is the preferred methodology under this new paradigm, not just because technology to measure such phenomena is currently limited, but also because it is impossible to conduct comprehensive research in this field without personal experience. Such experimentation also offers the investigator a superior route to greater understanding of themes such as psychic phenomena, subtle energies, healing, life-after-death, reincarnation, and human potential, among others. The paper concludes by examining how we view ourselves as individuals, and the extent to which that has been influenced by the dominant yet flawed scientific paradigm.

The Science of the Future: Liberation from the Cartesian Prison

Mike Lydon; Sponsor: Henry Bauer

This presentation aims to trace the roots of the modern scientific paradigm, and argues that the scientific revolution was not the product of a dispassionate search for truth, but rather, at least to some extent, a reaction to witchcraft hysteria, superstitious thinking, and that it was a legitimization of the power of the church and state at the turn of the 17th century. The reason that science has so much bias against psychic phenomena, and also the study of consciousness per se, is due to metaphysical biases that have nothing to do with the scientific method or the current amassment of empirical data. All scientific investigations are necessarily about our experience of the world, and are thus internal on some level, as they reflect our view (or consciousness) of the world, and never arrive at anything purely objective or at a "view from nowhere." Given that all events have internal and external components, this points toward a uniformity in consciousness concomitant to the uniformity in nature. If there is uniformity in human consciousness as much as there is uniformity in nature, and consciousness is the basis from which we arrive at facts in nature, what would then preclude us from saying that the other more internal contents of consciousness as well as other states of consciousness are intersubjectively coherent and that they can be studied scientifically? The experience of a laboratory is based in the same overall framework of consciousness in which psychic and transcendental experiences occur, but these types of experiences are seen as taboo for scientific investigation, for arbitrary reasons based on outdated metaphysics. This lecture aims to shed light on the fact that we are already engaged in a science of consciousness, and examines why most of us don't realize it, and why others are reluctant to.

A Comparison of Consciousness Functionalities: Introducing a Newtonian/Quantum Model

John P. MacLean, Utah Valley State College

This presentation discusses a model that includes both Newtonian aspects and Quantum Field considerations in Mechanistical and Consciousness portions of the Human Entity. The model started as a technique to teach comprehensive ergonomics and developed as reviews of numerous scientifically carried out and published studies in Leadership showed weak or zero correlations with measures of leadership that were intuitively satisfying. As the study progressed it became apparent that other studies in functionalities of the Human Entity similar to Leadership were resisting good correlative results, too. Despite the weak correlative aspects of their work, people in business and other disciplines continue to spend lots of time and money continuing Reductionistic approaches to exploring such issues as Leadership, Creativity, Conscience, Teaching ability, and others. Few researchers consider that these functionalities are part of Consciousness. Those that do, almost universally try to relate them to some aspects of a quantum field, a la Sheldrake's morphic fields, Bohm's underlying implicate order, and other models. Researchers are trying to measure by reductionistic methods the aspects of a functionality that basically exists in a quantum field. Few researchers in these areas are even aware of the Uncertainty Principle.

The model presented provides a discussion model to encourage those proficient in quantum theory to work in an area less esoteric and perhaps useful in diverse disciplines. The model is a work in progress. It is hoped that presentation at the SSE venue will provide additional information for the paper revisions. There is a level of expertise in quantum fields and consciousness in the SSE that is not present in the general business world.

Can Astrology be Tested?

Bob Marks

Sponsor: Frank McGillion

A model is proposed to test for putative astrological correlations between acts of murder and the birth horoscopes of those who have committed this crime. The natal horoscopes of 194 people convicted of murder were compared with control groups of horoscopes randomly generated by computer.

For the results to be meaningful, a minimum of 500 cases would be needed. Therefore no definitive conclusions could be drawn from this study. However, as further cases become available, the results could be combined using meta-analysis to yield a more definitive result.

The Physiology of Spontaneous Remission and Various Healing Modalities: The Foundation for a Unifying Theory?

Carl G. Medwedeff
Sponsor: William Bengston

Cases of spontaneous remission, as well as cures attributed to numerous other "healing" methods, such as the laying on of hands, Qigong, energetic therapies, and homeopathy are often thought of as occurrences which defy scientific explanation. Occurring for a wide range of diseases, governed by no known mechanism, the true cause of these recoveries remains a mystery, resulting in their frequently being described as miracles.

Given the multiplicity of diseases in the reported cases of spontaneous remissions and the diversity of the organs affected, it seems difficult to imagine that all of these recoveries might be attributable to a fundamental physical cause. This is one reason, albeit one of many, why healing is regarded with suspicion in the medical and scientific communities. The idea that a large number of diseases could be treated identically seems to contradict current thinking. Nevertheless, this is precisely one of the concepts shared by various energy medicine practices, be they ancient or modern, and one which is suggestive of a fundamental physiology.

This talk will describe a physiology and biochemistry to account for these cures and remissions as well as describe the history of their discovery.

Additionally, an attempt will be made, with a particular emphasis in the context of cancer, to explore how these lowest level principles might explain or account for other phenomena reported by researchers and practitioners. Environmental conditions required for specific processes and variables which impede or terminate them would then be co-factors.

Measured and observed phenomena, such as the wound healing and current of injury reported by Robert O. Becker, which too, seem consistent with Hering's Law of Cure, might all be understood as secondary expressions of a primary physiological process, labeled spontaneous remission, when no causality is apparent, called "healing" when initiated externally. In the healthy, it is homeostasis.

THE VIEW FROM SPACE, AND ITS EFFECTS

EDGAR MITCHELL

Studies in altered states of consciousness and transcendent states are now well known in the literature. Not so well known is the fact that such states did occur in the early days of space flight. Occurrences during the Apollo flights will be discussed.

Sizing Up Psi in a University Classroom: Exploration, Acceptance, & Skepticism

Garret Moddel, University of Colorado

If you're sure of the following and believe they're not worth re-examining:

- *Accepted science is rock-solid fact and not subject to revision.*
- *Premonitions of future events have no scientific basis.*
- *The concept of time-reversed causality contradicts basic logic and accepted physics.*
- *The existence of telepathy is just wishful thinking.*
- *Using our intentions to affect physical systems is just New-Age gobbledygook.*
- *The scientific method is objective and the only appropriate way to distinguish fact from fallacy.*

then this is the wrong course for you.

The above is taken from the webpage of an Honors course exploring the science behind psi phenomena that was offered at the University of Colorado. The course involved reading and discussing many primary and secondary sources on the scientific method, statistical analysis, telepathy, remote perception, psychokinesis, perception through time, physical models, reproducibility, and skepticism. For some of the class discussions, students divided into proponents and skeptics groups. Each student carried out a substantial experimental research project on topics including premonitions, telepathy between intimate partners, retroactive intercessionary prayer, the effects of anger on plant growth, the

sense of being stared at, and feng shui, with intriguing results. The students started the course with various degrees of acceptance of the existence of psi phenomena. After studying the material to a depth generally exceeded only by that of some researchers in the field, interestingly the degree of acceptance increased in some students, and some became more skeptical. The reasons for this range of responses involved their reactions to statistics, error, and uncertainty.

Scientific Methodology: Linking Subjective Paranormal Experience and Focal Brain Dysfunction

Vernon M. Neppe
Pacific Neuropsychiatric Institute

Recent research has postulated specific brain areas responsible for producing subjective paranormal experiences (SPEs). This provoked sensational publicity and inappropriate overgeneralizations. This paper provides principles correlating SPEs, like transitory out-of-body experiences, with specific brain areas. Scientists must apply appropriate, justifiable methodological critical analyses to appropriately advance knowledge and balance media hype.

The following roadmap analyzes the SPE/brain link:

1. Analyze the phenomenology of the SPEs in as much detail as possible.
2. Establish the typicality of the SPE: Compare the phenomenological experiences with the typical features of SPEs as described by Experients without any brain dysfunction history.
3. Establish the correct pathophysiological context, e.g., exact clinical symptoms, specific seizure focus, and the medical history.
4. Collect case series: Do not generalize from single cases.
5. Apply past knowledge: Compare the literature for sources of localization of specific brain and also subjective anomalous phenomena.
6. Recognize the existence of nosological subtypes, e.g., the already demonstrated four phenomenologically distinct variants of déjà vu complicate comparisons across these subtypes. Similarly, research on other ostensibly anomalous phenomena may demonstrate distinct nosological subtypes.
7. Don't overgeneralize key associations: Even when SPE findings, e.g.. OBEs, are referable to specific anomalous brain functioning, they neither confirm nor deny the veridicality of the SPEs or psi experience..
8. Brain events may be explained dichotomously: The particular brain function pattern may have entirely endogenous origins within the brain, e.g., pathological hallucinations; or they could conceivably allow subjective experience of an outside, usually covert, unshared, idiosyncratic, reality.
9. Methodologically, associative links do not imply causality. To consolidate the causality hypothesis, one should compare analyses of brain function and SPEs in controlled "ostensibly normal" groups, with SPEs in the brain pathology, e.g., temporal lobe epileptics, using a well-tested medical diagnosis model.

WHY THE STUDY OF THE ANOMALOUS IS CRITICAL FOR SCIENTIFIC ENDEAVOR

VERNON M. NEPPE
Pacific Neuropsychiatric Institute, Seattle

The study of the anomalous uses, where applicable, the conventional scientific methods and scientific principles of deduction, induction, data examination, formulating hypotheses, testing hypotheses and empiricism, and applied, applicable, theoretical mathematical realities. This nonlocal biopsychophysics scientific discipline has accumulated solid research data over a century. Yet anomalous experiences have been subject to a scrutiny and skepticism unparalleled in any other area of scientific endeavor, generally requiring a higher level of scientific proof and unparalleled methodological controls. Anomalous events evoke emotional attention and threaten carefully built scientific edifices: Its research is not silent; it thunders through controversy because the consequences of its ostensible findings are literally mind shattering.

Often however, the data generated have cosmological elements. By its very properties it does not involve control of the experiments by humans. Certain exact experiments cannot be replicated, either because the situation of the experiment never again exists in that exact form, or because the results require examination through the limited scientific instrument of our conventional three-dimensional space and single point-in-time universe.

The anomalous is critically important for scientific endeavor for six major reasons: Because

- its implications broaden our worldview at minimum, and are so profound in its more radical framework;
- it allows the development of cosmological theories, and new scientific endeavors may develop as a consequence;
- its methodology serves as a model for both the physical and humanistic sciences to adopt: more than any other area it exemplifies the greatest data rigidity and eliminates alternative explanations;
- the subjective approach to the anomalous extends its use-

fulness even further in social and medical sciences

- the implications for findings are so fundamental, ubiquitous, and versatile for almost all our sciences: It is not a narrow endeavor. It potentially implies extremely broad impacts on almost every other discipline.

Meaning and the Long Body

William Roll
State University of West Georgia

Mind is embodied and the body is emplaced, which means that mind is also emplaced. Mind has conative, cognitive, and executive functions derived from the limbic system, the cerebral cortex, and the cerebellum. The first gives objects conative meaning, the second a map to reach or avoid objects, and the third the means to do so. Cognition provides measurements of object, such as size, weight, and location in time. A material object is local. Conative meanings cannot be measured by number but may be perceived in another place and at another time than an object's material counterpart. Knowing the conative meanings of distant material objects is essential to life. Meaning is often nonlocal.

ESP is to perceive the meaning of another person or object whose material form is absent. While the material aspect of an object may remain the same in different places and at different times, its meaning may change. The same object can have different meanings to different people or to the same person at different times. The meaning with which an object has been endowed does not evaporate when the object is out of sight but may persist and may affect others who later come in contact with the object.

ESP and PK involve meaningful objects. This constellation of objects extends beyond the reach of the familiar body. It has been called the long body, an Iroquois term that refers to the tribal body, and embraces living members of the tribe, ancestors, tribal lands, and objects. ESP and PK occur mainly within the long body to which the person belongs.

Place and time are relative to the observer. A giant, being tall, can see things that appear to be in the future or the past to others and may seem to have precognitive or postcognitive powers. Psychics are our giants. In dreams and other altered states, anyone may briefly become a psychic giant.

REFLECTIONS ON THE SKEPTIC PROPONENT DEBATE IN PARAPSYCHOLOGY

MARILYN SCHLITZ

Institute of Noetic Sciences
California Pacific Medical Center

In this talk I will consider the nature of controversial science, focusing on the skeptic/proponent debate in parapsychology. I will do this from three perspectives. First, as a participant in a controversial area of science for more than 25 years, I have seen the ways in which research on psi phenomena has been both supported and marginalized. I will consider my own approach to moving my work into the mainstream by linking it to areas of increasing social relevance: consciousness studies, and complementary and alternative medicine. Second, I will reflect on my work with skeptics, noting the ways in which people within the field have responded to these collaborations and the views of the skeptics. In particular, I will overview my work with skeptic Richard Wiseman, with whom I have had an active and positive collaboration for nearly a decade—leading to some surprising and valuable results. Third, I will consider my work on the sociolinguistics of the skeptic/proponent debate, noting areas in which both sides of the debate make use of common rhetorical approaches and appeals. I will argue that an attitude of "open-minded skepticism" may be useful for moving the debate forward in a way that minimizes the polarization that is often characteristic of controversial areas of research.

The Enigma of Weeping Icons

Marilyn I. Schmidt
Sponsor: John B. Alexander

Since prehistory, humans have made attempts to personify and render tangible their relationship with the Divine or Absolute. The creation of imagery in the form of idols, talismans, icons, and statues is one way this need has been fulfilled. Icon veneration with an open mind and a willing spirit, in the Orthodox tradition, can promote a mystical experience. A transcending effect, interaction with the icon in prayer, forges a connection with the Divine. One rises above reality and becomes aware of a higher purpose and one's place in the scheme of things. Conceivably, surrender to the Divine creates a psi conducive field in which alleged miraculous events occur. The so-called weeping icons release various kinds of fluids, i.e. tear-like watery liquids, and substances resembling blood—in some cases being identified as human blood. Oily secretions similar to sweet myrrh and rose-scented oil are also typical. Although unusual, weeping icons are not a novel occurrence; they have been documented in the past. In A. Wallis Budge's *One Hundred and Ten Miracles of Our Lady Mary: Trans-*

lated from Ethiopic Manuscripts (1933), many weeping images throughout the domain of Christianity are described. Within Eastern Orthodoxy, there is an ancient tradition of images that weep occasionally and effect healings. Of major significance is the feminine element. A great many weeping statues and icons associated with anomalous healing are of Mary. From a historical perspective, this is hardly surprising. The goddess archetype has often been associated with healing and compassion. Many physical cures and psychospiritual conversion experiences have been documented. Nevertheless, further investigation is needed to rule out fraud and learn more about this mysterious phenomenon.

Consciousness Physics as an Alternative to String Theory

Evan Harris Walker, WCRI
Sponsor: Dean Radin

Whereas physics is quite successful describing physical reality using Quantum Mechanics (QM) for the microworld, General Relativity (GR) for the Universe as a whole, and the Standard Model to list elementary particles and give their interactions, the need for these three separate descriptors of reality shows that physics is not unified—the task of physics is incomplete. Because physicists feel that the ultimate fabric and the undeniable element of physical reality is space-time, the only path being seriously explored for this unification is String Theory. Vibration of this space fabric provides the unifying concept to make the particles of the standard model, and hopefully, unify QM and GR in the bargain. In this quest, physicists currently propose a 12-D space-time string theory. The problem with this string theory agenda is that to date it has produced no solid results. However, with 12 dimensions to play with, it is disconcerting that string theorists might construct something that would falsely fit the data, forever preempting discovery of our true reality. One problem with string theory is that it does not provide any understanding of consciousness. To handle the measurement problem in quantum mechanics, Quantum Consciousness theory incorporates observer consciousness to cause state vector collapse. As "reformulated," this theory is not based on space-time as the fundamental construct, but on the concept of events. Existence of events implies: time, information, and probability as fundamental. From this one can construct a Modified Schrödinger Equation to solve the measurement problem in quantum mechanics, account for duality, and formulate a Modified Dirac Equation in which time and events create a space-time illusion and where an information term generates the standard model. Thus, Quantum Consciousness Theory provides an alternative to string theory. GR/QM unification comes from this formulation with the application of the Noether theorem.

Multipolar Scientific Methods and Technologies

Andrey Zavalin
Vanderbilt University

Vasily Lensky
International Association of Scientists and Intelligentsia

Modern science, as built on the truth-false meta-logic, is therefore based on a qualitatively bipolar approach. Despite the fact, demonstrated in philosophy, that the truth is actually false and vice versa, or the true and false are the same, the dominating part of philosophical systems continue to keep these two opposite qualitative categories, as for example, in dialectics.[1] There were several attempts to involve a third qualitative category, but only a few of them mention the additional category as having equal rights with the initial two. The most successful approach, represented in modern science, seems to be the approach in quantum chromodynamics involving several equal-righted qualities, for example named by R, G, B colors according to analogy with human vision analyzer principles. All systems, having polarities, demonstrate the property of compensation of the polarities, and as a result of compensation—a new parameter—"neutral" to initial polarities. For example, in 2-polar electricity the result of compensation is neutral; in RGB colors the result of compensation is white/black (without color). To compare the results of the theory with experiment, the procedure of measurement is considered, basically transforming or making projection of the object in multidimensional (multipolar) space to the bipolar. There is another approach possible, when researchers develop non-bipolar abilities to observe multipolar processes, changing the design principles of physical devices. The developed principles of multipolar mathematics[3] and results of conducted experiments with biological objects as first candidates for the possible response to multipolar fields will be presented. Experimental results of treatment of microorganisms by multipolar fields, partially shown,[2] demonstrated 200% acceleration of growth processes in the compensation zone, strongly dependent on number and spatial configuration of polarities. The internal processes in living cells are subject to current experimental research.

1. **Hegel and the Problem of Multiplicity** by A. Haas, Northwestern University Press, 355 p., 2001.
2. "Compensation Zone of Multipolar System of EM Fields Stimulates Bacterial Growth," by A. Zavalin, W. E. Collins, S. Morgan, **Bioelectromagnetics Society Proc. of 24th Annual Meeting,** Quebec City, Quebec, Canada, p. 7, 2002.
3. **Fundamentals of Multipolarity**, V. Lensky, A. Kotchnev, Irkutsk U. Press, 1986 (in Russian).

CODE OF RECOMMENDED CONDUCT FOR THE SOCIETY FOR SCIENTIFIC EXPLORATION

PREAMBLE

Professional associations normally have a Code of Ethics or Code of Professional Responsibility. In recent times, scientific organizations in particular have found it desirable to develop codes of research ethics or professional ethics. A prime motivator has been the marked increase in conflicts of interest, as several fields of science increasingly offer considerable opportunities for commercial applications. Though such conflicts of interest may seem less likely to affect members of the Society of Scientific Exploration, given the lesser levels of commercial development and deployment of its topical materials, one can readily envisage circumstances in which professional and personal conflicts could arise, because SSE members do publish books, act as consultants, and hold offices and perform functions in other societies and professional enterprises.

Schools and colleges have also found it increasingly necessary to spell out proper conduct by explicitly defining such matters as plagiarism which used to be regarded as self-evident and universally understood.

Finally, the particular mission of the Society for Scientific Exploration can stimulate passionate feelings that tempt toward less than decorous behavior, and it may be useful to have a written set of guidelines that the Society's officers could refer to in such circumstances.

CODE OF RECOMMENDED CONDUCT*

The Society for Scientific Exploration exists to foster disciplined discussion of topics that are not fully explored by mainstream organizations, as well as of reasons for such exclusion. That purpose is best served when we

- give more weight to evidence and logic than to prior belief
- welcome substantive criticism
- wish to understand and discuss differing viewpoints
- are willing to specify, what it would take to alter our opinion
- do not insist on uniformity of opinion
- do not ignore contrary evidence but address its possible validity and implications
- abstain from proselytizing
- eschew rhetorical tricks and logical fallacies, for example, invoking guilt by association

Given the professional, and in some cases personal, sensitivity of some of the topics pursued by SSE members, and the Society's lack of major financial resources, it is particularly beneficial for its meetings and publication processes to proceed on a genuinely collegial basis. The Society is an entirely voluntary association of people who share certain intellectual interests. It has no paid officers or staff; it depends entirely on the goodwill of its members. All aspects of the Society's functions are enhanced when members treat one another with courteous personal respect, even when their opinions on substantive matters differ sharply. Discourteous behavior, on the other hand, can severely disrupt the Society's work.

Members should not use the Society's prestige for illegitimate personal advancement, say, by insinuating that presentations at meetings have had prior peer review. In both oral and written Society communications, members should:

- give prior notice to people who are mentioned or cited in to-be-published material
- give appropriate credit wherever possible
- avoid plagiarism
- avoid ad hominem comment

When members or officers speak or write, and are introduced or identified as associated with the Society for Scientific Exploration, they should make clear that the Society itself takes no substantive stand on any of the topics discussed at its meetings or in its publications, other than the importance of their open, critical, and objective discussion.

It is particularly egregious for any SSE member to deliberately distort or misrepresent material presented at its meetings or in its publications, say, for the purpose of discrediting individuals or topics on behalf of established "skeptical" venues or positions.

Members of the audience who wish to record the proceedings via audio or video at SSE meetings must ask permission of each speaker before recording, which is the accepted normal practice at scientific and many other meetings. Such requests should make plain whether the recording is to be strictly for personal use, or whether there is an intention to share the recording with others; and if so, whether this will be on an informal collegial basis such as for the exchange of preprints, or whether wider commercial distribution is envisaged. In the latter case, permission must be sought from the Society's President as well as from individual speakers.

Disagreements over Society matters should be settled within the guidelines provided by the Society's Constitution and By-Laws.

Any member of the Society should feel welcome to suggest emendations or additions to these guidelines, for consideration by the Officers and Counselors.

* The aims of the Gesellschaft für Anomalistik (GfA) are congruent with those of the Society for Scientific Exploration. Some details in this Code were inspired in part by the GfA's list of behavior that its members should eschew.

PROFILE

SSE Associate Members' Representative L. David Leiter

Dave Leiter is a retired mechanical engineer. His career was focused on product, process, and equipment R&D. He remains a licensed Professional Engineer in Pennsylvania.

How Did You Get Interested in Science?

I'm pretty sure I was born that way, and into a family well-suited to act as a nursery for my technical and scientific predilections.

I knew from the time I was 12 years old that I ***needed*** to be a mechanical engineer, and I thought everybody knew what they needed to be in life. What a surprise to discover that the opposite was true! When I was in my late 20s, if anyone had told me that I would eventually embrace philosophy, especially the esoteric philosophy of science, as I do now, I would have told them they were nuts.

The 20+ hypnotic past-life regressions (HPLRs) I have experienced since my "mid-life enlightenment" (more later) strongly correlate with who and what I am "this time around." Unfortunately, this current space will not permit further elaboration on that topic. However, don't "bet the ranch" on non-extensively validated HPLRs like the ones I have experienced. To do so would be dangerously un-scientific!

Based on what *I believe I know*, human reincarnation is a scientifically established natural phenomenon. However, as always, "the devil is in the details." Here's what I mean: Many reincarnation pundits claim that we super-consciously "contract" with our parents-to-be prior to conception, in order that we may be born into a situation that will benefit all those involved. The verb "benefit" does not necessarily mean "provide nice things for," but means only that that the immortal souls who are the many parties involved (family members, friends, etc.) will be given the opportunity to learn their required "soul lessons." Based on the above preamble: If I had not been born and raised in the U.S. metropolis of Philadelphia, Pennsylvania, and in a family steeped in technology and academic pursuits, I would have been a very unhappy camper!

Who Were Your Mentors and Influences?

My Dad was my earliest hero and no technical slouch. But when he responded with essentially "Yeah, yeah, kid," when I proposed the concept of vectored-thrust-steering of a jet fighter aircraft in my early teens (late 1940s) (which is now part of the new F/A-22 "Raptor's" flight-control system); and then later, when I asked him how machine guns worked, and he guessed "magnetically," I looked for other teachers and sources and found them all over, first in my immediate neighborhood, and then by constantly "upgrading" my circle of friends and contacts, culminating currently in SSE membership.

> ***Without the Institution of Science, the Philosophy of Science could not survive, and without the Philosophy of Science, the Institution of Science could not survive.***

Meanwhile, my "day-job career" went from BSME to 20 or so patents in half a dozen different industries. But when I took up TM (Transcendental Meditation) in my mid-40s to control job-induced stress (employer-sponsored no less), a whole new world opened up for me. It happened this way: Fearing that T.M. might be some kind of dangerous cult, before I signed up for the course of instruction I did a lot of investigative "insurance reading." It was through that reading into those unusual (for me) subjects that I gradually discovered that perhaps consciousness was more important than steel! Even so, early on, when I read The Maharishi's statement that "consciousness is everything," I threw down his book in disgust.

What Was the Spur to Anomalies?

I began to read non-engineering-related material more voraciously. Then I "found" Ian Stevenson and reincarnation research, and it was he who suggested that I join SSE. Ian still protests modestly when I tell him he's "the most important teacher I've ever had," but he'll just have to get used to it!

What Are You Working on Now?

In the "real world" (chuckle!): small windmill development, a unique configuration. In SSE's purview:

- Ongoing and unfettered "skeptic-bashing"
- Reaching out to SSE members, and building membership beyond our current, disturbingly low plateau.
- Working as a member of a fledgling SSE fundraising committee to try to build our treasury up to something better than barely marginal (with all due credit to those meritorious members and generous donors who have kept us going for 20+ years).

How Do You See Science?

It's the best tool mankind has to guide its progress and development (engineers love tools of any kind). But, like all tools wielded by human beings, it can be, and is being, misused, abused, and quite often, woefully misunderstood, even by many highly experienced practitioners.

In this regard, I am reminded of what I used to tell "lapsed" and guilt-ridden Roman Catholic friends and acquaintances who would cry on my shoulder about their troubled relationships with their Church: "In your mind, you must separate the Faith from the Institution, which is riddled with the evils of any large institution. Without the Institution, the Faith could not survive, and without the Faith, the Institution could not survive."

And, so it is with Science! Without the Institution, the Philosophy could not survive, and without the Philosophy, the Institution could not survive.

What is the Function and Future of SSE?

SSE is a major and growing factor in helping the Philosophy of Science to survive. Thank you for this opportunity. —DAVE LEITER

SSE Council Meeting at the University of Virginia in 2002:
front row: Marsha Adams, Richard Adams, President Charlie Tolbert, Education Officer Brenda Dunne, Hal Puthoff, Alice Kehoe
middle row: Ian Stevenson, Robert Jahn, Steve Baumann, Roger Nelson, Treasurer Bruce Greyson, Jim Tucker
back row: JSE Editor Henry Bauer, President Emeritus Peter Sturrock, Robert Wood, Larry Fredrick, Bob Rood, Peter Phillips

Society for Scientific Exploration

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P. D. Moncrief, Book Review Editor
Mail: JSE, 810 East 10th St., Lawrence KS 66044
Phone: 1/800/627-0629 Ext. 217
E-mail: http://www.ScientificExploration.org

THE EXPLORER

Editor: Kathleen E. Erickson
Mail: P. O. Box 1190, Tiburon, CA 94920
Contact: EricksonEditorial@att.net

www.ScientificExploration.org.org
Webmaster: Marcel Kuijsten, marcel@montclair-consulting.com

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