

Panel Position Paper

**Psience: what new developments in scientific investigation  
promote understanding of psi?**

James E. Beichler, PhD

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Before considering the question posed, I would like to comment on scientific investigations that do not necessarily promote understanding of psi. Parapsychologists have been transfixed on statistical analyses of minute paranormal effects to ‘prove’ or provide ‘evidence’ of the existence of psi for the past eight decades. This approach to studying psi is no longer of any use to advancing science and has become counterproductive for several reasons. Parapsychology no longer has anything to prove and its statistical methods have run out of steam. This truth is specifically linked to the question being discussed. First of all, science is not about finding evidence, whether the object is to ‘prove’ that any particular phenomenon or group of phenomena are real or not. Science looks for the properties and physical characteristics of phenomena that are observed in nature, then finds patterns of repetition in the observed phenomena, develops hypotheses and theories to explain those patterns, conducts experiments to test their hypotheses and theories and thereby verifies them. The current search to find statistical evidence for the existence of psi and the paranormal simply does not fit the scientific method as stated and understood by scientists.

Finding evidence of psi was a crucial part of parapsychology’s attempt to convince the scientific community of the validity of psi phenomena and the need to study them further between 1930 and the 1970s. But since that time, parapsychologists should have begun to concentrate on finding the physical characteristics of psi necessary to develop hypotheses and theories. Unfortunately, many parapsychologists are still pursuing evidence for the existence of psi based on a few extra statistically significant decimal places even though all the statistical evidence in the universe will not convince anyone, especially the vast majority of scientists, that psi exists let alone that there is a need to study the paranormal. The statistical analysis of lab studies had clearly demonstrated that something unknown and scientifically interesting was happening by 1980. Beyond that point any further statistical studies have become useless. Quite frankly, the primary methodology of parapsychology has become redundant. Parapsychology seems to be losing what little relevance it had (almost to the point of becoming a pathological obsession) in the modern world of ever increasing and amazing scientific accomplishments.

The study of psychic phenomena is undoubtedly more important to physics than it is to consciousness studies, because it opens new possibilities for studying and learning about the fundamental physical characteristics of the universe. This fact was clearly stated by Gerald Feinberg four decades ago. Feinberg believed that “physicists would be happy for the challenge” posed by studying the paranormal if “new physical laws were involved ...” (Feinberg, 22). In this regard, Feinberg posed two questions that need to be answered by physicists: “What is the range of consciousness in the universe?” and “How is consciousness related to the other aspects of the world?” (Feinberg, 22) If consciousness is indeed physical

and the paranormal can be explained by physics, then both of these questions need to be answered by physicists, not parapsychologists. Feinberg's views are all the more relevant since he is neither a parapsychologist nor a parapsychologist; he is a well respected particle physicist. Therefore his opinion represents a much larger group of modern physicists than one might suspect given the unpopularity of the paranormal within science.

A few physicists and physical scientists had already become convinced by the evidence that the paranormal warranted investigation by the 1970s when Feinberg made his claims. They began to look for the physical characteristics of psi as scientists should. Some of these characteristics were found, but seemed to present more of a problem for the existence of psi than providing a path to solve the problem. For example, remote viewing experiments conducted at SRI (Stanford Research Institute) by Hal Puthoff, Russell Targ and their colleagues implied that psi does not follow the rules of normal physics whereby signal strength attenuates as the inverse square of distance and signal propagation is limited by the speed of light. They interpreted these characteristics as negative rather than positive, problematic rather than problem solving, but perhaps they looked at the problem in the wrong way.

Scientists simply did not realize that these characteristics merely showed that psi is not limited to our three-dimensional space or four-dimensional space-time continuum. There are no such limits in a higher-dimensional embedding space such as that implied by the concept of curvature in general relativity. On the other hand, the quantum paradigm holds so strongly over modern physics, that others have interpreted these characteristics as proof that psi is merely a quantum entanglement problem – i.e., a non-local quantum phenomenon – and therein lies the primary misconception of psi. There is absolutely no evidence that psi is a quantum phenomenon. Entanglement is merely a word that has been traditionally associated with an undefined (and possibly indefinable) physical process. The word merely represents a common characteristic of an otherwise unexplained group of observed non-local quantum interactions. Entanglement is not itself an explanation of anything. Therefore using it to explain psi explains absolutely nothing. All that has ever been verified in the physics of quantum entanglement is that scientists have observed entanglement between groups as small as two and as large as about eighteen fundamental particles, which neither does nor implies anything that could account for a complex mental process such as psi. Nothing in physics indicates that larger massive bodies, such as two brains (for ESP) or a brain and an external material object (for PK) could be entangled in a quantum sense of the word.

The only path left for physical scientists to pursue in their quest to explain or develop a model of psi is the search for a valid physical theory of consciousness based on the observed neural correlates of consciousness. Consciousness is, for all intents and purposes, intimately associated with the mental interactions that are reported as psi events. We do not know if psi has acted or not until we become aware of its actions and self-awareness is part and parcel to consciousness. This means that any 'new developments in scientific investigation that promote an understanding of psi' will come from neurophysiologists and neurophysicists in the normal course of their studies of the neural correlates of consciousness if not in advances in developing physical theories of consciousness, rather than in the statistical studies of parapsychologists or psychologists.

Within this context, modern neurophysiologists and neurophysicists are making phenomenal discoveries that are laying the foundations for future legitimate scientific

studies of mind, consciousness, psi and survival without any reference to ‘proving’ anything. They are directly observing mind and consciousness in action at the cellular and near-cellular level of the brain and building a body of facts and data related to psi that can be used by theoretical scientists to develop hypotheses and theories for testing and verification. This is how science works. These new fields of scientific investigation are leaving parapsychology and parapsysics behind in the dust and will eventually, if not in the very near future, render parapsychology irrelevant and obsolete unless parapsychologists embrace and adopt new methods and the latest discoveries. The same is not true for parapsysics, so parapsysics is not harmed by the new discoveries to the extent that traditional parapsychology is harmed. Physicists would argue, and many have, that there can be no such thing as para-physics because there is nothing beyond (para-) what is normal or natural in physics. Physics is, literally, nature and psi is natural. Once something is known it is automatically adopted into ‘normal’ physics because physics already covers everything and every possibility in the universe. It seems that this notion may already be becoming true for para-psychology and para-psychologists need to heed the implied warning. Physics is the only science that can simply explain life, mind and consciousness.

The ‘extra something’ that we call life (the life-force, vital-force or biofield) is the total complex matter-energy pattern that represents all of the structural and biochemical components in an organism or living body, acting together. The sum of the parts is not the whole; the whole (life) is the simultaneous interaction of all of the parts. A single complex electric (scalar potential or voltage) field pattern that directs and controls the biochemical and mechanical actions of the body (matter-energy field) must be mind. Since electric field variations generate corresponding magnetic field variations and magnetic field variations regulate, direct and organize electric field patterns, consciousness could only be the complex magnetic (vector) potential field pattern that corresponds to the whole living organism or body. Since the magnetic potential field is four-dimensional rather than three-dimensional (the electric potential field is only three-dimensional), psi reduces to vector potential or magnetic field variations that communicate across the higher dimension of space. This physical model, when applied to the neural correlates of consciousness in the brain, can easily explain paranormal phenomena (ESP and PK) as well as the survival of consciousness and mind past death as an afterlife body or alternately as a hologram-like electromagnetic (mixed scalar and vector) potential pattern.

If anyone doubts that the human body is electromagnetically active or has a single magnetic field as a whole, the reality is easy to demonstrate. Just find an old television with a rabbit-ears antenna. For that matter any external antenna will work in this demonstration. As you approach the television and try to adjust the antenna to improve the image the reception goes haywire, sometimes the picture is lost altogether before you even touch the antenna. After you adjust the antenna for a good image you release the antenna, but as soon as you move away the reception is again lost. What happened? The explanation is simple. Your body’s magnetic field altered the electromagnetic field of the incoming waves. In fact, when you move close to the antenna and touch it, your magnetic field actually becomes part of the antenna system. So when the television antenna is released, the antenna system changes and reception either degrades or is lost altogether.

All living organisms are naturally electromagnetic, not merely gelatinous clumps of living matter. Electromagnetism is an integral part of the nature of all living organisms. It

could be just as easily and accurately claimed that all living organisms are composed of a matter-energy body and a separate but intimately connected electromagnetic body that is imprinted over the matter-energy body. Beyond this simple do-it-yourself experiment, there is now ample scientific evidence of the electromagnetic nature of all living bodies and organisms that all but verifies this model of life, mind and consciousness.

The work and researches of Fritz-Albert Popp offers irrefutable justification for an electromagnetic model of the human body and all living organisms. It also indirectly supports this electromagnetic model of mind and consciousness. Popp has been studying the production of biophotons in cells throughout the body, and indeed throughout the cells of all living organisms, for the past few decades. He and others have suggested that individual cells throughout the body communicate with each other through the exchange of biophotons.

Biophoton emission is a general phenomenon of living systems. It concerns low luminescence from a few up to some hundred photons-per-second per square-centimeter surface area. At least within the spectral region from 200 to 800nm. The experiential results indicate that biophotons originate from a coherent (or/and squeezed) photon field within the living organism, its function being intra- and inter-cellular regulation and communication. (Popp, 1999)

Use of the word biophoton suggests a quantum source of electromagnetic emission in living cells and organisms, but that need not be true. The cells as a whole or in part could instead be emitting electromagnetic waves classically like a radio transceiver. There is no need to assume that everything that happens in cells is quantum mechanical in nature just because the cells are so small. Otherwise, Popp's speculation that all cells communicate through photonic exchange fits this neo-classical electromagnetic model of mind and consciousness.

While most of science waffles on the existence of the paranormal, many scientists, especially those in the physics community, still want nothing to do with either mind or consciousness. To study or conduct research in the physics of consciousness is not the best way to make friends and certainly does nothing to impress colleagues in the physics community. Yet the public remains enamored with the concept of the paranormal. Two new advances in the neurophysical sciences that caught the public's imagination have been announced in just the last few months and they have the potential to change everything.

The first has been called a telepathy machine in the popular press. According to the press, "Neuroscientists at the University of California, Berkeley, have been able to listen in on people's thoughts, using brain waves to reconstruct the actual words that subjects have been hearing." (Woolacott, 2012) However this claim is somewhat inaccurate and obviously overstated. The research was conducted by Robert Knight. Up to two-hundred and fifty-six electrodes were placed on subjects' temporal lobes to 'listen' to their electrical brain activity while they listened to conversations. The detected signals were relayed to a computer and interpreted as speech. This setup does not really constitute a telepathy or 'mind-reading' machine – it merely interprets electrical signals in the brain as detected at the outer surface of the skull – but it does mark a new understanding in the electrical language of the brain and interpretation of electrical signals in the brain. This research represents an obvious and significant advance in brain research and neurophysics, but it is not yet paranormal.

The second advance uses a standard fMRI machine, which scientists have successfully used to reconstruct rudimentary images (thoughts) from the brain in real time. This particular research was conducted at the Gallant Laboratory. The test subjects watched

movies and movie clips while undergoing fMRI scans. A computer then interpreted the signals and reconstructed a very rough image of the movies as cognized in the test subjects' minds. In other words, a remote electronic device was able to pick up and interpret the thoughts in human brains.

Presented clip



Clip reconstructed from brain activity



(Nishimoto, 2011)

In this case, the fMRI was merely interpreting changes in magnetic particle spins within the brain, in particular the quantized nuclear magnetic resonance spins of water molecules.

It would seem then that the thoughts generated in the test subjects' minds while viewing the movies are either building memories within the greater context of their real life experiences or recognizing and comparing what they were seeing with real life experiences by utilizing the quantized magnetic spins of particles within water molecules in the brain, much as is suggested by the above electromagnetic model of mind and consciousness. Moreover, those patterns are being detected remotely without any material devices such as electrodes in direct contact with the brain or skull. In other words, the fMRI and the computer program interpreting the magnetic pattern signal are acting as a true although low level mind reading machine.

This experiment very nearly verifies the model proposed here that thoughts and memories are stored as magnetic vector potential patterns and that these patterns can be 'sensed' or detected outside of the originating brain. In other words, psi is the communication of magnetic field patterns via the higher dimension of space. Moreover, the discovery of this phenomenon was completed by neurophysiologists and neurophysicists rather than parapsychologists, so normal science has inadvertently all but verified the existence of psi or some psi-like signal without any recourse or reference to the statistics and evidence gathering methods of parapsychologists. These and similar developments in scientific investigation are strongly promoting our understanding of psi by 'proving' its existence through direct observation and measurement.

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James E. Beichler, P.O. Box 624, Belpre, Ohio, 45714  
Jebco1st@aol.com

Professor Beichler has conducted theoretical research to explain Dark Matter and Dark Energy as well as the true nature of life, mind, consciousness and matter and presently developing a new physical model of the atom. He has recently developed a neural model to explain how consciousness evolves in mind from its neural correlates. All of these advances are applications of a new fundamental theory of physical reality called 'single field theory' or SOFT. SOFT is a unification of the quantum and relativity based on a five-dimensional Einstein-Kaluza space-time geometry. Explanations of paranormal phenomena emerge naturally from the space-time structure of the theory as does the survival of consciousness after death. Professor Beichler published *To Die For: The physical reality of conscious survival*, a book that gives a simple explanation of his theory in laymen's terms including what happens when we die. He has also published a science fiction novel titled *Evo: the next step*. It is based on the same scientific theory and his prediction that humanity is approaching a new evolutionary leap forward. He will soon publish two e-books, *Phallacies in Fysics* and *Four Pillars of Wisdom: The conceptual foundations of natural science*, that take his theoretical work further than his previous publications.