

ParaScience

Our goal as serious paranormal researchers is to find the answers, even it means finding an answer we don't want to find. We should seek the truth, whether it is what we believe, or what we don't believe. We should objectively collect and analyze the data, and we should let the data lead us to our conclusions, or down the path to discovery. And always, we should be following sound scientific principles, and seeking the answers within the frame of science. We can't just prance around screaming the we have a spike on an EMF meter. We have to take it to the next level. It has been hinted at by many researchers that the answers to the questions encountered in paranormal research will be found in Quantum Mechanics. I believe this to be true, but not just in quantum mechanics, but rather a combination of Quantum Mechanics, Physics, Astrophysics, Biology, Psychology, Quantum Neurology (that is a new field, by the way, currently being developed), Chemistry, and for the most part, all of the sciences that apply. From the Quantum realm, there are specific entities that need further study to properly orient them into the paranormal mix: the first one is called the Zero Point Energy Field. In Quantum Mechanics, multiple component concepts are referred to as systems. The energy of a system is relative, and is defined only in relation to some given state or reference point. Now the layman might assume that a motionless system has zero energy, but this is not the case at all. In within the quantum realm, it is the rule of thumb to associate the energy with the expectation value of a certain operator, the "Hamiltonian" of the system. We have "borrowed" the phrase "Hamiltonian of the System" from Classical mechanics, after being tweaked by a dude named Schrödinger, who came up with an equation that will give even the most dedicated physicist a dull headache. I won't injure anyone with the math here, but if you are interested in it further, Google him. He is actually quite memorable for killing a cat with Quantum Physics. But enough on that...back to the task at hand. In all quantum-mechanical systems, the lowest possible expectation value of this operator, which would be the zero-point energy, is not zero. Adding an arbitrary constant to the Hamiltonian gives an equivalent description of the physical system, but can make the zero-point energy different. Regardless of what constant is added to the Hamiltonian, the minimum momentum is always the same non-zero value. In other words, no matter what, there is a web of weak energy permeating through spacetime as a backdrop to all other actions in the multiverse. We do after all, live in a dynamic universe. Lord, what a mouthful!

Zero-point energy is the lowest possible energy that a quantum mechanical physical system may have to exist, and it is the energy of its ground state. All quantum mechanical systems undergo fluctuations even in their ground state and have associated zero-point energy entangled with it, a consequence of the Heisenberg uncertainty principle creating a tango of reality. But, do we have any real proof of the existence of ZPE?

Good question....

The phenomenon that is campaigned as evidence for the existence of zero-point energy (in a vacuum) is the Casimir effect, which was discovered in 1948 by Dutch physicist Hendrik B. G. Casimir, (go figure) who detected the quantized electromagnetic field between a pair of grounded, neutral metal plates. In other words, I got energy readings between the two plates without adding any energy to the construct. On analysis, the vacuum energy contains contributions from all existing wavelengths, except those excluded by the spacing between plates. As the plates were moved together, more wavelengths were excluded and the vacuum energy decreased. The decrease in energy indicated that there had to be a force working on the plates as they moved. This force has been measured and found to be consistent with the theory. However, as with nearly every aspect of Quantum Mechanics, there is still some debate on whether vacuum energy explains the Casimir effect. Robert Jaffe of M.I.T. has offered an equally acceptable explanation using charge-current interactions. But as you will see, every principle of QM is and always has been under intense fire from its critics. In fact, Dr. Michio Kaku states that "It is often stated that of all the theories proposed in this century, the silliest is quantum theory. In fact, some say that the only thing that quantum theory has going for it is that it is unquestionably correct." Moving on so keep up!

In Quantum Electrodynamics, the Lamb shift has been argued to be a manifestation of zero-point energy. The Lamb shift, (named after Willis Lamb, 1913-2008), is a small difference in energy between two energy levels of the hydrogen atom. According to Dirac (English theoretical physicist, 1902-1984 and one of the founders of quantum mechanics and quantum electrodynamics), the 2 orbitals should have the same energies. However, the interaction between the electron and the vacuum causes a tiny energy shift on one of them. Lamb and Robert Retherford measured this shift for the first time in 1947, and this measurement provided the stimulus for "renormalization" theory to properly explain the divergences. It was the harbinger of modern QED as developed by Julian Schwinger, Richard Feynman, and Freeman Dyson. Lamb won the Nobel Prize in Physics in 1955 for his discoveries.

In cosmology, the zero-point energy offers an intriguing possibility for explaining the speculative positive values of the proposed cosmological constant, i.e. what is space? Lord, do I ever get into arguments about this one. I have a friend who is a worshipper at the throne of the Holographic Principle, and he is constantly deriding me over this point. But in brief, if the energy is "really there", then it should exert a gravitational force (of course we argue over what gravity is as well). In general relativity, mass and energy are equivalent; both produce a gravitational field. One obvious difficulty with this association is that the zero-point energy of the vacuum is almost infinitely large. While this is a daunting prospect, we can't measure its total energy. We can, however, measure the differences in energy. The near infinity of course can be removed by renormalization (renormalization, the procedure in quantum field theory by which divergent parts of a calculation, leading to nonsensical infinite results, are absorbed by redefinition into a few measurable quantities, so yielding finite answers).

In all practical calculations, this is how the infinity is handled. It is also arguable that Quantum Physics takes over at the Planck scale, and that the energy growth is cut off at

that point. But the more we learn about the cosmos, the more we realize that this isn't the case at all.

We seem to daily make discoveries that subatomic matter, wave interference patterns, collapsing wave functions and parallel realities are just beyond our perception and they range from the micro-micro-scopic (sub-atomic or particle level) to the macro or megaverse level. Recent finds by CERN using the LHC (Large Hadron Collider, and largest particle accelerator in the world) have revealed the W and Z particle, as well as the Zeta particle, and FermiLab's (the second largest particle accelerator in the world) discovery of the Omega-sub-b particle. Magnetization dynamics in nanomagnets has attracted broad interest since it was predicted that a dc-current flowing through a thin magnetic layer can create spin-wave excitations. These excitations are due to spin-momentum transfer, a transfer of spin angular momentum between conduction electrons and the background magnetization, which enables new types of information processing. These discoveries are paving the path toward the quantum computer.

UC Santa Barbara's Andrew Cleland cooled a small metal paddle in a refrigerator, dimmed the lights and, under a special bell jar, sucked out all the air to eliminate vibrations. He then plucked it like a tuning fork and noted that it moved and stood still at the same time. To even try to understand it, you have to think really, really small. Smaller than an atom. Think of it like this; if the atom were the size of Jupiter, a particle would be the size of a grain of sand. Electrons, which circle the nucleus of an atom, are swirling around in multiple states at the same time, a split personality so to speak. This behavior makes them extremely hard to map out. It's only when we measure the position of an electron that we force it to have a specific location. Cleland's breakthrough lies in taking that hard-to-grasp yet true fact about the atomic particle and applying it to something visible with the naked eye. When you observe something in one state, one theory is it splits the universe into two parts. Because of this theory we can explain how we can have multiple universes, but only perceive one of them. The multi-verse theory states that the entire universe "freezes" during observation, and we see only one reality. Whatever the case, can you imagine what chaos it would be to behold multiple realities? I have a whale of a time with just one. The current mental institutions are full of those folks...

Additionally there is evidence of a field of nothing and yet everything linking it all together. And we are still pioneering the trail to understanding the human consciousness, and what role it has to play in all this. Not to mention, I am working on a hypothesis involving the existence of a cosmic stew of sorts and I have expounded upon this in a theory I am currently developing called the Megaverse.

The connection of the physical to the metaphysical has been proposed for many years by various fringe scientists, believers and quacks. But recent research at the Princeton P.E.A.R. Lab under Dr. Robert Jahn, Seedling experiments by Dr. Lynn Taggart, and even books by the father of motivation Dr. Wayne Dyer, suggests that the Zero Point Energy Field may be a web of potentiality, where anything can be manifested into reality. Other notable researchers, such as Nobel prize winner Deepak Chopra, David

Hawkins, Phillip Ball, Malcolm Gladwell and others have proposed a mind-Zero Point Energy grid link. There are also postulations that the Zero Point Field may be Edgar Cayce's source of the Akashic records. In my opinion, it may answer the question concerning how mediums and psychics get their information. Then there is my own research into the potential existence of wormholes and their dynamics, which if it pans out to be true, will contribute a unifying connecting link that may be the Theory of Everything in paranormal research, cementing all aspects of the paranormal to a single conduit type of phenomena. Wish me luck on that one!

Bells Theorem led to demonstrating the proof of non-locality, which in turn led to the acceptance that everything is connected to everything. Entanglement has been explored from the micro to the macro. Connections that everything can be reduced to pairs is gaining credence. In fact, the four major forces in the universe can so be paired. Electromagnetic and Weak force, Gravity and Strong Force. Suppositions have been made that the ZPE is a web of information connecting everything through space-time. Patterns are found to be recurring in nature, from the micro to the macro. The double helix is just one example of this.

The Many Worlds theory, Hugh Everitt III's proposed theory of reality that was the subject of intense ridicule in the late 19fifties is currently under study by psychologists as well as physicists in an effort to discover the pathways between the separate universes. In 1954, Everitt took *Methods of Mathematical Physics* with Eugene Wigner, while in college, although he stayed active in math his original major and presented a paper on military game theory in December of that year. He passed his general exams in the spring of 1955, thereby gaining his Master's degree, and then started work on his dissertation that would (much) later make him famous. He switched thesis advisors to John Wheeler some time in 1955, wrote a couple of short papers on quantum theory and completed his long paper, *Wave Mechanics Without Probability* in April 1956 later retitled as *The Theory of the Universal Wave Function*, and eventually defended his thesis after some delay in the spring of 1957. A short article, which was a compromise between Everett and Wheeler about how to present the concept and almost identical to the final version of his thesis, appeared in *Reviews of Modern Physics* Vol 29 #3 454-462, (July 1957), accompanied by a supportive review by Wheeler. The physics world took little note except to ridicule him for his efforts. Everett had already left academia for defense work and eventually drank himself to death. Today we know this theory as "The Many Worlds Interpretation" and much of the math proof has been worked out by Dr. David Deutsch of Oxford University.

The meat of MWI is this; if a being died in one world, he could manifest in another. Or, a UFO could leave Universe 23 and enter Universe 100102. Are you starting to think there could be a viable paranormal connection in all of this? You betcha!

But gee whiz Dave, if there are other universes, and other dimensions, then where are the portals interconnecting them? How could paranormal beings and energies (if they do indeed exist) travel from one to another? Can we travel between the dimensions? Will I doubt you can hail a cab or catch a bus, train or plane to get there, so how does it

work, if it works? Let's explore what we do know, from observation. We know that the fastest way to get from point A to point B is a straight line. But we are dealing with several factors that are not like life here on Earth. There is a thing defined by Einstein called "spacetime", and in "spacetime" there is no such thing as a straight line. Everything is a curve. The universe is an origami of folds and bends that undulate across our perception. So in order to traverse from one solar system to another, or to another galaxy to another, on another universe or time even, a short cut needs to be found.

Black Holes use to be viewed as a theoretical construct. It is now an accepted fact that Black Holes exist. In fact, they exist in entangled pairs in every galaxy we can observe, causing the stars within their influence to orbit them with unnatural speed, and dance a dance of their approaching death. The possibility of parallel worlds has been proven mathematically. Some scientists today believe there are pathways or conduits between them, called wormholes. In fact, in 1935 Einstein worked with Nathan Rosen on a paper proving the singularity of a Black Hole could be a bridge connecting two universes. The bridge became known as the Einstein-Rosen Bridge. Kip Thorne, an American theoretical physicist, known for his prolific contributions in gravitation physics and astrophysics was one of the first people to conduct scientific research on whether the laws of physics permit space and time to be multiply connected. Along with colleague Sung-Won Kim, Thorne identified a universal physical mechanism (the explosive growth of vacuum polarization of quantum fields), that may always prevent spacetime from developing closed timelike curves or to put it bluntly, may prevent "backward time travel". His work with Mike Morris and Ulvi Yurtsever demonstrated that traversable Lorentzian wormholes can exist in the structure of spacetime only if they are threaded by quantum fields in quantum states that violate the averaged null energy condition, or in 250 words or less, have negative renormalized energy spread over a sufficiently large region. This created a virtual avalanche of research into exploring the ability of quantum fields to possess extended negative energy. What is even more fascinating to me is that recent calculations by Thorne indicate that simple masses passing through traversable wormholes could never engender paradoxes, which would seem to indicate that there are no initial conditions that lead to paradox once time travel is introduced. Plain English, this means that none of the supposed "paradoxes" proposed by the naysayer pundits against time travel can actually be formulated at a precise physical level. Or in even plainer English, any situation in a time travel scenario can permit many consistent solutions.

Of course the first type of wormhole solution discovered was the Schwarzschild wormhole and as stated would be present in the Schwarzschild metric describing an eternal black hole. But research demonstrated that this type of wormhole would collapse far too quickly for anything to pass from one end to the other. In order to have a traversable wormhole, one would need something called "exotic matter" or matter with negative energy density that could create stability. Physicists have not found any natural process which would be predicted to form a wormhole naturally in the context of general relativity, although the quantum foam hypothesis is sometimes used to suggest that tiny wormholes might appear and disappear spontaneously at the Planck scale. It has also been proposed that if a tiny wormhole held open by a negative-mass cosmic string had appeared around the time of the Big Bang, it could have been inflated to macroscopic

size by cosmic inflation. So did we really have the big flow? That is my story and I'm sticking to it...for now. LOL

For our purposes, we should concern ourselves with three types of wormhole constructs. The Intra-universal (connections within the same universe) the interuniversal (connections from one universe to another or others) and the trans-time construct (Connects different points in time). But these are not the only possibilities. A wormhole could possibly connect two different D-Branes. But the common characteristic would have to be "traversable", for they may allow humans, non-humans or even beings of pure energy or simply "consciousness" to travel within them. And while we need the ever shy exotic matter for a stable manifestation, there is currently some work being pursued to overcome the problems of the necessity of exotic matter being required for a wormhole to stably exist. In fact, a number of theorists have claimed to construct special wormholes that do not require exotic matter. In their PRL paper, Visser and David Hochberg, of the Laboratory for Space Astrophysics and Fundamental Physics in Madrid, Spain, show that all wormholes including time-dependent and asymmetric ones, require exotic matter, which in turn requires quantum mechanical effects. "You cannot just get away with normal classical physics," says Visser. The authors blame many of the contrary claims on confusion about the precise definition of a wormhole and the concept of "passing through" it.

Their approach (and this is important, so pay attention) was to rigorously define a wormhole "throat" and show that because light rays spread out as they emerge from it, there must be a kind of "antigravity" present, which is the hallmark of exotic matter. In the process they found that time-dependent wormholes actually have two throats, one for each direction of traffic, and they say that was one source of the confusion: A theoretical traveler could paradoxically pass the middle of the wormhole without actually reaching the throat for their direction. Part of the problem is the lack of a good physical picture for a dynamic wormhole, which is a complicated four-dimensional object; the usual image is only works for one that doesn't change in time. Could it be that a traversable wormhole may be modeled after the double helix of DNA? It isn't much of a surprise, since we are constantly finding shapes and patterns repeating themselves from the very micro to the never ending macro. This research plays in to my own wormhole theory.

Another important point to bear in mind is that traveling through a wormhole would not necessarily mean traveling faster than light. Wormholes simply do not require light speed. It is all time related. All you need is a black hole and a white hole and you are in business. The black hole would be the entry point, the white hole the exit. Theoretically, a black Hole implosion in our universe, results in a White Hole explosion creating another universe. But wormholes are scaled down versions of black and white holes. They have neither the intense gravity nor mass that a black hole manifests. Hence, we could travel through them under the right conditions without being stretched out into protoplasmic spaghetti.

What we need to do is find a stable Black and White hole, and then determine what really happens to matter once it is pulled inside. Any volunteers? As stated, getting beyond the point of singularity intact is the issue. I don't know about you, but seriously I am not into becoming infinite. But here in again, this is not the only issue of concern. Radiation may be the show stopper for physical human beings to trot across spacetime.

In other words, how much radiation we can stand before we sprout a third eye or four arms, because at the event horizon, light is captured in an explosion of brilliance not before witnessed by human eyes and due to its nature, may never be. But they may, under less gravitational extremes, offer lower level higher frequency radiation in the form of ultraviolet light, which we still wouldn't see, but we could measure it. This too plays heavy handed in my own wormhole theory. But, while I may have observed some compelling effects and conditions that seem to indicate the possibility that wormholes may indeed exist, they are still theoretical in their existence, theoretical in their workings, and theoretical in their effect on matter. Ok so who is first in line? What, no hands out there???

Seriously though, some physicists remained convinced that wormholes are navigable, under certain conditions. Albert Einstein believed no living creature could survive passage through a wormhole. But then ole Al had issues with Quantum mechanics, such as spooky action at a distance. Then along comes Roy Kerr in 1963 who came up with the brainstorm that a spinning black hole could remain stable due to centrifugal force canceling out the inward force of gravity, allowing you to be drawn in and shot through to the other end without turning into a piece of flesh colored thread. But this idea also has issues unresolved; Kerr's hole is one way. You can get there from here, but you can't get back. Again, no thanks!

Entering a Kerr hole would be a one-way passage out. There is also the distinct possibility that upon entering the Kerr hole, you would cause it to become unstable, due mostly to the non-exotic nature of your matter, and turn into flesh colored string anyway. Stabilization of the wormhole is the target for physicists to ponder for now. I have kicked around a few ideas and will have it out soon on the site under the innocuous title, "The Megaverse Theory". I still have a few kinks to work out.

In the past, I dabbled in all of the paranormal phenoms from Cryptozoology to UFOs. The wormhole concept offers a lot of potential for the paranormal researcher, if it turns out to be true. Let us ponder the UFO question. Quite a few of today's top physicists believe that alien civilizations are highly feasible, due to superstring theory, parallel universes and multiple dimensions. Couple these with inflation theory, and the stretching of time and space, it is not hard to accept this as a potential reality. In fact, during the 1960s, Nikolai Kardashev developed a classification system for radio signals from advanced civilizations (no kidding, really). This was a by-product of the search for intelligence using radio telescopes. The classes are based on the consumption of energy and the laws of thermodynamics. You can Google these up on the net for more detail, but just to become a class 1 civilization, we have between one and two hundred more years to go. To get to type 3 is estimated to be 100,000 to 1,000,000 years away! For those of you who are depressed by all of this, worry not! Some physicists feel we are on the verge of a huge leap in technology. I tend to agree.

Some UFO sightings we can correlate here share the following characteristics. They have signatures, and leave behind traces of intense electromagnetic radiation. They use a type of propulsion that allows them to defy gravity, accelerate incredibly fast, and turn on a dime and give you nine cents change. They operate silently. They often have a plasma-like corona, suggesting microwave or electromagnetic fields, they are disk, triangular or cigar-shaped, sometimes wobble like a spinning top, and they can

accelerate to incredible speeds, stop short, and hover. Things that would generally speaking turn our bodies into a study in hamburger.

To me, a casual observer with some inkling of science, this indicates the use of electromagnetic fields in conjunction with a self-generated field manipulating gravity, space and time. There have been associated reports that aircraft have their navigational aids instruments go haywire when approaching or being approached by these vehicles. One possible explanation for this would be an antigravity field. I am not saying it is, but I am saying that it is the duty of science to investigate the unexplained, not explain the uninvestigated. This goes for all you critics out there who got your knowledge via Googleing physics websites while wearing your underwear in your mother's basement just so you could make a name for yourself attacking people who actually look for answers.

Today, in spite of what many skeptics will tell you (and most of them are not scientists) more and more traditional scientists are buying into the probabilities proposed by conditions encountered in serious paranormal research. A case in point, a prominent psychological journal is expected to make history later this year when it publishes what is believed to be the first scientific paper arguing that humans can predict the future. And while a conclusion is premature until adequate replicability can be performed (scheduled for this summer), the researchers who have reviewed Cornell University psychologist Daryl Bem's paper say it's scientifically sound. If you are interested in the paper, you can read it here:

<http://www.dbem.ws/FeelingFuture.pdf>

The often quoted in the paranormal community, Tesla, once said that when science begins to study nonphysical phenomena, more progress will be made in ten years than in all the previous centuries combined, or something to that effect. The man was truly ahead of his time in more ways than we will ever imagine. And gratefully on my part, after years of studying what "isn't there", I am watching this study of non-physical phenomena unfold before my very eyes.

The brilliant physicist Michio Kaku, author of *Parallel Worlds: A Journey Through Creation, Higher Dimensions, and the Future of the Cosmos*, Neurophysiologist Karl Pribram and noted physicist David Bohm have all contributed to advance a theory about a multiple dimensioned universe. These people are legitimate scientists who now recognize that the things that have folklorically labeled "The Paranormal" most likely has a perfectly scientific explanation, and one that will shed additional light on what we currently know and understand about our selves, our world, and our universe. This of course brings to mind the possibility that maybe all of these phenomena we are witnessing, measuring and recording could be coming from another world or worlds, crossing the gaps between the dimensions through different realities, or through alternate universes...

Could a mass of near infinite energy travel across space and time to manifest itself as a UFO artistically creating a crop circle down in a wheat field in Kansas? Who can say? Quantum mechanics in conjunction with Astrophysics and cosmology stand on the verge of explaining the unexplainable. In fact, I believe the explanation is already out there and has been there all along; we just need to transpose it into our psyche.