

The Bridge of Aether

*Everything is determined, the beginning as well as the end,
By forces over which we have no control.
It is determined for the insect, as well as for the star.
Human beings, vegetables, or cosmic dust, we all dance
To a mysterious tune, intoned in the distance
By an invisible piper.
~Albert Einstein*

*We have sought for firm ground and found none.
The deeper we penetrate, the more restless becomes the universe;
All is rushing about and vibrating in a wild dance.
~Max Born*

We find here a most peculiar Bridge, its construction a cunning blend of stone, gilded metal traceries, and deep antique wood. As you step lightly onto its breadth, the sudden shock and sense of wonder strikes, as you observe that the ornamented railings and braces are unconnected with the structure beneath! They hover silently and powerfully, supporting what we would deem to be an enormous weight, with a delicate springiness that responds to our slightest movement. A flavour of deep magic permeates this place. We notice that the curious golden spherical lamps that march forward into the twilight distance along the bridge railing are themselves free floating, each bobbing and hovering in an assigned spot. The light cast by the luminous orbs is unique, with a hue that lies in an indescribable outré of yellow-white, but with overtones of blue. As we walk onward, the air about us seems livid and bristling, and a soft whirl or hum emanates from an unknown direction. The slight breeze down the span of this bridge carries a scent unlike anything we have smelled yet, a flavor of raw power, of a cosmic...essence. We fancy that this Bridge is held in place, and directed toward its destination, not by strength of stone, or resilience of wood, but by sheer will and a power beyond reckoning...

We walk cautiously, here in the demesne of something special - the realm of The Fifth Element: the Aether.

Many will recognize that the four elements of ancient Western thought (earth, air, fire, and water) still direct our daily outlook and lives in a subtle way. Far fewer, however, recognize that in hermetic tradition and alchemy, there was a fifth element, said to permeate and bind the four other essences into perfect balance. This fifth essence was spirit, or aether, sometimes also known as the Quintessence.

This Bridge will tell of our explorations in the realm of subtle energies and forces that would seem to be expressions of the fabled quintessence. It is not a Bridge trodden by many, for the study of these principles at their core is a call that is only answered by those of a certain cut or intellectual warp. It requires a thirst for mathematics and physical laws, and tools and instruments of a decidedly arcane nature. The archetype of the wild-haired mad scientist appears again and again here! The pursuit of this Bridge taxes the left brain / Yang nature, and we find historically that the majority of research into the aether and its manifestations has been by males. However, like all Bridges, it is congruent and tangential to each of the others in its turn, and contains fabulous secrets

and great promise for the world. It lies open to all, and bars none. The aether underlies all of our existence, flowing and weaving a matrix of reality.

The study of gravity and strange energy effects is here, as are the principles of radionics and radiesthesia, and life energy in its many descriptions and names. The portraits of many revered pioneers are suspended on this Bridge, brave men and women like Reich, Tesla, Townsend Brown, and Mme. Blavatsky. Seekers all, after the fundamental powers and forces of our world, desiring to beat them into plowshares for the common man.

The Aether in History and Lore

It is difficult to say where in history and time mankind first conceived of a notion, that given centuries of refinement would become a scientific paradigm dealing with the basic structure of space. Elements of a fundamental animating force or energy may be found in both ancient East and West, if given a broad enough interpretation.

As early as 5,000 B.C., we find the people of India referring to this basic source of all life as prana. In 3,000 B.C., the Chinese referred to this same source as chi, which was composed of two polar forces: yin and yang. Lao-tzu described this force as "...something formless and perfect before the universe was born. It is serene. Empty. Solitary. Unchanging. Infinite. Eternally present. It is the mother of the universe. For lack of a better name, I call it the Tao".

In 500 B.C., Pythagoras recognized that this luminous body of vital energy could produce cures. Paracelsus coined the term "illiaster" in the 1200's to describe this same force. Plato saw this energetic universe as "a single living creature that encompasses all of the living creatures that are within it".

Indigenous cultures, such as the Lakota Sioux, believe that there is no emptiness in the world or sky. Life is everywhere, both visible and invisible. The life force is seen and felt in everything. Thus, everything is connected to the Great Spirit and deserves respect.

Spiritual traditions from India and Tibet, recognize this eternal force of the universe from which all things are manifestations, and they represent it with the word OM or AUM. If pronounced properly, all vowel sounds can be heard. The consonants are considered interruptions of the essential vowel utterances. Thus, all words are fragments of the AUM, just as all images in the universe are fragments of the Whole. AUM is symbolic of a four-part universal energy. The "A" sound represents the birth (waking consciousness) and the gross bodies in which we dwell. The "U" or "oo" sound represents the coming into being - the dream consciousness or the subjective realm of which we are a part. The "M" sound symbolizes the dissolution and a return to the cycle. But underlying all of these sounds is the silence, the fourth element, which represents immortal energy from which all things come and into which all things return; it is representative of pure consciousness.

The AUM, or symbolic voice of God, is the metaphysical aspect of what we will refer to as the "aether". We are therefore, fragments or manifestations of the Source trying to understand itself. The ancients knew that we need to hear the AUM in all things and recognize the great web of life. When we can transcend to this level of understanding, we realize that the fulfillment we seek is everywhere.

And yet the West has not forgotten the aether. Through its perspectives, the physical properties- the pragmatic properties - have been argued and explored, even through eras when the utterance of the word "aether" was most unfashionable.

As the forces of gravity, electricity, and magnetism became characterized (although not necessarily "explained"), many thinkers attempted to relate to these newly defined forms of energy to the old mysteries. Even as James Clerk Maxwell formulated his famous equations of the electromagnetic force in 1864, mystics had begun to speak of healing and paranormal talents in terms of "personal magnetism" or "human electricity", a tendency that continues to this day. Perhaps it is a history-long tendency for thinkers along the near-cutting edge to couch the high unknown in the most modern terminology of the day.

Despite this, the urge to define and explain has always marched onward. With the advent of understanding about the characteristics of the classical electromagnetic field, came a new scientific twist on the old vital fluid: the aether.

Since the wave nature of electromagnetic radiation was easily demonstrated (as distinguished from Newton's corpuscular theory), it was completely natural to model a fluid medium through which radiation would propagate. After all, do not sound waves require a physical medium of transmission, such as air or water? Thus the aether of space was incorporated into physical science with an assuredness seldom found elsewhere in Western history. The aether expressed rationalism and a universal lawfulness. It was often perhaps thought of in metaphysical terms as the fluid medium of the will of God. The force of gravity was suspected of propagating as a stress or flow in the aether as well. It was an easy matter for a physics student in the 1870's to picture our world as a castle in a fish tank, lovely of form and surrounded by an invisible fluid, undetected and unfelt by the aquatic inhabitants.

It was during this time that those who continued to explore the shadowlands between the mystical and the scientific began to slowly acquire a realization: the energy of life and strange human talents was getting difficult to explain in terms of the increasingly better understood principles of electricity or magnetism. Franz Anton Mesmer, whose name lives on in the term "mesmerized", performed rationally based (although by most accounts not terribly well controlled) experiments into what would eventually be known as life energy or the morphogenic field.

Mesmer, a native Austrian who lived from 1734 to 1818, referred to emanations, rays, and fields from the human body as a novel form of magnetic force. Although a lawyer by training, Mesmer became a medical doctor at the age of thirty-two. He was heavily influenced by Newton's theory of gravitation, and felt that the human mind and spirit had the ability to interact with forces on a cosmic scale. He later modified his model, feeling that the energy of the mind and body was closer in character to magnetism. Thus the term "animal magnetism", a popular phrase to this day, was born.

Mesmer's experiments initially dwelled on the reactions of human volunteers to magnetic fields of different orientations and strengths. He believed that this "magnetic fluid" could charge animate and inanimate objects, be utilized in hypnosis, and influence at a distance. However, as years went on, he developed an unfortunate affinity for showmanship and demonstrations of what might be now called stage hypnotism.

Eventually, Mesmer ran afoul of the scientific and medical community in Vienna, where he lived. He was denounced as a fraud, and ended up shuffling off to Paris to

begin his experiments and demonstrations anew. He once again incurred the wrath of the scientific community and was denounced by the University of Paris and other colleges. Mesmer then made a final effort to demonstrate what he felt were rational experiments and theories to a board of the scientific stars of the time, including Benjamin Franklin. However, the judgement was not in Mesmer's favor, and it was declared that there was no merit to his methods, claims, or results. In rearward view, we find this to be a bit ironic, considering the eventual failure of the other more properly acceptable scientific theories of the day, such as caloric, and phlogiston, and even Franklin's claim of "frigidiferous rays"!

A few decades following Mesmer's death, a German, Baron Karl Friedrich von Reichenbach (inventor of creosote, by the way!) continued to characterize the curious effects that hinted at a human energy form, and referred to this force as the "od". This odic force was compared to the electromagnetic field. Whether one considers his conclusions to be valid or not, Reichenbach meticulously catalogued experimental results of the effects of magnets, crystals, sound, and light on the talents of selected individuals who displayed what would today be called psychic abilities.

Also in the 1800's, Wilhelm von Leibnitz coined the term "essential elements" to describe the aether as centers of force containing their own source of motion.

Skipping slightly forward in time to the 1870's and 1880's, a brash but enigmatic inventor in the United States, John Ernst Worrell Keely, displayed a set of apparatus that seemingly produced an amazing variety of physical effects. Among these were levitation, disintegration, light from the air itself, and tremendous amounts of heat. Keely, a man who clearly represented the changing times, claimed that his devices used sympathetic resonance of the aether as a basic principle. Sound was the key, Keely claimed - sound imposing upon the aether as opposed to physical air. Even at the time, Keely polarized believers from skeptics, the latter group accusing him loudly of snake oil fraud and the clandestine use of compressed air.

For the closing decade of Keely's life, prior to succumbing to pneumonia in 1898 at the age of 61, he devoted his efforts to pulling in as many potential large-money investors as possible for his devices, rather than openly publishing or providing public access to his work. Nevertheless, to this day, Keely has a loyal army of believing supporters, although sadly we admit that any firm replications of his machines have been still forthcoming, after 130 years.

By the end of the 19th century, the notion of a dynamic life force, or universal essence had arisen from the fragmented concepts of classical and hermetic metaphysics, and had begun to enter an era of rational and methodical analysis. We certainly must give credit to a number of hermetic societies and movements, and to groups like the Theosophists for carrying the paradigm like a torch to this very day.

In 1875, at what has been considered to be the height of the 19th century Spiritualist movement, a book entitled The Unseen Universe: or Physical Speculations on a Future State was published. The book caused a stir among scientists on both sides of the Atlantic, and among a great number of science-minded laymen and spiritual seekers as well. The authors of the book were P.G. Tait and Balfour Stewart, two Scottish physicists of high standing at the time.

The primary objective of this work was the pointing out that within the framework of thermodynamics, electromagnetic theory, and Newtonian mechanics, an

entire invisible universe could exist amidst the one we sense on a daily basis. Furthermore, this universe could contain its own forces, forms of energy, and laws of functioning. The concept of the “Dynamic Aether” was given a respectable and sensible boost into the public domain. Because the arguments of Tait and Stewart were carefully laid out in the accepted physical terms of the day, and because of their proper use of logic and proof, even the most vociferous of critics, such as the writer John Fiske, could find little fuel to fire their skepticism. Fiske's primary argument was philosophical, rather than academic, and concluded, despite the plausibility of Tait and Stewart's model, that since the unseen universe was unseen, it did not exist. Period.

Back in the halls of science, however, physics was about to lose its comfortable picture of the aether-as-fluid, in part because of a certain inflexibility of thought. As a medium for the transmission of electromagnetic fields and gravity, the predominating view of the aether was one of a static material filling all of space, very rarified of substance and possibly imbued with hydraulic or fluid properties. In a sense, the aether of physics truly was very different in character from the Dynamic Aether. The physical aether was the medium for energy transmission. The Dynamic Aether WAS energy! As we shall see, these two concepts, the dragon and the dragon's wake, have recently found a genuinely promising chance for a reunion, in the form of the “quantum vacuum”. But we digress...

The period from 1905 to 1935 saw tremendous changes in the way we perceive the universe through the eyes of science. Further experiments in optics began to offer evidence that electromagnetic radiation was indeed as corpuscular in nature as it was wavelike. The model of the photon was born, along with the major portion of what we call quantum theory. General and special relativity, although truly understood by only Einstein himself and a handful of the most advanced students of the day, took a deep hold on our collective unconscious as well as provided an adequate model for the nuclear reactions being studied and harnessed. It was suddenly becoming apparent from a theoretical perspective that a physical aether of space was no longer needed to carry waves of light or other energy.

A series of famous experiments were carried out during this era that failed to support the predicted presence of a static or physical aether. The most famous of these was the Michelson-Morley experiment in 1905 that appeared to provide no evidence for a difference in the speed of light relative to a hypothetical aether wind created by the Earth moving through the static space fluid. To this day, this experiment is trumpeted as the death of the aether by those satisfied by, and safely ensconced in the arms of relativity. There are those who differ with this opinion, however, and who point out that other experiments DID seem to show evidence for a directionality of space or for a medium in space. Dr. Michelson was not convinced and went on to perform other replications of his experiment with Morley, claiming to have found variance in "c" - the speed of light.

An electrostatic aether wind experiment by Trouton and Noble (1903) likewise failed to show a predicted torque due to an aether wind, but modern replications of this test (Naudin 1996) have indicated that the early experimental results may have been negative due to inadequate high voltage.

We have attempted some initial Trouton-Noble type experiments to look for a vertical aether or space flow into the Earth, and have on occasion seen some interesting deflections of a balanced high voltage vane.

There is currently a scientific "underground" of contrarian physicists, some of brilliant caliber and well known to us, who continue to examine classical experiments and push for new ones to examine the physical aether. Michelson-Morley killed nothing, we observe. It merely provided incentive to say that the physical aether was still possible but required redefinition.

Redefinition and Merger: The Physical Vacuum

Even as Michelson-Morley was paraded through the alleys of physics, the next phase in the understanding of the universe was underway. Oh, what a confusing ride it has been as well - picking up evidence and adherents only very slowly, and all the while gaining speed and mass like a snowball.

It begins with the realization that the atom, the basis for the entire physical world we observe, does not always act like the well-mannered, mini-solar system of a nucleus and electrons depicted "Norman Rockwell style" by Niels Bohr. Evidence began to mount up that the particles that seemed to make up the atom acted in ways, when on their own, seemed very strange and almost capricious. Bohr stated, "Anyone who is not shocked by the quantum theory does not understand it".

It would be easy enough to turn this Bridge into a dried lecture on the birth of quantum theory, and to recount the contributions of minds like Heisenberg, Schrodinger, and Planck by rote. That however, is easily accomplished by a visit to your local library. For the time being, the Questing Beast pants eagerly for us to follow, so we should not waste words.

What was observed went something like this:

The individual particles that either compose or interact with everyday matter - the electron, the proton, the neutron, and the photon (light as a particle) – follow a well-defined choreography in their dealings with each other. We find that most often these particles either combine, collide, or change in distinct steps or levels, as opposed to the smooth transitions and mechanical effects we are used to in the "big" world. This is called quantization, the parent of the term quantum. The operation of the particles that compose or influence the atom is thus referred to as quantum mechanics. The interaction of electrons and photons, which has presented itself often for testing and is the best known of quantum processes, is referred to as quantum electrodynamics or "QED".

A book by this same name, authored by the late Richard Feynman, stands out as one of the most brilliant works in all of physics, not so much by virtue of its content, but by the method used by the author to explain QED to the layman. It is invaluable reading for any sojourner navigating this Bridge.

In the world of quanta, however, not all is as it seems. We find that every particle actually leads a double existence as a wave. Particles TEND to exist here or there, but as Heisenberg demonstrated, we cannot know the position of a particle and its velocity or energy at the same time. Thus, the electron is not so much a small ball whizzing around the atomic nucleus, as it is a cloud, within which there is a probability of finding the electron at a given point in space and time.

Other surprising predictions have arisen out of the mathematics of quantum mechanics - predictions that are still being proven out. For example, physicist Erwin Schrodinger's famous "cat" experiment (actually a gedanken, or thought experiment)

demonstrates that until an object is observed, it exists in a potentially vast number of possible conditions or states.

In this proposed scenario, a cat sits in a covered cage with a small electrical device that could, at any random time, break open a cyanide capsule that would kill the cat. The observer cannot see whether the cat is alive or dead, because the cage is concealed. In our everyday mode of thinking, we would sadly shrug and say we just don't know if the cat is still alive or not.

However, in the realm of quantum mechanics, a different way of perception is offered. Mathematically and theoretically the cat, because it cannot be observed, exists in both a living and a dead state at the same time! It is as though two possible universes lie waiting - one with a living cat, the other with a dead cat. It is then the very act of observing, in this case peeking under the sheet at the cat in a cage, which causes the many possible states of existence to collapse into a single one. The cat is now either safe or out of its misery. A universe has been selected. Sort of the ultimate twist on the "tree falling in the forest" shtick. (Does it make a sound if there is no one to hear it!)?

The principle embodied by Schrodinger's Cat has paved the way for considerable speculation on the topic of alternate realities, or the "many universes" theory. In the Bridge of Spirits, we will come back to this core issue.

With specific relevance to theories of aether, however, we turn to another key but often overlooked feature of QED - the nature of the vacuum, or the "zero point energy".

Within the framework of QED lies a most surprising principle. With most processes at a quantum level, we find that mathematical probability is an overwhelming factor. Electrons have a high probability to be at a certain level of energy. A photon has a probability of being emitted from a weak light source. However, in some interpretations, QED states that the entirety of our universe, from the air around us, to the gaps between atoms, to the most evacuated reaches of intergalactic space, is actually filled with a seething ocean of energy. This energy exists in the form of "virtual" photons from the creation and annihilation of electrons and positrons that arise out of the background of space-time itself, all as a matter of probability.

We would ask how our universe could exist in this state! Why do we not see evidence of the amazing hidden power surging amidst every corner of our existence? Apparently, the reason lies in the fact that the energy of the vacuum is incredibly short lived; on a per-particle basis, it is almost completely non-coherent and self-canceling, and exists in such a broad band of wavelengths as to defy our perceptions. Power beyond imagining, but as subtle as a faint summer's zephyr. Oh, my, it *is* the Tao...

For as fantastic as this concept seems, there has been acquired considerable evidence for the existence of the energetic vacuum. Some maverick writers note that the evidence now actually exceeds the magnitude of solid evidence for general relativity! Chief among this evidence is a phenomenon known as the "Casimir Effect".

In 1948, the Dutch physicist, Hendrick Casimir, hypothesized that if two flat metal plates are positioned very close to each in a parallel manner, these plates will experience a mechanical force from the energy of the vacuum. The reason for this force lies in the fact that between the metal planes, a certain amount of the virtual photon flux (the hidden energy of space) is prohibited, thus producing sort of a reduced pressure zone within space itself! However, the gap between plates needs to be very minute, typically less than a few microns, for the mechanical force to be easily measurable. The precision

positioning equipment and strain gauges needed to measure the proposed effect were not available at the time.

In 1996, Casimir's prediction was verified by a young scientist named Steven Lamoreaux. By using gold plated quartz surfaces and solid state strain gauge sensors, Lamoreaux observed effects that were within 5% of Casimir's predicted values. Since 1996, numerous replications of this effect, and related vacuum force effects have been carried out. In our everyday existence, we truly are unaware of the great ocean of energy around us, just as the fish is oblivious to the water that sustains it. In the microscopic world, however, the energetic vacuum, the "new aether" makes itself seen with enticing consequences.

Modern day physicists seem to be embracing a living universe theory as opposed to the dominant cosmology that held the belief of a dead universe - that being one that ended with the Big Bang and its random spewing forth of lifeless debris. Thus the cosmos is constantly being regenerated from the subatomic realm to distant galactic systems not in predetermined, clockwork patterns but in a spontaneous fashion full of probabilities. No one part of the cosmos is in a hierarchical position over another; it is a vast interacting web.

Physicist David Bohm states: "Relativity and, even more important, quantum mechanics have strongly suggested (though not proved) that the world cannot be analyzed into separate and independently existing parts. Moreover, each part somehow involves all the others: contains them or enfolds them... This fact suggests that the sphere of ordinary material life and the sphere of mystical experience have a certain shared order and that this will allow a fruitful relationship between them."

Of course, we could take this further into other universes or dimensions that are possibly interconnected in space and time by strings, tunnels, umbilical chords, or Star Trek warps. Successful universes flourish, unsuccessful ones like the dinosaur leave only archaeological residue for us to ponder over.

And so the circle seems to close. The Fifth Element, the Hermetic Quintessence, the Breath of Life survives a temporary conceptual incarnation as a static fluid medium of space, before being disproven and then rebirthing phoenix-like into a role as the dynamic aether - the ocean of ultimate energy in which we exist.

For some of the Bridges to Avalon, knowledge and wisdom are enough. For others, understanding and illumination come with "works". The works of our own hands, the works of our colleagues, or the works of those brave hearts who ran the gauntlet of criticism and denial to try to give wonder to the world.

In our view and daily experience, the fifth element exists, looking something like our old friend the Questing Beast itself. It has always existed, and endured a variety of names that were pinned to it, or to certain of its attributes: aether, zero point energy, physical vacuum, orgone, chi, quintessence, Od, vril, and so on.

We strive to use the principles we believe to be inherent in the powerful yet subtle forces around us, for a number of ends. Some readers might be inclined to write off this chapter as being just another "mad scientist's workshop" full of free energy claims or gadgets that do little else but entice the imagination. Ah, quest with us here, gentle reader, for indeed these things are present, but so much more! The Bridge of Aether is a place of arcane science, and healing arts, and nigh magickal gifts, that we believe, in

combination with honest research and engineering, will make the world of our children's lives a better place.

In the following sections of this Bridge, we will examine the role of subtle energy forms in several key areas. These are all disciplines or topics that we have devoted time and effort to, in some cases going back to our childhood. These efforts cross over easily into other Bridges, and so in some cases the quests are continued there.

The Aether in Living Systems: Life Energy and Heresy

As we discussed early in this chapter, the ancient view of the aether tended to portray the phenomenon as being alive, animated, and yes, even aware. Through the decades of the past three centuries, one of the primary foci for defining the aether has been in living systems. And who can fault this, for if the aether is a great mystery, then the very spark of life itself is a more immediate one, if not greater.

The theory that a subtle form of animating energy, or life force, exists, and is the ultimate difference between living and non-living systems was classically referred to as vitalism; from the term "vital essence". As we will see, this viewpoint is a peculiarly Western one, arising mainly from Classical Greek thought.

In an era before microscopes and molecular biology, vitalism indeed held a far greater appeal. However, as we began to peer deeper into the physical make-up of life the scene became more uncertain. One can certainly say that a rabbit, or person, or elephant is a complex animated form, each full of well-defined subsystems in perfect choreographed balance. To visualize a shimmering dream-like spark or current flowing through each is not difficult. However, we arrive at the bottom end of the size scale for life - the virus. We certainly can see that a chemical complexity of high degree exists in viruses, and that they meet a good portion of the basic criteria for life; but do they contain the vital essence? If the answer is yes, then where and when does the spark appear? How many organic chemicals must we mix together in a test tube before some subtle threshold is crossed, and the vital essence appears?

It began to appear that the lower end boundary of vitalism was in serious danger of vanishing by the 1930's. The preponderance of evidence suggested that life began with a certain amount of organization, and remained a phenomenon of organized behavior - a non-linear, nonreversible, thermodynamic blip in the face of entropy until decaying back into a simpler form. And indeed, this sad but comfortable mindset is where one will find the bulk of biology as a science to this day.

So, did Leeuwenhoek with his microscope deal the deathblow to the aether as expressed in the theory of vitalism? We would say no; he forced it to grow up and evolve.

There are always other options. Enter one of the most vilified, angrily debated, and yet undeniably unique scientific minds since Galileo. A charlatan's charlatan to many, a mad misguided savior to others, and to us - a scientist who simply dared to break free of the world's intellectual bonds and ended up stepping not just one century, but perhaps ten, ahead of his time.

Enter Wilhelm Reich.

To our readers we say, "follow us in our tale here". We also pause and say the following. This book is being tendered as a culmination of a portion of our own Questing. We do not believe that we will make any manner of monetary haul from it, nor

was that the intention. We likewise do not intend to try to reverse the mind-set of anyone, only to point out our own adventures, and historical and scientific evidence to back up some of our beliefs and opinions. We have our doubts that much of any material in this book will elicit a fiery and vitriolic response from those who typically critique or debunk claims of the unusual. However, with the mentioning of just one name - Wilhelm Reich - we step as close to the line of fire as anything else in this book will take us. No matter, we step forward anyway...

We would again not take precious time with detailed biographies and family histories. Just the basics will do, for the beginning.

Wilhelm Reich was born in Austria, in 1897. His childhood somewhat troubled and checkered, he nevertheless grew to adulthood and went on to study the new discipline of psychology, and became one of the star students of Sigmund Freud. He also achieved a second degree in medical science and thus hung a second shingle on his wall - that of medical doctor. By the early 1930's Wilhelm Reich had achieved a status of global recognition as one of the brilliant pioneers of psychology and psychotherapy. His involvement with revolutionizing psychology was matched by an equally fervent involvement in politics. (What bedfellows, we hear you saying!) Reich fought against the restrictive and life-negative tendencies and traits of bougoire conservatism and fascism. He supported abortion rights, contraception, and the rights of young people to have healthy and meaningful sex lives. Reich believed that a healthy and progressive society needed to start with healthy and progressive people who could express themselves fully and freely in their sexuality, their work, and their creativity. Two of the excellent works from this period of Reich's life are Character Analysis and The Mass Psychology of Fascism.

Then history coughed, and lifelines took unsuspected routes. Follow carefully here. Reich had maintained a reasonable working relationship with his old teacher Freud, until the mid 1930's. However, whether it was because of his medical training or his work as a political reformer, Reich departed from Freud in an interesting way and struck out on his journey into infamy.

While Freud maintained that the human personality was motivated by specific drives, such as Eros and Thanatos, these were seen as conceptual entities, abstracts, or patterns of mind and chemistry. Reich began to ponder whether or not there was more to this story. He proposed that there were specific energetic states, perhaps bioelectrical, perhaps otherwise, that corresponded to these psychological forces. Could humans be at the mercy of influences and tendencies that would cause constrictions or aberrations to occur within the normally balanced energetics within them?

He studied different personality types and people who displayed assorted mental and emotional problems. However, rather than assume the passive "observer" position of the therapist in a chair, with patient on a couch, Reich studied the musculature and posture of his subjects. He felt them and examined them and sometimes provoked them into reaction. He took galvanic skin (electrical) potential readings, and looked for unusual fluctuations of these. These techniques and theories began his eternal exile from the psychological community, and he left Austria for the Netherlands.

In 1939, Wilhelm Reich sensed that there was little else he could do in a Europe on the verge of war. He immigrated to the United States, and set his sights on carrying on his work in an atmosphere of freedom and peace...

As his boat steamed toward America, Reich carried with him the following convictions:

1. There existed a powerful and physically real form of energy within living creatures that if altered, disrupted, or constricted, could produce physical alterations in the organism, as well as psychological and physical debility.
2. This form of energy was unique, and was not electrical or magnetic in a classical sense, but could produce both of these fields when in a concentrated state.
3. By the understanding and utilization of this energy, the lot of humanity overall could be improved in many ways.

In America, Wilhelm Reich achieved the gift of a few years of good research before the medical and psychiatric communities became overly aware of his presence. In his lab on Long Island, Reich laid the groundwork for the research that would consume the rest of his life. He had named the form of energy he had isolated and had begun to study "the orgone" - from *organic* and *orgasm*.

Reich began to study the dynamics of this force, and attempted to characterize it. He discovered several unique methods of indirectly measuring the presence of orgone concentrations using thermal, hygrometric, and electrostatic means. He also built devices, which appeared to be able to build up charges or gradients of orgone - orgone accumulators, or ORACS as they were nicknamed.

In 1941, Reich felt positive enough about the orgone accumulator that he managed to make an appointment with Albert Einstein and demonstrated the curious scintillation effect seen in ORACS to him. Einstein's response is uncertain. Many of Reich's colleagues and later students felt that Einstein had been genuinely puzzled and impressed by the device, while skeptics are quick to point out that he was not impressed at all. If we go by transcripts of the conversation, it would seem that Einstein did observe the scintillation and expressed a positive acknowledgment of the effect, though some also feel he was simply humoring Reich. We will likely never know for sure. Einstein never made any further mention of the effect in his papers or memoirs, at least none that has come to light. Wilhelm Reich later wrote about this episode in a short, self-published document called The Einstein Affair.

Through the 1940's, Wilhelm Reich prospered as a scientist and author. He developed a network of colleagues across the globe that exchanged ideas on the topic of orgonomy and aether. Many of these were medical and psychiatric professionals who had followed Reich's early work, through the evolution of orgone theory. In the United States, a number of clinics and medical doctors experimented with ORACs and other components of orgone therapy.

Reich performed an incredible number of experiments on both living and non-living systems. He demonstrated evidence that exposure to orgone concentrations could arrest and prevent some forms of cancer in test mice. He looked for evidence of orgone energy in the Earth's atmosphere. Experiments with high vacuum tubes produced anomalous effects wherein ionization of gases was induced at voltage potentials normally considered too low.

Experiment "XX" dealt with the apparent creation of unusual residues in pure water that had been treated in an ORAC. Reich found evidence that the free life energy

of the orgone could apparently organize itself into a pseudo-life state, tiny cellular-like structures that appeared to bridge the gap between life and non-life that he called “bions”.

This era was prolific for writing. One of Reich's best books from this time was The Cancer Biopathy, copies of which can still be found in larger libraries. Another out-of-print document originally published by Reich's foundation, Cosmic Superimposition, dealt with the functioning of the orgone/aether on a geophysical and astronomical scale. Dr. Reich was soon to move his laboratory and life to a newly constructed research center and home near Rangely, Maine, that was named “Orgonon”.

In 1947, Wilhelm Reich claimed that he had managed to power a modified electrical motor from orgone energy. This particular topic was the subject of a three-year quest by NR; and a small, published paper dealing with what may have been a version of the orgone motor effect is presented in the Archives. The story of the orgone motor is intriguing and shadowy and could easily be fodder for a fine X Files episode.

Even as Wilhelm Reich placed puzzle pieces together and began to see how life and non-life throughout the universe worked together in the common functioning principle of the orgone, storm clouds were brewing. The medical and psychiatric communities in the United States had begun to notice this maverick, and took special care to observe how his claims of cancer and disease treatment were infringing on the dominant paradigm. The first labeling of Wilhelm Reich as a dangerous man had begun. Quack to some, charlatan to others. It has often seemed to some “life energy” scholars as though the growing hatred of Reich was extending beyond these excuses. It was becoming a pathology.

The reasons the status quo needed to hate, fear, and ultimately shun the memory of Reich were about to multiply. From 1948 onward, some believed and still believe that Reich stepped into areas of research that were jealously watched by ...someone. And that someone took notice.

First of all, Reich began to examine the role of the aether/orgone as it related to atomic energy. He sincerely believed that orgone energy could be a remediation not only to the energetic devastation possible within the human animal, but also for the negative biological and environmental effects of nuclear radiation. In the two-part document entitled "The ORANUR Experiment" he disclosed the effects of orgone energy concentrations on nuclear material - specifically radium. The relationship between orgone and nuclear forces was dramatic, surprising, and remains a topic of controversy in the alternative physics community to this day. Among many other observations, we find the claim that concentrated orgone could accelerate atomic decay, driving radionuclides to a stable and safe state in a fantastically shortened amount of time.

In 1952, amidst the aftermath of a particularly harrowing experiment with nuclear material that ran amok in the presence of the concentrated orgone atmosphere at Orgonon, Dr. Reich discovered a new method of orgone energy engineering. He built a device that appeared to be able to manipulate local weather patterns, and adjust orgonotic potentials in the environment from a distance - the Cloudbuster.

The Cloudbuster was an outwardly simple system of multiple metal pipes mounted on an adjustable base like an anti-aircraft gun. The pipes were connected by metal flex conduit to a deep well, or a substantial source of water. When water connected, and directed toward points in the sky, the Cloudbuster appeared to be able to either build up or break apart lower level cloud formations.

It was during this period of his experimentation that the medical and governmental parties who had begun to discredit Reich stepped up their efforts in the face of more shipments of ORACs to medical doctors around the U.S., who wanted to use them for patient treatment and research. It was also when Reich made what was likely to be the most fantastic and least-believed of his discoveries. The Cloudbuster was not just adjusting and manipulating the weather; it was attracting UFOs!

Reich had first noticed this in Maine from the very beginning of his Cloudbuster experiments. Late in the evening, he and his assistants and students observed disc and spherical lights swoop in over the hills and hover, as though they were carefully examining the situation at Orgonon. Even more bizarre in nature was what happened when one evening, Reich pointed his Cloudbuster pipes at one of the hovering disc-shaped lights. The object began to dim and flicker, as though its motive energy was being pulled out or disrupted. It wobbled, descended, then managed to fly away low over the trees in escape. Ever the patriotic citizen, Reich reported the event to the Air Force, along with a lengthy dissertation on his view of the UFO phenomenon.

In 1954, Reich, his son, daughter, and several assistants set up an extended field operation in the Arizona desert near Tucson. Their objective was to attempt a reversal of the desert conditions west of the Catalina Mountains by using a souped-up version of the Cloudbuster. Supposedly, this objective was achieved to a degree; however, it was during this time that his encounters with UFOs reached an apex. In December of 1954, Reich believed that he had come under assault by UFOs in the desert, and he fought back by disrupting their operation with his Cloudbuster. December 14th, 1954, is recorded by Reich as "The Battle of Tucson". The entire story of the Cloudbuster, desert remediation, and UFO interference is recounted in the now almost impossible to find Contact with Space (We retain a copy of this manuscript).

The end was in sight, however. In 1956, Wilhelm Reich was charged with multiple criminal counts dealing primarily with the transport of ORACs across state lines. In a federal court, under circumstances that retain an almost absurdly strange kangaroo court flavor, Reich was convicted and sentenced to time in Federal prison. Orgonon was seized, and in a move that many find difficult to believe possible in the 20th century, many of Reich's notes, books, and instruments were either axed or burned under court order. The frenzy of these actions has an unearthly tone to it and invokes shades of the Inquisition.

In 1957, shortly before his release date, Dr. Wilhelm Reich, dreamer, writer, natural scientist, and re-discoverer of the living aether died in prison of a heart attack. Or a broken heart...

It happens.

Experiments in Orgone Energy

Nick: "I remember running across mention of Wilhelm Reich and Orgone energy when I was in junior high, in the mid 1970's. I may have tried building an ORAC or two at the time, but my recollections are dim. I do know that old mentor, Howard, had boned up on the topic, but likewise had little inclination to do anything practical with it at the time - being more into biomass and methane.

The drought of 1988 brought Wilhelm Reich back into my life. Howard and I swapped ideas about Cloudbusters in the early summer of that year, as the corn withered. In late summer of that year, we built a crude 10 pipe Cloudbuster and set it up on a platform over one of Howard's giant goldfish ponds. We spent a number of Sunday afternoons moving the pipes around, searching for signs that the rains were brewing.

Whether the unit worked or not, was never determined. Within the time of our testing, the jet stream shifted, and we did get an increasing amount of rain into August. Was the Cloudbuster to blame? Probably not. However, in a strange side note, around June of 1989, probably three or four months after Howard and I had finished playing with the Cloudbuster, several people in the old neighborhood reported a green UFO. The disc-shaped brilliantly green light was seen over several evenings, zigzagging around the general vicinity of the old Cloudbuster.

Did someone get a belated report of a minor Cloudbuster operation that needed checking up on? We wonder.

I was hooked on the idea of the orgone as aether. Over the following two years, I feverishly pursued everything I could find on Reich's work. I dug into the mystery of the orgone motor. I built dozens of ORACs.

In another very early published paper, I described some observations I had made where an orgone accumulator appeared to be able to produce microampere currents in wire coils. Conversely, I observed an effect that suggested that an ORAC could suppress or attenuate thermionic emission currents in a vacuum tube rectifier.

I drank ORAC charged water and made orgone blankets. The rotor device used in our ghost-hunting expeditions has an orgone accumulator base to it, and was designed and first built during this time.

By 1991, I had moved into the research of the UFO abduction phenomenon, and so thusly much of my ORAC work and orgone theorizing went back to a more rearward burner. I had to open a few other doors - the Questing Beast beckoned.

I had corresponded with the good, the bad, and the ugly of orgone research, and I learned a lot. I learned that Reich was fallible, a mortal man prone to many likely erroneous observations. I learned that he could make as many utterly naïve conclusions about natural phenomena as he could make brilliant insights. Many of these insights have only come to manifest recently, nearly 40 years since his death. For example, who might have guessed in 1945 that the layered metallic structure of the ORAC is also a key geometry for producing the Casimir force from the quantum vacuum? As I branched into other theories of energy and space, I always came back to Reich - examining these ideas in light of organomic functionalism. My respect for Reich and his research has only grown. In the years since 1990, I have been able to both visit Orgonon, and the Tucson desert where strange things once happened in the sky over the dust and rock, even though the latter is now a subdivision of a sprawling city. In both cases, I was moved to tears by the history confronting me, and the utter humanity of its struggle."

Amazingly, the community of orgone researchers and organomy has endured in the absence of its initiator. Many of those currently active are also seeing that much of the character of the orgone is fitting very well with new discoveries relating to the zero point energy, or quantum vacuum. Dr. Reich continues to enjoy a slow, posthumous vindication.

In 2007, per Dr. Reich's last will and testament, a vault at the Wilhelm Reich Museum, at Orgonon in Rangely, will be opened. Inside are purportedly many documents and notes that will open up new insights into orgone energy. Reich had instructed that these documents be sealed and retained for 50 years following his death, long enough to bring them into the possession of a new generation of (hopefully) more sensitive and insightful humans. The old enemies will be likely long gone. It will be a new time, a new beginning a new footpath over the Bridge of the Aether.

The Aura: Perceptions of the Personal Aether

Let us stop to relax on the Bridge while we ponder a topic that the more intuitively inclined or less technically hungry readers may be able to relate to with a little more ease. We speak of our own direct perception of the aether- our personal aura and its appearance to both sensitives and scientists.

As mentioned previously, pioneers Mesmer and Reichenbach recorded their perceptions of the life energy. Wilhelm Reich and his colleagues and students made many darkroom observations of how the orgone stimulated visual impressions. The orgone/life energy/aether could take on a variety of appearances, ranging from an undulating bluish haze, to blue-white sparkling particles, to vivid whitish streaks. However, for many decades, mystics and alternative healers had already been carefully examining the visual properties of the human energy field.

In 1911, Walter Kilner used colored screens and filters to view a phenomenon he referred to as the "human atmosphere." He was able to correlate configurations in this aetheric field to disease. Today, we more commonly refer to this field of energy as the "aura".

So, what exactly is the aura? The aura might be best described as the human aether or life energy field *as it is perceived by our senses*. There is little or no disagreement that the aura is composed of the aether or orgone as characterized by Reich and others, however what sensitives or healers visually perceive are apparently the modulations, patterns and detailed *information* contained in the field! In similar fashion, one can tell much about a beam of photons by using counters, filters, lenses, and detectors. But only our minds and senses can say what color the light is, or its warmth, or how it makes us feel. The aura is aether, but it is structure more importantly. What can we say about this structure?

While Reich perceived the human energy field as being visually like a bluish silvery nimbus or cloud, more intuitive observers are able to discern distinct colours, boundaries, and even textures. Considerable lore has accumulated on the interpretation and diagnosis of specific ailments and human conditions from the appearance of the aura. Many claim that one of the easiest points on the body for aura viewing in subdued light are the arms and hands, where rays or extensions of the colored regions may be seen. Other more advanced sensitives and clairvoyants claim that with enough practice, one can see actual images of people or places, floating like holographic information, within the aura field.

Some have viewed the entire structure of the aura as one great Russian *matrioshka* (nesting) doll with the universal energy field, (the cosmic aether/zero point energy?) the outermost layer. One interpretation is that every material form that is

known to exist must be first formed in the aetheric energy field in a grid or template form and then on into actual matter. Perhaps those who are able to perceive the auric field around physical human beings may be getting a glimpse of the gradual solidification of the universal energy field into the human energy field and finally into a physical being.

Likewise, auric traces have been reportedly seen around all living systems and are evident in Kirlian photography. For example, it is said that when considering a budding leaf, the energy field is actually present and already taking the shape of the leaf-to-be. This would indicate that the aether has already predetermined the physical form that will follow.

Since the early 1900's alternative scientists and others more accepted in their professions continued in pursuit of an understanding of the aura as the patterned human energy field. In the 1950's came the term "life field" or LF, as put forth by Harold Burr and F.S.C. Northrup, as an energy that directs the organization of an organism. This duo also developed the idea of circadian rhythms. L.J. Ravitz than proposed a TF, or "thought field" which could interfere with the LF by producing psychosomatic symptoms.

The 1970's, 80's, and 90's brought forth a plethora of new observations. Robert Becker was able to measure what appeared to be an electromagnetic field in and around the human body and correlate it with health and disease. Barbara Brennan and a variety of colleagues observed the human energy field (HEF) in relation to an emotional response factor, darkroom measurements with a human presence, and laser bending with the HEF. Hiroshi Motoyama was able to electrically measure the chi or acupuncture meridians associated with this energy. Victor Inyushin claimed to have detected a free ion bioplasm in the HEF. Andrija Puharich and Robert Beck were able to measure magnetic readings from healers that correlated with life enhancing properties and the Earth's own Schumann resonance frequencies respectively. Researcher John Zimmerman was able to demonstrate that right/left brain synchronization occurs in both healers and patients during treatment of the human energy field.

One of the most intriguing areas of research comes from Dr. Valorie Hunt and her colleagues at UCLA. During her study, she recorded the frequency of millivoltage signals emanating from the body of an individual undergoing rolfing sessions. Wave patterns were recorded by a Fourier analysis and sonogram frequency analysis; these patterns were then mathematically analyzed. Simultaneously, a healer by the name of Rev. Rosalyn Bruyere observed the auric fields of both the rolfer and the subject. Her descriptive comments of the their auras were recorded as the session progressed. The experiment was repeated with seven other healers, all of which reported the auric colours they were able to perceive around the subjects.

The results were astonishing! Wave patterns and frequencies detected by Dr. Hunt corresponded to specific auric colours reported by the healers. The table below seems to validate what was once thought to be subjective interpretations by sensitives.

Blue	250-275 Hz plus 1200 Hz
Green	250-475 Hz
Yellow	500-700 Hz
Orange	950-1050 Hz
Red	1000-1200 Hz

Violet	1000-2000, plus 300-400; 600-800 Hz
White	1100-2000 Hz

In 1997, during the course of one of our more memorable paranormal investigative cases, we employed talents for aura visualization and observed some strong ray-like anomalies coming from the arms and hands of a woman who appeared to be prone to poltergeist type psychokinesis. In the weeks following the case, our speculations ran afield regarding why a normally invisible field of energy should appear so colorful and meaningful to a sensitive observer. One of the epiphanies that arose from personal speculations ended up fitting in very well, in retrospect, with a number of other factors presented by aura investigators in the past. This hypothesis revolved around the refraction of white light by water droplets - a human rainbow! In his experiments with orgone accumulators and Cloudbusters, Wilhelm Reich concluded that a charge of orgone energy/aether would tend to attract humidity or water vapor. It would be presumed that around living animal systems, and humans in particular (who are relatively lacking in hair), there could exist a very fine cloud of water vapor. Even if one discounts orgone energy, the respiratory functions of the skin certainly produces measurable moisture. What if ambient white light of a low value could refract in the nano-droplets of water around a human, thus giving rise to a rainbow so faint that only highly sensitive eyes could perceive it? Differences in the flow, density and volume of this "cloud" could produce subtle changes in colour spectra. We furthermore speculated that subtle acoustic signals or infrasound from the human subject might produce modulation, as well as nodes of rarefaction or compression that would give rise to additional visible refractive features. We have continued the quest to track down evidence for this model.

What a pioneer scientist may call bioenergy fields, sensitives may call the aura. Regardless, this energy has been put under close scrutiny. EEG, EKG, and superconducting quantum interference devices (SQUID) have measured it in recent decades, just as Reich was able to observe it with electrometers in the 1930's. Abnormalities in this field seem to indicate a weakness or disease. As you see, we are treacherously close to sliding right off this bridge and onto the Bridge of Healing, so we must watch our footing - for now. There is much more to come.

Theoretical physicist, David Bohm, suggested that the world we perceive through our senses (with or without scientific instruments) represents only a small fragment of reality. What we perceive is an unfolded or "explicate order", which emerge from a much larger matrix of an enfolded or "implicate order". What we perceive is but a small version of a level of reality that is not accessible to our senses or to the level of scientific investigation that we are currently capable of.

Renowned brain researcher, Dr. Karl Pribram, has made a determination that the brain is holographic. Analysis of spacial and/or temporal frequencies indicates that the brain structures touch, taste, smell, sight, and hearing holographically. In other words, information received is distributed throughout brain so that each fragment can produce the information of the whole. This holographic process extracts information from a domain that transcends space and time.

Therefore, in a holographic model, the human aether or aura contains all information. We merely live under the illusion of separateness. We are the microcosm of the macrocosm. Indeed, this aetheric energy containing all information may be the

answer to the questions that have stumped parapsychologists in their search for understanding enigmas such as why those gifted in the healing arts often report telepathic intuitiveness.

The entire universe appears to be a latticework of energy patterns, of which we are but a part. We are made of probability waves of inseparable energy patterns and are thus not separate parts of the Whole. These energy patterns may emerge from frequencies that transcend time and space, for they are simultaneously everywhere. We are asked to view ourselves and the universe as a holographic image, an exact representation of the Whole, which can be used to reconstruct the entire hologram.

The Aether in Connection...As Above, So Below

We have examined the tradition of the aether as manifested in the larger world, as well as having given it consideration in its appearance in the subtle fields of the human body. However, we believe that there exists what may be called a connection zone, or interface between the "aether without" and the "aether within". To illustrate this, we will present three topics: one arcane, another being a modern twist on the arcane, and a third utterly without precedent. All three have crossed our paths on a number of our Bridges.

Nick: "One of the many tales rolled out under early evening summer stars of a long ago boyhood was Howard Zirger's dissertation on the art of dowsing. Howard, as a true blue Earth-friend-new-age farmer, often dowsed for water, field tile, or lost plow points on his farm. For Howard, dowsing, like most talents, came in brilliant streaks isolated by times when the muse would totally flee the scene. However through him I learned much about the practice. On jaunts to occasional dowser's meetings with Howard, I watched some of the masters in action, and was amazed. I also learned about those parts of the whole "art" that seemed somewhat shaky and unconvincing - explanation wise. I learned that I was pretty talent-less as well."

Dowsing as a practice can be reliably traced to medieval Europe, where it presumably had to dodge nosy neighbors with axes to grind and penchants for tattling to the local church inquisitor. As a folk practice, it does seem to be limited to the West. For centuries, it existed as a peculiar and generally hereditary talent for finding water by the mysterious use of special forked rods made from certain preferential tree wood.

The dowser, or water witch, would generally grasp the forked rod in his hands, and wander across the land in a seeking frame of mind. If a hidden source of water was crossed, it was said that the wooden rod took on an animation of its own, and would bend down at its tip as though shoved by an invisible and independent force. While held in suspicion by those of churchy faith, water witches were a commodity in high demand, prized by town burghers and merchants who relied on good sources of water.

In the 1920's a renaissance in dowsing unfolded in Europe, soon to follow in America. A Frenchman, Mssr. Abbe Mermet, organized his own adventures as a dowser along with an exhaustive compendium of dowsing lore into a book that coined a fashionable new term for an old art - radiesthesia. What a lovely name! (In truth it rolls off the tongue like a sweet brandy). In his book by this name, Mermet outlined in

rigorous detail and methodical manner, a wide variety of experiments that seemed to demonstrate the scientifically test-able aspects of dowsing.

In Mermet's model, all organized matter emits its own subtle spectrum of a radiation that resembles light in some aspects, but seems to follow a more arbitrary set of laws. This radiation is of a sort that can be tuned and sensed by the nervous system and brain of select individuals. In short - a similar or identical force to that subtle expression of aether within the human organism!

Since the 1950's, a number of dowsing societies has sprung up around the world. The array of equipment available for dowsers is staggering, although many purists have always insisted that a good willow or witch hazel fork cannot be beat!

Admittedly, many of the primary questions surrounding dowsing have remained unanswered, or have only been marginally breached in a rational light. The role of dowser's intent, for example, or the compositional material of the dowsing rod are key unresolved issues. Despite these uncertainties, the practice of dowsing has found a myriad of venues, thumbing its nose at critics and skeptics all the while. Dowsing for earth currents, minerals, water, crime clues, or missing persons are all frequently encountered among the dowser communities.

In a broad sense, we believe that the dowsing reaction is the result of unconscious muscle movements that in turn is the result of a patterned response of a human nervous system/mind to spectra or gradients in the background aether/vacuum/zero-point.

As will be further detailed in *The Bridge of Spirits*, in the heat of July of 1997, we investigated one of our more memorable haunt cases near Troy, Ohio. The owner of the old farmhouse was eager to demonstrate that he had made an astonishing discovery. A water dowser since his youth, "Rob" had found that his trusty willow had responded with very powerful dips and deflections at certain spots in the house. Dowsers have often spoken of their instruments seemingly responding to areas of subtle energy or "mystery spots". However, to Rob's astonishment, these deflection spots were on the move! One would sometimes end up chasing a spot around a room. Could Rob have been dowsing ghosts?

While its mechanism remains unclear, we feel that the opportunity for correlating subtle energy features to other understandable phenomena is essential to pursue.

Now check out this scene.

In a steaming Louisiana night, the 1890's, a solitary window at the rear of an ornate house on Royal St. glows with the unsteady light of a guttering candle. Inside, a nervous looking white man sits across a wooden table from a disturbingly lovely dark woman in silks and gold. She throws back her hair, and laughs, showing blazing white teeth that one fancies are perhaps a bit sharper than is right. The woman toys with a doll, a rag cloth simulacra of a man stuffed with fragrant herbs and resins. The shuddering, sweating Caucasian places a stack of bills on the table.

Deftly, the mysterious woman pulls from her dress a fiercely sharp, cruel looking needle, and plunges it deeply into the chest of the doll. She winks at her patron, scoops her reward into her hands, and leaves the room silently. The white man wonders what he has just done.

As the town clock strikes three, a portly businessman in Baton Rouge rears up in bed as a searing pain strikes him in the chest like a hammer. As he hits the floor, his

heart in final convulsions and vision going black, he recalls something vague about how his recently fired cane warehouse manager had muttered veiled threats about letting Mademoiselle Dauphine having the final say...

Nick: "I first heard of the Hieronymous Machine when I was about 12 years old. Like so much else, it was described in a book I borrowed from my old mentor. I think such devices are better understood by an adolescent, because I later forgot about the whole enigmatic field of "radionics" for a good many years. Sometime around 1986, though, I think I must have found that same book again, or another like it. This time, I dove in, and researched everything that I could. I sought to become a master of the high-tech 20th century version of age old Magick - the electronic voodoo doll. (Although Mmslle. Dauphine has a certain attraction...)"

The subject of radionics, in recent years blending (or blurring) in semantics and symbolism with "psychotronics" has long been a favorite target of skeptics. Sometimes, this has been with good reason, for it has been a field ripe for shysterism, and false or rash medical claims. Let's review.

As outlined in earlier portions of this chapter, the 19th century brought a raft of scientists and seekers who sought out the old "elan vital" in the subtle energy effects found in the human organism. At the end of the century, an American doctor by the name of Albert Abrams sought to objectify and make use of certain traditional medical techniques that seemed to relate to a human energy field. Dr. Abrams made use of the technique called "percussing", or thumping of patient tissues and listening for unusual sounds or responses. Abrams also felt that the human body produced a wave-like radiation that could be sensed in ways similar to techniques used in dowsing. However, he took this concept a bit further, and claimed that simple networks of resistors or variable tuning capacitors could refine the diagnosis of human radiation. It was believed that physical or organic afflictions produced a pathology in the radiated field, and that by tuning and looking for dowsing type responses at the same time, these previously undiagnosed afflictions could be pinpointed.

Had Abrams stopped there, his developments would have been likely lauded among dowsers and non-traditional healers for decades to come. However, what came next crossed into the voodoo parlour of Mmslle. Dauphine!

Albert Abrams claimed that the tuned diagnosis of a patient could be carried out as effectively from an apparently unlimited distance as it could if the patient were on the doctor's table. All that was needed was a small sample of the patient's blood, tissue, or even hair! By placing the sample from the patient in a coil, or special collection well, the radiation pattern from the original patient was reproduced in the diagnosis unit. Dr. Abrams would then tune his dials whilst rubbing or percussing a Bakelite or rubber plate attached to the circuit of the machine. At a certain arrangement of dial settings, a change in either the plate texture or density became apparent, perhaps by a similar mechanism to that which dowsing rods utilize. The diagnosis could be thusly filed, and treatment sent to the patient, or wired to another physician. But there was more! In his later years, Abrams looked into the technique of treating disease or debility by using radio frequency signals (diathermy) applied to a patient's body. He made the striking discovery that not only could the diagnosis of a patient at a distance be carried out, but the inverse could

occur. By applying the healing techniques through his machine to the patient "witness" sample, the patient would seemingly respond as though the treatment was being applied firsthand!

And thusly was the age-old process of sympathetic magick - the voodoo doll - packed into a prim Victorian Bakelite case with brass dials and knobs. The birth occurred at that point of a technology that has been debated, adored and loathed ever since - the science of radionics.

The fundamental premise of radionics was carried further into the twentieth century. Controversial experimenter and radio engineer T. Galen Hieronymous refined Abrams principles, and carried out many experiments until his death in the early 1980's. In fact, so many refinements and designs were attributed to Hieronymous, that his name has indeed become analogous with the basic radionic system. In England of the 1940's, George DeLaWarr worked with and promoted a radionic machine that could seemingly produce photographic images of the tuned radiation from a witness sample.

As more individuals worked with this concept, even more bizarre claims were forthcoming. For example, in the 1940's Hieronymous found that a physical witness sample was not needed for tuning a radionic machine - a mere photograph of the patient, victim, or target seemed to work as well! In the 1960's, the editor of "Analog" magazine, a well respected science fact/science fiction magazine, examined and tried a simple radionic machine, and became a believer when he reproduced the effects claimed by Hieronymous and others. In an even more outlandish twist, it was found that to produce actions at a distance, even the entirety of the electronic circuit did not need to be present. An accurately drawn electronic schematic of the amplifier, of India ink on plain white paper, with a tuner and antenna connected to it by strings seemed to produce effects that defied probability.

The Golden Age of radionics lay in the 1940's and 50's. At this time, medical doctors enjoyed an independence and freedom to pursue non-traditional techniques that was swiftly lost, and has only recently begun to show slight signs of return. By the mid 1950's, the organizations and forces that dogged Wilhelm Reich were actively persecuting and making life very hard for doctors who continued to use radionic techniques. By 1970, such machines were only to be found in the hands of hobbyists, amateur mad scientists, and a few die-hard chiropractors. The radionics subculture continued under a veil of fear. A handful of small companies in the U.S. and Europe continued to produce radionic machines, but sold them with a full contingency of disclaimers against any medical applications. Reprisals against any medical claims were swift, at the hands of the FDA and the AMA. Life was easier in England and Europe, where use of radionics was placed alongside other acceptable alternative therapies such as herbs, acupuncture, and colour therapy.

To be sure, radionics was, and is, not just for healers. Radionic machines have been used for agricultural applications, such as weed and pest control. They have also been used, if we believe our sources, for espionage and remote surveillance. Howard Zirger claimed he got better gas mileage from his K Car by placing a photo of the engine in the well of his Kelley Machine, and tuning it for "increasing energy"...

Does radionics, the 20th century contribution to sympathetic magick, really work? Our answer is "sort of...but not always...and usually not in the way you want it to..."

Nick: "As I began to mention, I built a simple two-dial radionic machine in the fall of 1986. I seem to recall that the plans had been available at one time from Borderlands, or some such clearing-house. It was housed in an aluminum box, and had an appropriate sample well for photos, hair clippings, chemicals, etc. The three-transistor amplifier drew a few milliwatts at most, and was connected to a three-foot whip antenna.

A man without a vendetta is likely to use radionics for benign screwing around. I procured small samples of hair from my son, myself, my spouse, and the dog. When Trevor came down with an ear infection, I went to work on him, "cold tuning" for settings until I felt a distinct stickiness. I then placed a little sample of his antibiotic in a pill bottle and placed it in the sample well with his hair sample. To my admittedly hopeful expectations, by the next morning, my little son seemed much better, and was without discomfort. One data point proves nothing, however, especially in statistics. Over the next year, I tried a number of experiments with my radionic box, ranging from the removal of fleas from George the dog, to trying to help a recently jilted girlfriend of my spouse's get revenge on her ex. His truck engine blew up a couple of days after our "treatment". But then my own car engine lost its diesel fuel injector pump the day after that...

Curses always rebound onto those who cast them. Apparently even those cast electronically...

I had drifted into orgone experiments in 1987 and 1988, and gradually left radionics behind for a time. The distinct impression I was left with was this: the principles of radionics were pretty uncertain, and the results were realistically indeterminate. However, it did appear that on just enough occasions to be interesting, probability seemed to be defied, and a positive result seemed to occur. It also occurred to me that the effects at a distance that were curiously on the mark were also those that were rather trivial in scope. It was easier to de-flea George dog than it was to kill weeds in a 50 acre imperiled bean field. Perhaps radionics works where it is easiest to help probability along. For our sake, the jury remains out, with no firm verdict in sight."

Today, we have in our possession of a set of radionics equipment that was bequeathed to us by Howard Zirger. Occasionally, we will fire one up and experiment. However, the reader might be yet wondering at this point why the topic of radionic machines, the modern first cousin of the Voodoo Doll, is appearing on this Bridge, as opposed to the Bridge of the Mystic. It is a matter of connection. Consider this: If the principle of radionics is valid, it seems to involve the creation, propagation, and interpretation of pattern or spectra. The patterns maybe said exist in the primordial background ocean of energy - the quantum vacuum, the aether. By understanding how it might be possible for patterning and coherence to occur in the aether, we arrive at a greater understanding of reality itself. More importantly, since radionics ultimately requires the presence and interaction of a human operator, it is a connection between the subtle energy forms within us, and the greater ocean of aether that lies outside.

And now comes the story of a machine, a man, and a grand paradox. It is a tale of a mad scientist's mad scientist, and how the joke has been on all those to visit him, because each has walked away so very sure of how the wonderful weird device that they

witnessed worked. We present John Hutchison and the poltergeist machine. The aether at its most capricious behavior.

John has been written about for twenty years by assorted new science, new age, Teslaphile, and skeptical writers. This will not be a biography, from our perspective, but a view on an enigma. Names, dates, and circumstances are recounted from notes and memory, as a number of our contacts from that era are no longer to be found.

Nick: "I first heard about John in 1989 from one of my orgone energy correspondents. I was told that there was an experimenter in Vancouver, BC, who had built a machine that could produce intermittent poltergeist-like effects artificially. The operation of the machine was somewhat enigmatic, and rumor was that it was actually more of a system of linked high voltage and RF devices. I was provided with John's phone number and address, although I waited before contacting him until I had acquired a better background on the whole scenario. The story unfolded like a road map.

John Hutchison was an electronics and radio enthusiast whose passion for playing with high voltages and Tesla coils extended back to his teen years in the 60's. He did not possess any known college or technical degree, but was a self-taught experimentalist. Hutchison apparently was not forced to hold a day job, having lived for a number of years on disability pension for an undefined condition that also restricted him to a fairly house bound lifestyle. He was also beloved by a broad network of friends and relatives, who often contributed to his welfare.

As I understood it, John began to observe his poltergeist effects in the late 1970's. The anomalies would occur in his basement "laboratory" where he had accumulated unearthly quantities of high voltage and radio frequency equipment. The phenomenology was simple: when John would have a number of his pieces running at the same time, all producing sparks, radio waves, Tesla coil discharges, or electrostatic fields, strange things would start to happen. Not often, mind you. Perhaps several times an evening, or maybe only once a week or two. Hutchison would observe loose metal objects lift up off of the bench top and flip through the air. Other objects would shake or gyrate. A steel file became white hot and shattered. Plasma balls or sheets of coloured luminescence would appear spontaneously. Sometimes, like an unseen hand, the effects would reach out of the basement and manifest elsewhere in the house, though seemingly never travelling too much further than the nearby outdoors.

As the years went on, John added more devices to his 'web of energy' (quotation marks mine). Larger Tesla coils, a Van de Graaf generator, some small samples of radioactive materials - as he added to the system, the frequency with which the anomalous effects occurred increased. On one well-investigated occasion, a piece of aluminum metal embedded itself in a wooden beam. When analyzed, an amazing effect was discovered. There existed a region within a few millimeters where the wood and aluminum seemingly transitioned into each other! The aluminum had taken on the form of the wood grain, and the nearby wood had seemingly become partially aluminum!

In the early 1980's word of Hutchison and his 'machine' had spread around the world, and John found himself contending with many offers for study, critique, and partnership. Without a doubt, the most exhaustive research on the Hutchison Effect, and in our opinion the most astute and balanced view, belongs to George Hathaway, a professional engineer and alternative technology researcher from Toronto. George, along

with an associate at the time, spent month after month analyzing effects from Hutchison's set-up, logging events, and attempting to replicate the effects at a second lab. From this research came a sizeable collection of videotaped occurrences. Analysis of mechanical forces and vectors needed to produce some of the levitating effects have been carried out from these segments. I have since personally viewed original versions of some of these video clips, and will vouch that they bear an uncanny quality, and make one a bit nervous. The quality of objects as they lift off is eerie, and certainly does not look like any imaginable forgery or trick.

In the end, by the 1990's, George Hathaway had moved on to other research pursuits. However, to this day, he firmly maintains his opinion as a scientist and engineer that Hutchison's anomalies were quite real. While there has never been any evidence whatsoever to indicate hoaxing or falsification by John Hutchison, it is also acknowledged that he is almost certainly a factor! No anomaly has ever occurred without John being somewhere nearby. The lab set up by George Hathaway and his group achieved no anomalies EXCEPT on occasions when Hutchison was visiting!

Another factor involved a basic difference in approaching the phenomenon. Most engineers would call for a reduction of the effect to a lowest common denominator - take away components of the system until the effects no longer occur. Hutchison, on the other hand, has always taken the artist's approach - seeking new patterns and effects, by perpetually adding more electromagnetic devices, or moving things around. Coupled with a mercurial temper befitting a French Impressionist painter, many linear thinkers and researchers were simply unable to deal with John for very long.

After learning most of the basics, I did manage to contact John and spoke with him on a couple of occasions. I personally found him to be a cheerful, pleasant fellow without a hint of guile or desire for self-aggrandizement. Few revelations were forthcoming, although in conversation, John divulged that he had recalled what might have been a UFO/Visitor encounter from his boyhood. He felt that he was, in some way, affected by that event for the rest of his life.

For a number of years after that, I kept a watchful ear and eye out for any new information regarding John and his machine. I would sometimes get updates second or third hand from Canadian contacts, and noticed that mention of John was nearing cult status on the Internet.

On occasion, John seems to be prone to run-ins with the local constabulary. The conspiratorial-minded from the alternative science community have often looked upon this as evidence of a dark 'greater scheme' against him. Upon closer inspection, though, it has generally been due to delinquent payments on power bills, or other minor altercations that have nothing to do with his Effect. John has, on at least a couple of occasions, had some of his equipment seized, but again reasons here seem to tend toward the repo-man and bill collector than the secret government.

Here is the point: John Hutchison remains alone in his production of anomalies of this sort. To date, no one to our knowledge has successfully reproduced his Effect. However, while no one has reproduced it, no one has ever found evidence of fabrication or hoax. He and his system are discussion fodder for hundreds of new energy enthusiasts and Teslaphiles on a daily basis. The theorizing among those circles seems endless. Microwaves? Purely inductive effects? Cohering of the aether or zero point energy? Vague talk of electromagnetic vortexes set up from the many radio frequency and high

voltage patterns all at once? Or is it pure PK from John himself? Until it is reproduced outside of Vancouver, all speculation is equal, including ours. Hathaway and colleagues have never made any formal statements about firm explanations. All who come and witness, or who read and believe, walk away with their own theory.

In 1997, we had an epiphany about the matter. From this epiphany came a design for a device that could be considered our stab at replicating the Hutchison Effect. The machine of ours sits on a shelf for now, awaiting finishing and testing, and it sometimes seems as though just when I get the yen to finish it, other more pressing research matters come along.

I called it the Pentathelenom (penta for five - THELENOM being an acronym for thermal electron noise magnifier) If I ever finish it, and it works, its theory of operation is this:

The quantum vacuum/zero point exists around us as an incredibly dense ocean of energy, but it is in a purely chaotic state. In fact it could be considered the ultimate in chaos, where all probabilities are summed and negate each other. Now consider the human nervous system. From billions of synapses come electromagnetic emissions that even though incredibly weak, form a very specific, although highly complex, spectrum. It is white noise of an electromagnetic sort, but yet white noise that is subtly patterned.

We have suspected that the occasional physical effects of macro-psychokinesis or the poltergeist phenomena could be due to this human neural spectrum achieving a resonance with a small portion of the chaotic vacuum energy. For a brief instant, a small but powerful portion of the vacuum energy is released, throwing a door open, or causing a fire, or a candle to fly off of a table - like a small signal biasing a power transistor attached to an infinite power supply.

Now suppose that John Hutchison represents a personality type, as evidence might suggest to us that is on the threshold of the psychokinetic. A mercurial, maverick, right brain personality, cordial one moment, or angry the next. A French artist. A 15 year old girl. A mad scientist. A dreamer. A soaring mind. This personality surrounds itself with Tesla coils, and Van de Graafs, and spark gaps, all roaring away in unison, flooding the immediate area with an electromagnetic emulation of the vacuum energy itself - except in real time. High energy density, high chaos.

From this, then, could come reasonably frequent points in time where the triune system - PK prone personality/high energy EM noise/quantum vacuum enters an ordered mode, and a pattern ensues, engaging a download of energy from the aether. Metal bushings fly, fires break out, and luminous plasma blobs whiz through the air.

Our own machine consists of a number of stages of RF noise generating circuits that are fed into each other to create ultra-chaotic waveforms. These are then fed into several stages of amplification before being sent to a ring of five coils or plate transducers, where the operator sits. Our theory suggests that in the region of space where the chaotic emissions from the five coils mix, a human operator might be able to pattern and induce Hutchison-style poltergeist effects - perhaps on demand.

When the shadowy powers allow us to finally test this machine, you will be the first to know!"

Aether and Form

In the Bridge of the Earth, we discuss the findings of the late Dr. Hans Jenny who found intricate and surprising patterns emerge from granular materials exposed to sound. We also know that frequencies and modes of acoustic vibrations, as well as electromagnetic waves can be determined and affected by geometric form.

There exists interesting evidence that the energy of space, the dynamic aether, can also be affected by physical form and geometry. The mechanisms of this relationship remain unclear, and will likely continue to do so until we define the aether to a greater completeness.

In Hindu tradition, not only do prayers and thoughts have a sound - the mantra, but there exist intricate geometric representations that are imbued with the essence of the prayer or thought. These are referred to as Yantras. Many magical systems through the centuries have made use of geometric symbols and characters in their rituals. Images for the purpose of focusing thought and intent? Or do subtle wave phenomena in the aether respond to patterned aggregates of molecules? A hexagram inlaid in gold on a ceramic tile may be a delicate and inspiring form, but is there evidence that it couples in some way with the ocean of energy around us, as a directional "YAGI" antenna couples with radio waves of the right band? We speculate.

In the early 1970's, the phenomenon of "pyramid power" burst upon the counterculture scene, and hints of it showed up in a number of otherwise respectable college and high school physics labs. For many of us, awareness of the possibility of this effect nurtured a greater wonderment of the forms of energy around us. It also provided skeptical thinkers with a goodly amount of fodder (and in truth some of it well deserved) for decrying junk science.

In some respects, the pyramid craze was the result of auspiciously timed marketing by individuals who had been in radionics and alt-sci since the 1950's. The history of pyramid power actually extends back to the early part of the century. In the 1930's, a Czech radio engineer by the name of Karel Drbal experimented with small metal and cardboard models of the Great Pyramid at Gizeh. He claimed that in and around properly built models of the Great Pyramid, unusual phenomena would occur. Meat and organic materials would not rot, but dehydrate - like a mummy. Tungsten razor blades would supposedly spontaneously re-sharpen themselves. In an overall sense, it seemed as though the pyramid form was somehow playing havoc with the Second Law of Thermodynamics - a venture quite impossible by conventional understanding! Materials used to build the pyramid models seemed to be of less importance than precise shape and proportion. If one were to believe the claims, it seemed as though magic was being worked by form alone!

Nick: "The craze succeeded in a way, also, because pyramids were so damned simple! Any junior high mad scientist could fabricate them on a Saturday afternoon. And so I did!

My bedroom was a haven for pyramids as well as lint. But rather than dwell on their mystique, I truly made a valiant effort for a thirteen-year old to do some experiments with them. I tried dehydrating flowers and cheese bits, which did seem to produce some uncannily preserved specimens. Of more convincing merit, I used one of Dr. Pat Flanagan's Pyramid Matrix devices to "charge" water with which I watered one group of alfalfa seeds, while watering a control group with plain tap water. I can still

recall my excitement as I watched the pyramid water alfalfa sprout faster and grow taller than the control. I was hooked. I still am. My eighth grade science fair project on pyramid power never went past district, but what did I care.

There have been other enigmatic examples of form-producing, surprising effects. Another book from the 1970's, not as well known as the paperbacks on pyramids, was an enigmatic and apparently now long out of print book entitled The Psionic Generator Handbook. This was a supremely fascinating work. It consisted of an over-sized paperback with cut out patterns that could be folded and taped into a variety of 3D geometric forms, such as pyramids, cones, tetrahedra, etc. When certain combinations of these forms were strung up on thread, like mobiles, they were said to spontaneously spin by the psychic or auric influence of the experimenter. These "psionic generators" were said to be based on eastern European and Russian findings from the early Communist era, notably the work of Pavlita. The topic is briefly covered in the well-regarded genre classic Psychic Discoveries from Behind the Iron Curtain.

I built and played with these eagerly as well. And to this day, I confess that while some of the forms did nothing that I could discern, others genuinely seemed to spin and even reverse their rotation to my efforts of concentration. Since the early 1990's I have searched for another copy of The Psionic Generator Handbook, having long ago loaned my original to a party with whom it vanished. Thus far, the search has been to no avail, despite on-line bookfinders and diligent bibliophile chums. We will someday score a copy, though, and play with these wondrous mobiles anew."

The essential rationale for why certain geometric forms and shapes should couple with the aether/vacuum in arbitrary ways remains obscure. In New Age jargon, pyramids are spoken of in terms of "patterns" and "vibrations" and often used in the same breath as 1980's quaint concepts like "tachyons".

Nevertheless, recent developments in quantum vacuum theory have included experimentally supported predictions that relate to form. For example, Casimir forces may be either repelling, attracting, or even bizarre mixtures of the two depending on surface textures of materials, shapes of surfaces, material compositions, temperature, and cavity dimensions. While it is unknown to us whether or not any quantum vacuum specialists have examined Casimir forces around pyramids, we would say that it is not improbable that someday, very unique energy densities and reaction forces might be proclaimed.

Gravity and Anti-Gravity

In Classical and hermetic traditions, the aether was the source of spirit, and by extension - life. In its modern rebirth as the quantum vacuum, the aether is also seen to be a potential source of incredible electromagnetic and mechanical forces. We believe that as time goes by, applications for the benefit of humanity in all of these areas will be found and developed. Indeed, this is part of what our foundation is dedicated to!

One other great potential exists within the scope and lore of aether - the understanding and control of the least comprehended and most elusive natural force: gravity.

A few years ago, we were asked what possible use anti-gravity or gravity control would be. Our answer was simple! Of what use would it not be!? Control, reversal, or manipulation of the force we call gravity would measure up to the wheel, to fire, to electrical current. Most obvious would be the revolution in a human pastime that we believe in firmly and passionately - space travel. The stars would be at last opened to us, with wonder to follow. Here on Earth, the applications would be just as far reaching. Efficient reduction of apparent weights of freight and payloads by even 10 to 20 percent would mean enormous savings in transportation costs due to fuel, and result in an equivalent reduction in pollution. In the construction and rescue fields, methods that could render concrete and structural materials weightless would benefit society tremendously.

In one sense, we have attempted the defiance of gravity since Montgolfier flew his balloons, and perhaps even since Icarus and Daedalus dared Helios to melt their wing wax. But flight and buoyancy have come at a cost. We burn petroleum by the mega-barrels to fly crates of bananas and peacekeeping troops from one continent to another. We creep between the Earth and moon by brute force. We remain locked into our solar system by life span and space program budgets and the cost of hydrazine. Every inch of the way, we struggle and overcome gravity by the sweat of our brows alone. And all the while, the gods snicker.

While man was busy in his emulation of bird- wings and his balloon sojourns, from the Renaissance to the 20th century, a handful of thinkers pondered the other great option of flight - the cancellation of gravity itself. A common thread connected these thoughts, from Newton to Tesla - the notion that gravity, just like light, was somehow connected to or transmitted by the aether. However, then as now, the nature of gravity is just as obscure, and open to all fair speculation.

From the last three decades of the 19th century to the 1920's, the new frontier of electromagnetism tantalized the imaginations of those who speculated on the direct control of gravity. Experimentalists often speculated that by manipulation of electrical and magnetic fields, the force of gravity could be affected somehow.

In 1905, our beloved home state of Ohio gave birth to a man whose name has lived on in the anti-gravity hall of fame: Thomas Townsend Brown. Of all the early gravity experimentalists, Brown took the lead into investigating the possible connections between electrical stress and gravitation. As we will see, a certain mythos has evolved around Brown, and to this very day, his experiments are debated and trumpeted in print and on countless Internet web-sites.

T.T. Brown was born to a prominent Zanesville family, and spent his childhood there. He was a precocious lad, and the epitome of the Tom Swift breed of "boy mad scientist". When in high school, Thomas experimented with salvaged high voltage power supplies and X-ray tubes. He observed some curious mechanical actions of highly charged tubes, and carried his fascination with the anomalies on to college.

In 1928, Thomas and his physics professor at Denison University, Dr. Paul Alfred Biefeld, worked with a curious effect that seemed to indicate a reaction force of space/aether against a highly charged arrangement of lead plates and dielectric masses. This became the infamous Biefeld Brown Effect of lore and legend. In his final years, in the early 1980's, Thomas looked back on this earliest of work as being the most inexplicable and the most likely evidence of what he termed "electrogravity". Sadly, for

the many who look into Brown's work, these earliest of experiments are the most overlooked. Definitive replications are still forthcoming.

Brown concluded his schooling in physics; he did not attain an advanced degree, although he is often referred to as Dr. T.T. Brown. His next path in life led him on to become a career Navy man. During WWII, he and his family moved about the globe on a number of assignments, many having to do with communication systems. There is an on-going rumour that Brown had been involved with the "Philadelphia Experiment", but we have found no evidence to back this up, even if the validity of this legendary event can someday be proven.

In the 1950's Brown solicited funding and went free-lance as an R&D operation in the field of electrostatic and electrokinetic propulsion. A number of patents were issued from the 1930's to the 1960's for assorted high voltage concepts. This work continued into the early 1960's, moving from benefactor to benefactor, until Brown informally retired. During this era, Brown designed and flew a variety of tethered airfoils and saucer shaped devices using extremely high voltage potentials. In retrospect, we find however, that those who reviewed these demonstrations were unable to eliminate the likelihood that the propulsion forces were due to ionized airflow and electrostatic forces, as opposed to a true electrogravity effect.

In the 1970's, T.T. Brown turned his attention to some fascinating and fruitful work on the electrical properties of rocks. We have reviewed much of this work, and have found similar effects, as recounted in *The Bridge of the Earth*.

Thomas Townsend Brown spent his retirement years on Catalina Island, near the town of Avalon. He passed away in 1986, and is buried in Avalon Cemetery. We have pondered this little piece of historical irony to no end!

For as much as we have found reason to distance ourselves from speculations of conspiracies, there are some odd facts from T.T. Brown's life and times that beg understanding. In his final years, Brown repeatedly told young inquiring scientists that he was sadly unable to give out technical information on his earlier electrokinetic and electrogravity work. The reason for this was that an unnamed company in California had bought rights to Brown's work, and that he was under orders not to discuss any of it.

We also find it curious that documents coming to light in the 1990's indicated that several of the major aerospace corporations of the 1950's had budgeted projects in anti-gravity, with vaguely reported, yet apparently positive results being indicated. Yet by the Gemini and Apollo era, these programs had vanished from history and company record keeping. Did the projects dwindle because no anti-gravity results were forthcoming? Or did they vanish into the folds of a greater...program... We wonder.

This chapter could easily be expanded into an extensive volume if we were to recount the history of anti-gravity research in the 20th century. It is perhaps easier to provide an overview of methodology, rather than details of theory or designs.

Experimentalists and theorists who have approached the idea of controlling gravity have the disadvantage of no "shoulders of giants" to stand on, as Newton put it. Despite our high degree of confidence in its characteristics, the ultimate origin of the force of gravity remains as incompletely understood in the framework of relativity, as it does in any other paradigm, such as quantum theory or string theory. We have surveyed "g" (the acceleration due to gravity) globally, and have calculated the universal

gravitational constant "G" to a high degree. We know that gravity is associated with mass, but theories lead off into the forest beyond that point.

There are fewer distinct "camps" of gravity theory than in other speculative science topics. Quantum gravity would consider gravitational force to be the result of an exchange of graviton particles, in a fashion analogous to photons carrying the electromagnetic force. Relativity would predict that gravity is a distortion of space-time by mass - the science fair model of marbles on a rubber sheet. A recent group of quantum vacuum theorists, championed by Dr. Harold Puthoff, has provided solid modeling for the forces of gravity and inertia to be due to pressures in the zero point energy. In our view, this model would seem to be the one of the most hopeful for predicting arrangements for gravity control. However, since 1997, we have also worked under a theoretical model for gravity proposed by Dr. Harold McMaster. This model, echoed by a handful of other recent "new aether" proponents, suggests that the force of gravity arises from a converging flow of space/aether into mass. Like water being sucked into a piece of porous stone connected to a pumping line, the inward accelerating flow of space/aether draws mass along with it. One of the excellent features of this view is that it provides the option for reversing the flow, thus producing negative or anti-gravity.

Thus, with several tentative models and methods, but no firm proof, the search for anti-gravity ends up being one perhaps best suited to the empirical or even the serendipitous. Indeed, it does seem as though those few examples of experimental evidence for anti-gravity have arisen from intuition, chance, or accident. As a boy, Brown saw slight movements of an energized Coolidge tube that happened to be suspended from twine.

One of the more modern anti-gravity "up-roars" occurred in 1992 at Tampere University in Finland. Dr. Eugene Podkletnov and colleagues were experimenting with energy storage in rotating discs of YBCO superconductor, when they observed that dust in the room and mist from their cryostat was rising in a column over their experimental apparatus. It was then found that when solid masses were suspended over the device, these masses would lose up to 2% of their weight. While positive replications of this effect have been sparse and controversial, even NASA became convinced of the possibility that something real was going on, and has spent close to \$1 million dollars since 1996 on limited budget projects and SBIR contracts to investigate.

Another philosophy ends up being of potential use in our quest, however. That is the time-honored precept of natural observation. Man learned to make fire by watching the aftermath of a lightning strike, or by experimenting with spark producing rocks. He learned the advantage of the wheel by watching logs or boulders roll along. He learned to fly by watching the form and motion of bird wings. Anything we wish to harness to our use as a technology exists somewhere in our universe - in nature, if we can only find it and watch it. In on-going work with Dr. Harold McMaster, we have spent considerable time examining models of black holes to look for phenomena that could be attributed to anti-gravitational forces in nature. In particular, the axial jets or plumes of black holes may be useful features to examine for clues.

Some investigators have acquired evidence that anti-gravity effects exist in living systems. This, it would seem, is of little surprise in light of the notion that living systems utilize or interact with the aether in assorted ways. Dr. Orvin E Wagner of Oregon has claimed that a gravity -like force with a limited range exists in the microtubular xylem

tissue of living trees. This force may be a missing link in the long-debated model of sap flow in tall trees. We have attempted some bench-top replications of this effect with wood samples, although results have been unclear to date.

The Russian experimentalist, Grebennikov, claimed that gravitational anomalies occur near natural structures such as bee and wasp hives that contain many small volume holes or voids.

We have also considered that valuable clues might be forthcoming if we examine cases of either macro-psychokinesis or even claims of shamanistic human levitation, provided that such cases could be ruled out as hoaxes or illusionism.

While radionics is a field ripe for the ugly fungus of shysterism, because of its easily marketable form, anti-gravity suffers an equally bothersome affliction - mythos. With so little in the way of solid results, legends and rumours abound, and with the unfortunate help of the Internet, it can grow to enormous proportion. The alleged fragment of the Roswell crash promoted by the Art Bell show a few years ago (the Bismuth and Magnesium layered metal) while titillating the UFO community, has done more damage to the antigravity community. Whole websites have grown up around speculation based on 2nd or 3rd hand accounts of supposed unusual properties of this piece, which we determined to actually be a slice of very earthly industrial residue.

It is equally unfortunate that even legitimate researchers such as T.T. Brown fell posthumously into the mythos pantheon. Countless web pages exist linking Brown to everything from the Philadelphia Experiment, to Alternative 3, to Area 51 secret saucer factories.

Since 1997, we have performed a number of experiments in anti-gravity, many as part of the ongoing research project funded in part by Dr. McMaster. We have attempted to look for changes in weight or the force of gravity near such arrangements as high speed rotating discs and magnets and electrostatic fields. We have tried replicating Podkletnov's claims on a smaller scale. We have tried assorted variations of Brown's electro-gravity apparatus. We have vibrated superconducting powders, and have looked for miniscule deviations in magnetic susceptibilities of materials with magnetic field reversals. We have swirled turbulent liquid metal near accelerometers and suspended masses.

Admittedly, results have been slim. On two occasions, we repeatedly witnessed some promising anomalies that "went away" and could not be reproduced again. We have seen some modest but promising weight change results using high voltages applied to curved or spherical capacitors. These, however, have a long way to go before we are past the "artifact removal" stage. ("Artifacts" being the scientific term for unforeseen influences that can give false results in an experiment)

With so little known about the ultimate source of gravity, the control of gravity is certainly a vocation that continues to arouse sidelong glances and downright harassment from the scientific establishment. It is also not for the sloppy or half-hearted. Experimental artifacts abound, and observations must be thorough and careful. In the darkest night, we have pondered the following: what if the method needed to control the force of gravity turns out to be something ...well...very silly..? As a culture, we appreciate the high-tech motif of electronics, or fast powerful machines, or things like lasers and superconductors. Can we handle the "weird-out", if anti-gravity comes in the form of a song, or a chant, or symbols or shapes? Or clay cauldrons filled with boiling

mixtures of exotic organic compounds? Can we handle anti-gravity if it comes along in a form that is technologically embarrassing?

We quest and quest and quest, the barking and baying of the Questing Beast leading us onward down the curiously floating bridge...

Reflections from the Bridge

The Aether, the Old Mother of Everything, Tiamat, Universal Energy Field, or Quantum Vacuum, can be directly experienced in the objective realm of science as well as in the subjective realm of ancient meditative traditions. It is still beyond our best abilities of description, but there do seem to be key points universally recognized by religions, mystics, indigenous cultures, and philosophers. And, we note, by a growing body of modern physicists.

It is a dynamic, creative energy that is unbounded, permeating animate objects, inanimate objects, and empty space. It connects all objects to each other, although its density may vary.

It seems to be the "elan vital" from which all life emerges. It precedes changes in the physical world with changes in the invisible. It is not separate from us, and it is presumptuous to say that it may not also connect with other universes or "dimensions".

It gives evidence of being synergistic. This is where the simultaneous action of separate elements or agencies combined has a greater effect together than individually. It follows the laws of harmonic inductance and sympathetic resonance – much like striking a tuning fork and having another one begin to vibrate at the same frequency.

It is the opposite of entropy, even at the same time as it embodies ultimate entropy! The cycling between order and chaos is contained therein. It has an organizing or regenerative effect, but can dissolve as well. (Brahma - Vishnu - Shiva)

It is compassionate and associated with a form of consciousness. It is impartial. It does not interfere. Only those who have experienced even the smallest fraction of its resonance can comprehend this. It is boundless in its scope of unconditional love. It is the breath and the word of the Source. It is the AUM.

Our connection to this unifying field provides us with what author Duane Elgin refers to in the *"IONS Noetic Science Review"* as a "moral tuning fork that makes it possible for individuals to come into collective alignment". The new physics renews old beliefs of our interconnectedness; we are the observer and the observed.

The endearing KBHR disc jockey/philosopher, Chris Stevens, on the old television series *"Northern Exposure"* often mused over the workings of the universe. One of our favorite quotes is this one:

"When we think of a magician, the image that comes to mind is Merlin - long white beard, cone-shaped hat - you know. Well, in one version of the Arthurian legend, this archetypal sorcerer retires, checks out of the conjuring business. His reason? The rationalists are taking over. The time for magic is coming to an end.

Well, ol' Merlin should've stuck around, 'cause those same rationalists, trying to put a rope around reality, found themselves in the psychedelic land of physics, a land of quarks and gluons and neutrinos, a place that refuses to play by Newtonian rules, that refuses to play by any rules at all - a place much better suited to the Merlins of the world.

If there's nothing of substance in the world, if the ground we walk on is just a mirage, if reality itself really isn't, what are we left with? On what do we hang our hat? Magic - the stuff not ruled by 'rational' law."

The Bridge of Aether - our limited mental capacity can never hope to fully comprehend or conceptualize its power and vastness; we can only stare in awe and hope for an epiphany filled gifted glimpse.