

## Keynote Address

# SOME SCIENCE ADVENTURES WITH REAL MAGIC

**William Tiller, Ph.D.**

As Arthur C. Clarke said years ago, “any sufficiently advanced technology is indistinguishable from magic.” This presentation provides a body of experimental data that will seem like magic, based upon the present (QM) and past (CM) paradigms of world science, but it is completely lawful based upon an expanded paradigm. We have entered a new era wherein the new science being created conforms to the reaction equation  $\text{Mass} \rightleftharpoons \text{Energy} \rightleftharpoons \text{Consciousness}$ . Einstein’s great research studies circumscribed the quantitative relationship connecting the first two terms, mass and energy. In this century, our job is to provide the quantitative relationship connecting the last two terms, energy and consciousness plus a reliable theory for the convertibility of any term to any other term. Thus, it is time for humans to both understand and seriously connect their individual inner worlds to the collective outer world and vice versa. For the present quantum mechanical (QM) paradigm and the previous classical mechanics (CM) paradigm of science, the unstated assumption has been that “no human quality of consciousness, intention, emotion, mind or spirit can significantly influence a well-defined target experiment in physical reality.” Our experimental data on inorganic, organic and living materials shows that this long held, unstated assumption of science is very, very wrong. We have discovered a “consciousness” procedure for imprinting a specific intention into a simple, low tech, electronic device. This imprinted device then acts as an intelligent surrogate to raise the inner symmetry state of a room or laboratory to a thermodynamic free energy state substantially above that of our normal world. This intention imprinted electrical device (IIED) tunes this space in such a way that a corresponding target experiment set up in that space responds to this IIED in such a way that the experimentally-measured material properties change, both in the direction of the intention and to the degree specified by the intention. We have also discovered an experimental procedure for measuring and tracking the degree of thermodynamic free energy change, above the normal U(1) outer, world level created in this IIED-conditioned space (U.S. Patent Pending). In a separate series of experiments, we have tested and proven replicability of one of our four initial target experiments, by others in their laboratories located in Missouri, Kansas, Baltimore, Bethesda, the UK and Italy. In addition, in these experiments, we observed that information entanglement (connectedness) occurs between macroscopic, room temperature spaces, over distances of ~5,000 to ~6,000 miles, via an energy propagation mechanism different than any of the four known and accepted fundamental forces. Finally our experiments have also shown that all humans have their acupuncture meridian/chakra system at an inner symmetry state level that is well above the U(1) level. This means that personal human intention acts directly on this system of the body which, in turn, drives chemical, electrical and optical, etc., processes of the U(1) EM gauge symmetry aspects of the human body to manifest many if not most behaviors that we call life!

**KEYWORDS:** Intention, IIED, conditioned space, chi-prana pump

**I**t is indeed a great pleasure to be with you today and have a chance to speak with you and fill you in on what we've been doing for the last eight years. I want first to introduce you to my colleagues in the experimental work that I'll talk to you about. Walter Dibble, Michael Kohane, and Greg Fandel. Two of them, the first and the last, are with me presently in our lab in Payson, Michael Kohane is still with his family in Minnesota where we did three years of work that led to the book *Conscious Acts of Creation*. Walter and Greg were with me for this new book, *Some Science Adventures with Real Magic*.

I picked that title based upon Arthur C. Clark's statement about any sufficiently advanced technology as being indistinguishable from magic. I paraphrase that to "Any scientific data or personal observations that cannot be explained by the prevailing paradigm must be considered as magic until an expanded paradigm accepts their lawfulness as an important part of nature's manifest expressions." We are indeed heading in that direction. The last people to get it will be establishment science! But that's the way it is, and let's not worry about it. Basically we need to be fully aware of the unstated assumption of science in all its forms (over the last three centuries at least) and that is that "No human qualities of consciousness, intention, emotion, mind or spirit, can significantly influence a well designed target experiment in physical reality." There's been a lot of data around for a long time by others to indicate that really isn't true—for those who have eyes to see. However, the establishment has not had eyes to see. So we decided to do an unequivocal set of experiments to test this, yea or nea.

Before proceeding, you need to understand my personal bias. For me, we are all spirits having a physical experience as we ride the river of life together. Our spiritual parents dressed us in these biobodysuits, they put us in this playpen that we call a universe in order to grow in coherence, in order to develop our gifts of intentionality, and in order to become what we were intended to become—co-creators with our spiritual parents. That is where I stand and, although I am very objective in the scientific work I do, and I use all the available talents of conventional science, I do have a bias.

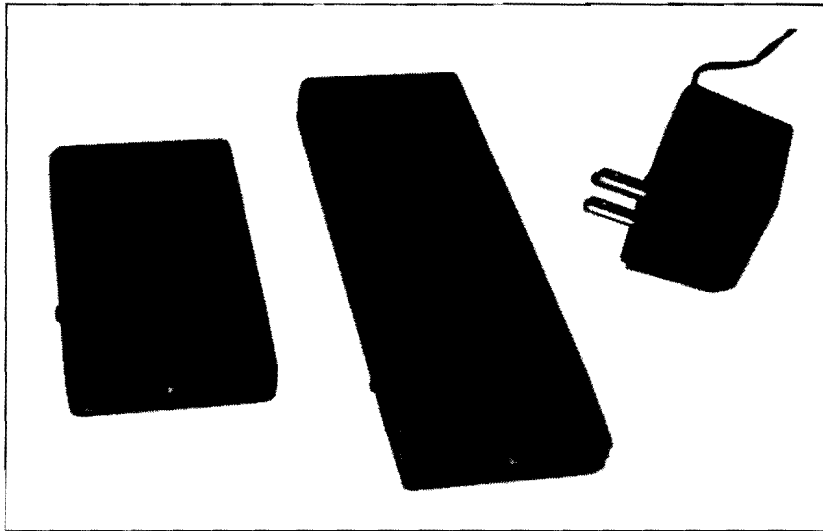
The way we approached this problem was to develop a little black box, which we called an IIED, an Intention Imprinted Electrical Device; it's a very low

tech electrical device. It has some EEPROMS in it for memory; it has an oscillator in the megahertz frequency range, it has a few capacitors, a couple of diodes, some resistors, plus an LED and a switch to let you know when it's turned on. Its total output power is less than one-millionth of a watt. This was the intended host to carry the intention imprint. Rather than use humans, as has been done in the past directly with an experiment, we decided to go the extra step of embedding an intention into a device, ship that device fifteen hundred miles or so, by FedEx, where the experiments had already been set up. Then have that device, with its embedded intention, influence the space and the equipment and whatever interesting physics it saw along the way.

Basically we started with four target experiments. One device would be used for raising the pH of highly purified water. The second device would be to lower the pH of highly purified water—each of these by one full pH unit. Our measurement accuracy was one one-hundredth of a pH unit. We were asking with intention to have a signature a hundred times the noise. That's big stuff. As you know, in terms of what is one pH unit for biological systems, in our bodies we have an internal pH. If we moved it up a half of a pH unit, we're dying or dead. If we move it down a half of a pH unit, we're dying or dead. So one pH unit is a lot for a biological system.

**W**e then moved out of the inanimate material realm (we could call it that way, but water is really special, so we'll just leave that as a question as to whether it's totally inanimate). Then we looked at increasing the thermodynamic activity of a specific liver enzyme called alkaline phosphatase. Then we went on to look at using intention to increase the ATP to ADP ratio in the cells of fruit fly larva—so that they would be more fit, and have a shorter larval development time between the larval stage and the adult fly stage. Those were the four target experiments that were set up in Minnesota. We did the imprinting. Figure 1 shows what these devices looked like: little black boxes, the one on the left in a single oscillator device; the one in the middle is a three-oscillator device, all in the megahertz range; and the far right is just a power converter for the device.

The way we did it was from a deep meditative state. We took two identical devices, set one aside to be a control and set the other one on a table top, around which four very well qualified meditators sat. My wife and I were two



*Figure 1. One and three oscillating IIEDs with power converter.*

of the four. We would go into a deep meditative state, cleanse the area mentally, link to each other, link to the unseen, and then I would state the particular intention for the device. I'll give you an example in the next few minutes. We would hold that (and the different individuals would hold it differently) and I would scroll it in my mind with silent words. That was just the procedure I used. After about fifteen minutes, when it felt as if things had been cooked enough, I would give the statement, "So be it. Thy will be done." Then we would use a subsidiary intention to seal the primary intention in the device so that it didn't dissipate itself through nature's many processes. And then again, "so be it, thy will be done." When we came out of meditation, we passed it around and people who were more sensitive said it's cooked or it's not cooked. We would generally do it a second time. We have never done it more than twice and in each case the time period was something like an hour total to imprint one device.

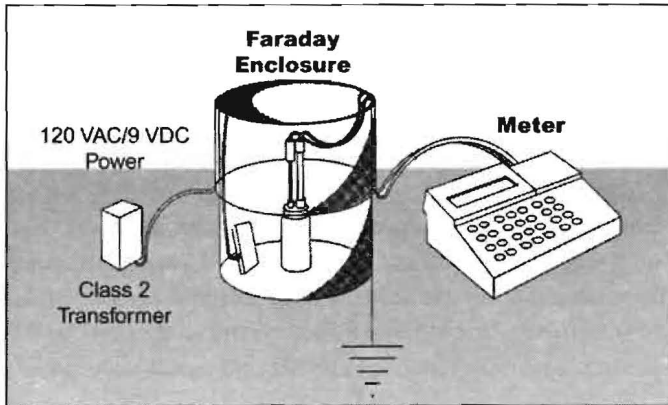
Basically for the water case, the intention was to activate the indwelling consciousness of the system and of the device, because it was going to be the active agent to be put in a room, so that the IIED increases the pH of the experimental water in that particular room by a full pH unit compared to the

control. That would be a decrease of the hydrogen-ion content in the water by a factor of ten.

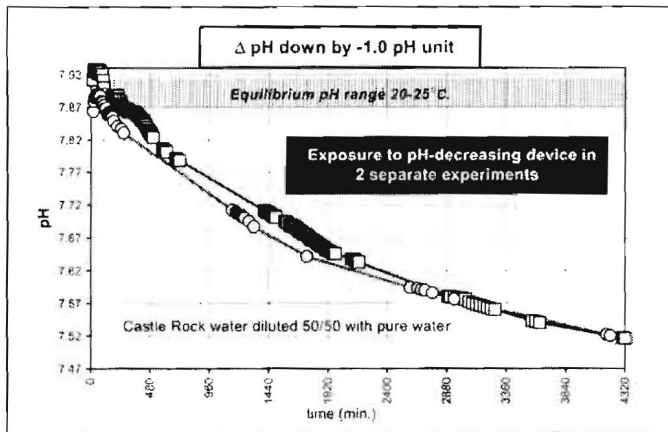
The first thing we did when we had imprinted a device was to set the unimprinted device and the imprinted device about a hundred meters apart and turned them off electrically. We had some possible expectations, and it turned out that within three to five days the unimprinted device picked up the imprint. So we lost our control. But you say, "What does that mean to us?" What it means is, since we turned it off electrically, there could be no electrical information transfer. It says that in the universe there is another information transfer mechanism from the one device to the other. In a secondary way it also says, "Hey, we did something during the imprinting process." Because of that we couldn't do experiments, because the lifetime of the device was not long enough. So we thought maybe the electromagnetics in the environment and everything else were dissipative elements. Although this stuff was not going to be electromagnetic, it obviously could interact with the electromagnetic and that would give rise to the dissipation process.

**W**e decided to wrap it in aluminum foil to block all optical frequency bands of electromagnetic radiation, and we put it in an electrically grounded Faraday cage so that we would block all the electromagnetic frequencies down to the order of a thousand Hertz. The low frequencies we couldn't do much about with simple systems. In our Faraday cages they were about a foot in diameter, and maybe a foot or a foot and a half tall. Just copper mesh. The lifetime then was extended to three or four or six months, depending upon the environment it was in. If it was in an environment where people were using their own positive consciousness, then it would extend the lifetime. So we had these four experiments that we were going to work with, and they were all eminently successful.

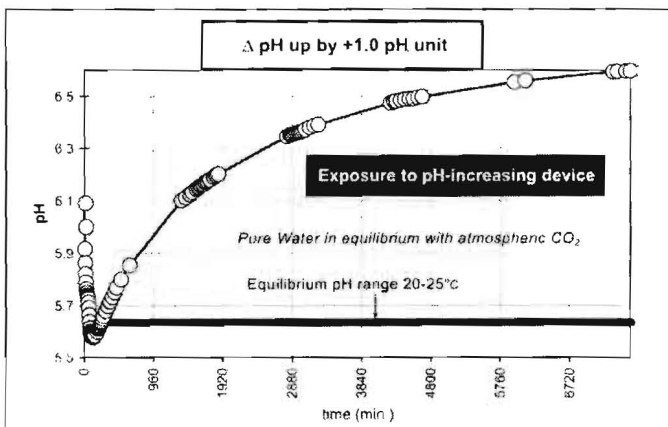
Let me just show you a bit about them. I want to first show you the kind of apparatus. Figure 2 is the water vessel in a Faraday cage, measuring both temperature and pH. The device was also sitting inside—remember its electrical output power is less than one-millionth of a watt in the megahertz range. The electrical output went to a meter and then to a computer for storage, and so on. Figure 3a is the data for a  $\Delta$ pH decrease and this was one of the early ones. It was a mix of purified water with Castle rock water.



*Figure 2.*  
*Laboratory IIED experimental set up.*

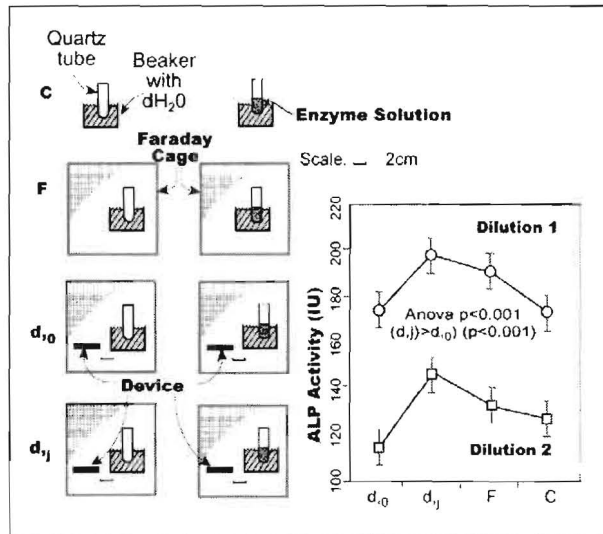


*Figure 3a.* Figure 3a shows the  $\Delta pH = -1$  unit case data for a more alkaline water.



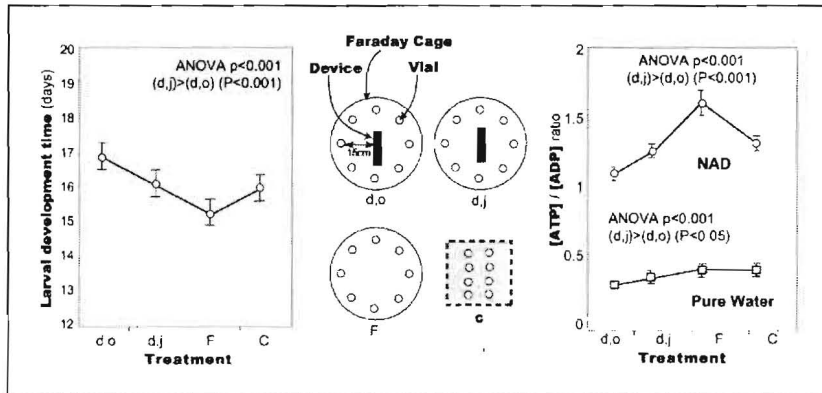
*Figure 3b.* Figure 3b shows the  $\Delta pH = +1$  unit case data showing a short buffering region at very small time to the equilibrium pH-range.

*Figure 4. The left-side illustrates the experimental set-up while the right-side provides the experimental data for the ALP experiment.*



Continuing the time, the data would drop and, after about five days, it would be down one pH unit. Figure 3b is the example for the case of the pH up. It first comes down into the buffering region to the equilibrium pH for our normal, what's called U(1) electromagnetic gauge background state, and then it started to climb over the next five days, and it went up 1.01 pH units.

**T**he next example was the liver enzyme. Basically Figure 4 was the set of treatments we had for them. They were side by side in the room with their built-in controls for temperature and humidity. We exposed these (see the left column) and the treatment was for two days. Then we put the enzyme solution in the test tube and exposed it this way for thirty minutes. Then we took the enzyme solution out and we analyzed it by an optical spectrometer procedure and diluted it 1.5 to 1.0 with water. This was dilution 1. The control is the enzyme thermodynamic activity in the ambient environment. Then you put it in a Faraday cage and it's more thermodynamically active, which says that the ambient electromagnetics (EM) are a stressor for this particular molecule, alkaline phosphatase. Next, we put in the device (d<sub>0</sub> means the unimprinted device) so it dropped down to the same level or below the control. Certainly in this case, the drop in value below the original control indicates that, although the Faraday cage screens out the ambient EM, putting this small output power, in this megahertz frequency range, said to be less than

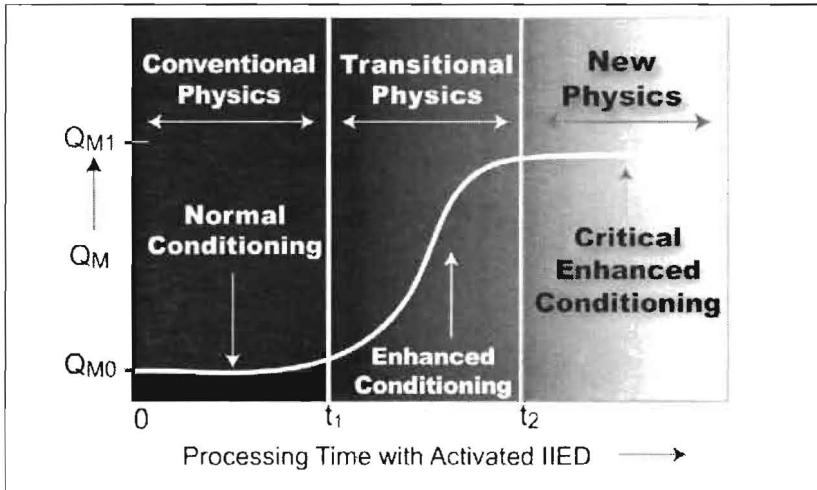


**Figure 5.** Simultaneous side-by-side, four-treatment protocol at the same temperature and humidity. The [ATP]/[ADP] ratio data is given on the right while the larval development time data is given on the left.

a millionth of a watt, was enough to really degrade the thermodynamic activity down to below the control level. And then this fourth case is with the imprinted device. Even though it has the same output electromagnetic power to bring it down to the level of the unimprinted device, the imprint intention raised it up to the maximum of the four levels. So, the statistical data from this was that p-values were better than 0.001 in all pairs.

The fruit fly larva of Figure 5 had basically the same kind of treatment system side by side. Actually the control sat on top of the no-device case in the Faraday cage. On the right, we see the ATP—the energy storage molecule of the cells. The ADP was its chemical precursor. And we see this kind of a result—with nicotinamide adenine dinucleotide, which is basically a catalyst for this reaction, causing it to occur faster. Here we see that, compared to the unimprinted device, there is a big increase. So again, you see for this very simple living system the ambient electromagnetics are a real thermodynamic stressor. Put the unimprinted device in, with its one-microwatt or less, and it really drops the activity down. Then, with the imprinted device at the same electrical output power, it raises it up. Not quite like the previous experiment, but significant. Still again, the p-value is better than 0.001 between any pair, and you have built-in controls because you are doing them side by side in the same kind of system.

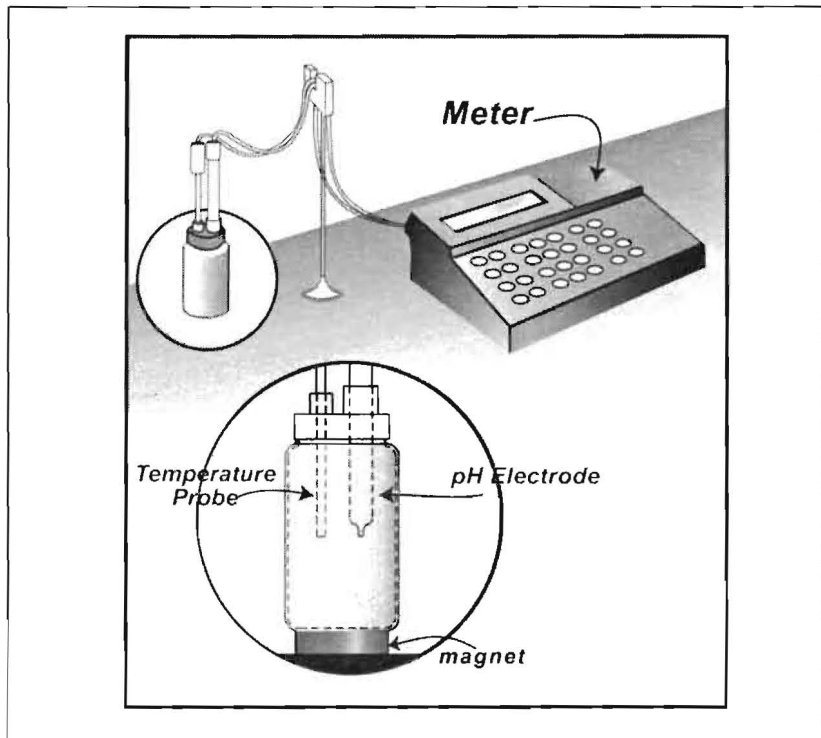




*Figure 6.* For any typical physical measurement,  $Q$ , the qualitative magnitude change,  $Q_M$  is plotted versus the degree of locale conditioning produced by continued IIED use.

What it appeared was happening here is illustrated in Figure 6. We were conditioning the space by just having this device in it and turning it on. So if you're measuring a particular kind of thing,  $Q_M$ , then you start out with the normal space value and nothing happens for the order of little over a month, one month to two months, then the system has been percolating, and something is happening. It starts to make a transition in the direction of the intention and it goes up to a plateau. You have this difference, and this difference is generally the intention statement difference in the device. At this stage, you can take away the IIED and store it in a Faraday cage. This will generally stay for one year, two years. In one case, we have firm data that it has stayed—in fact it has not only stayed, it's grown by another process—over the last six years so far, for that particular space. Very interesting.

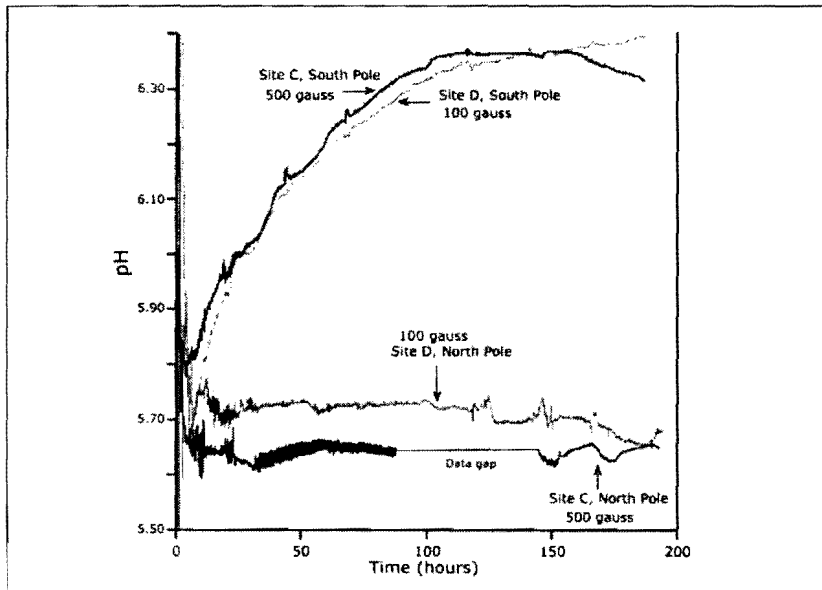
What we learned is that there are several important characteristics that we observed about this "conditioned" space. We observed what's called a DC Magnetic Field Polarity Effect. I'll explain later what that is. We saw oscillations of all the temperature, pH, electrical conductivity, air temperature and water temperature measurements. The pH oscillations were always one one-hundredth to one one-thousandth of a Hertz in frequency. Our overhead lamps



*Figure 7. Laboratory set up with disk-shaped ceramic magnet placed under the experimental water vessel.*

are at sixty Hertz. So way down, very low frequencies. But the magnitudes of the oscillations were huge compared to our measurement accuracy. There was also this information entanglement. Just like the experiment, where I set them apart by a hundred meters and turned them off electrically, they were information entangled. We saw that when the space was conditioned, and that becomes an important thing I'll tell you about as time goes on.

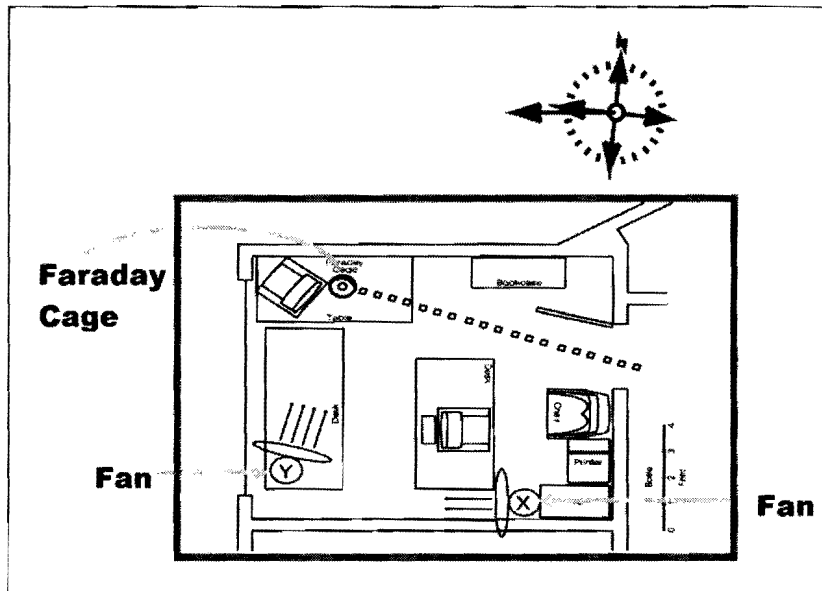
Let's first look at what the DC magnetic field polarity effect means, because that is crucial. For example, we put a DC magnet under the vessel where we were measuring the pH as in Figure 7, first with one pole up, and then after several days we reversed it to give the same circular symmetry but with the north pole up. Basically, we found that if you were to do that experiment in



**Figure 8.** pH changes with time for pure water for both N-pole up and S-pole up axially aligned DC magnetic fields at 100 and 500 gauss.

a normal U(1) gauge symmetry space then, because we have a normal reality, we only have magnetic dipoles. That means that the magnetic energy depends on the square of the magnetic field. The magnetic force is the gradient of that, which means it doesn't matter which pole is up, the energy is the same and the force is the same, so you should get no effect. And if you do that experiment in a normal space, you get nothing, no difference. But, if you do it in a conditioned space, Figure 8 is the kind of thing you get. You see the south pole increases the pH and the north pole decreases the pH. So, in a conditioned space, this example is 0.6 pH units after several days. In other "conditioned" spaces we've gotten one and a half pH units, we've gotten smaller differences as well. Basically, in a conditioned space it behaves very very differently than in a normal space.

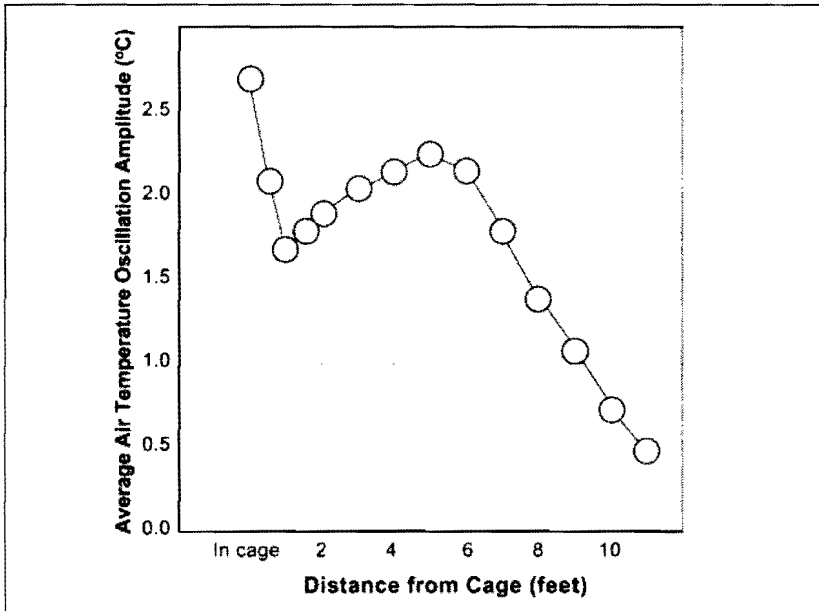
Now you ask yourself a question, "How is it possible to get that result? What does it mean, because we normally only have magnetic dipoles?" The only thing we could come up with is that we have to be accessing an odd number of magnetic charges. That is magnetic monopoles. Now our government and



*Figure 9. IED-conditioned laboratory with a line of thermistors located every 6" from the center of the Faraday cage to 11 feet outside the room, monitoring  $T_A$ .*

other governments around the world have spent billions and tens of billions of dollars looking for magnetic molecules, and they have not been able to find them. But all of these experimental laboratories were in a U(1) gauge space. It's when you "condition" the space, raising it to a higher thermodynamic free energy level, to a higher gauge symmetry state—and in exotic physics there is a state called the SU(2) gauge level, where you have electric and magnetic monopoles coexisting. And we have, I believe, experimentally done that. That's very interesting.

Let me go forward then to the oscillations experiment. First we monitored the air temperature and looked at the oscillations. We used the Faraday cage. Figure 9 illustrates the case with the water and temperature probes placed six inches apart over a total of eleven feet. On each probe we saw the temperature oscillations. The magnitude of these oscillations are about three degrees centigrade. Our measurement accuracy was one one-hundredth to one one-thousandth of a degree. So the signal to noise ratio was huge.



**Figure 10.** Showing that  $\Delta T_A$  does not decay with distance in a normal way but exhibits an anomalous intermediate maximum a few feet away from the Faraday cage.

The thing that we found interesting was that when you Fourier Transform the oscillation waveform to look at the basic frequency components making up the waves (the oscillation harmonics) we found that, unlike a normal space, all the frequencies throughout the room nested with each other. The fundamental, the first harmonic, second harmonic, etc.—they all nested. That doesn't occur in conventional reality. And then we looked at comparing the situation for the pH versus the temperature. Their frequencies also nested—impossible for this to occur in conventional reality. Something is pumping this *whole room*, this is a very macroscopic effect of room temperature behavior. Interesting stuff.

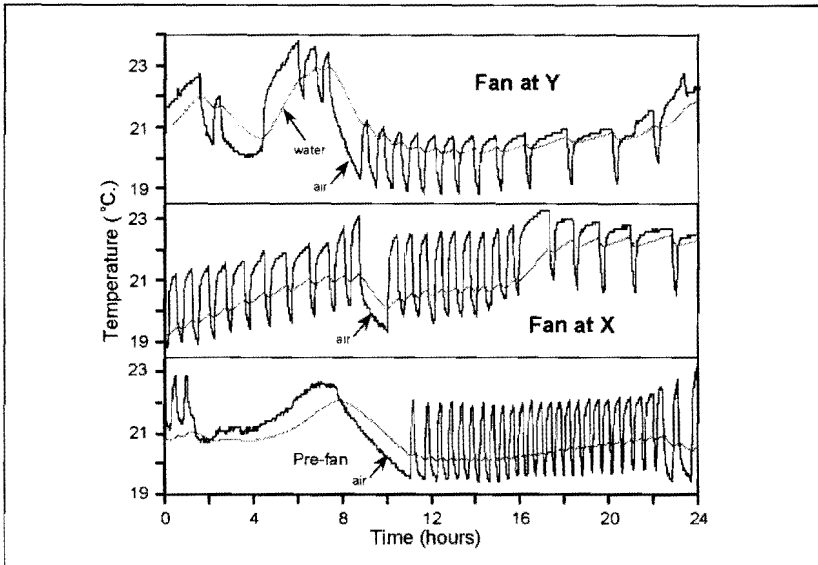
So, we went on to the next bizarre piece of data. There was a spatial pattern for the oscillation amplitude which I'll show you. Here it is in Figure 10, the spatial oscillation amplitude pattern outside the Faraday cage first goes down. Normally you'd expect things to decay exponentially to zero in this way. This pattern goes down and then goes up to a maximum, and then goes down again

over a distance of eleven feet. So the next question was to say, all right, it is possible to have temperature oscillations in the air due to what's called density inversions of the air, because you have a temperature gradient in the air which then sets up little convection cells which, for a fixed location of a thermister, generates oscillations. Now these are the kind of things you see in the clouds when you are flying: these are the kinds of things you see in a pan of water when you are heating it from below. This is called Bénard Convection.

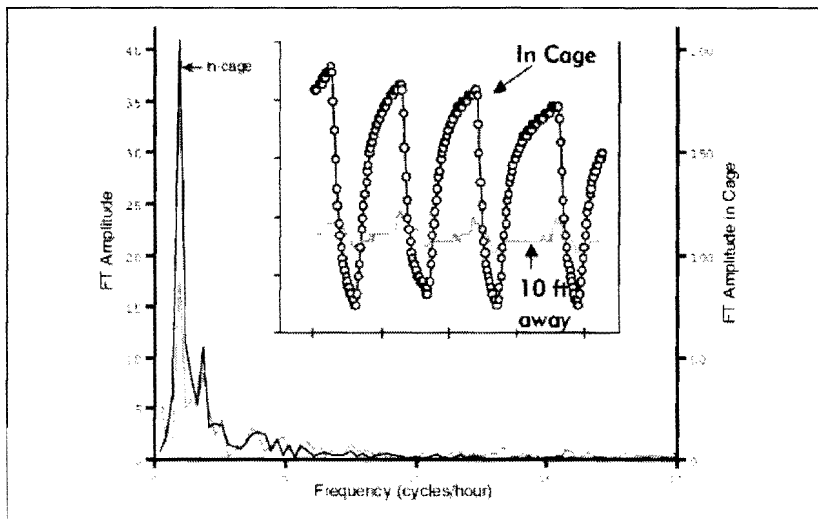
**W**hat we did then was to set up a whole line of thermisters outside of this cage extending out into the hall as in Figure 9. We could close the door of the room. We had two fans in the room, one on the floor and one on a table top. These fans are strong enough that if I put some papers on the table top they would just blow across the room. The issue here is that in conventional reality, when you have Bénard convection cells giving temperature differences and you blow from a fan, that will just dissipate those temperature differences and you will see no oscillations. Figure 11 at the bottom show the oscillations in the case with no fan. With the fan in the X-position and the fan in the Y-position you get some shifts of patterns, but the oscillations stay; they don't disappear, they're not gone. Therefore, they cannot be caused by something in the atom/molecule level of the room, something that is in the air itself. So where are they coming from?

One possibility is that they are coming from the physical vacuum level of reality. Here's what I call the physical vacuum level of reality. If you consider an atom or a molecule, the fundamental particles that make up the things like electrons and neutrons and protons, they're all very very tiny compared to the space they move in. So almost all the space of what we call an atom and molecule is *empty*. The stuff we call *empty* is the coarse physical vacuum, which contains humongous energy potential, which I'll talk about in a bit. But that's what I mean when I say the vacuum level of physical reality.

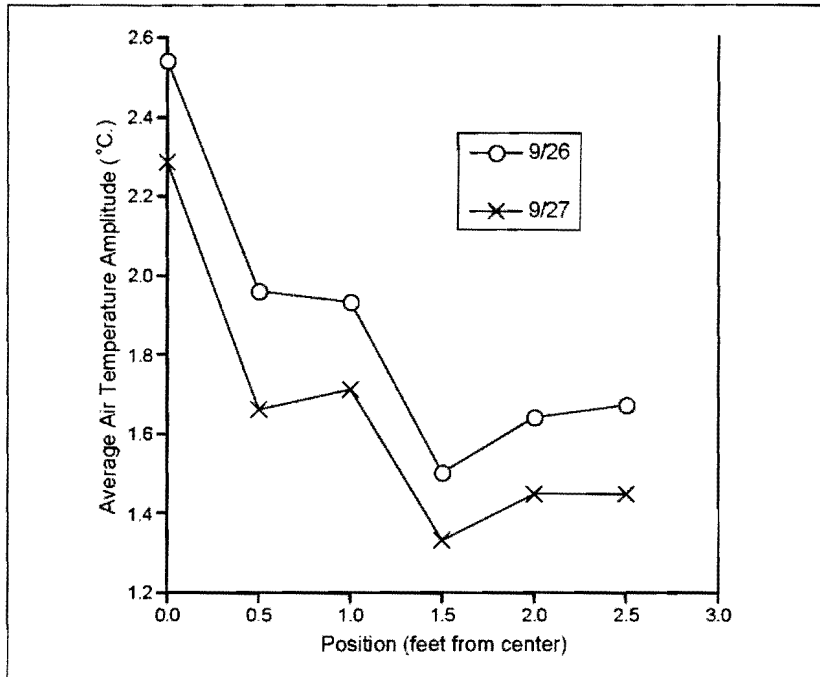
Figure 12 shows one case where we had the temperature measurements both inside the cage and also ten feet away in the hall with the door closed. And if you take the Fourier Transform they still nest. Really impressive. Not the kind of thing that occurs at all in normal physical reality. Next, we removed the cage and the water jar to a distant building. If that were to occur in normal reality, and it was the source causing these things to happen, they should collapse. They do not collapse!



**Figure 11.** Showing  $T_A$ -oscillations are not due to a density inversion in the air, or in fact any significant relationship to something going on in the air!



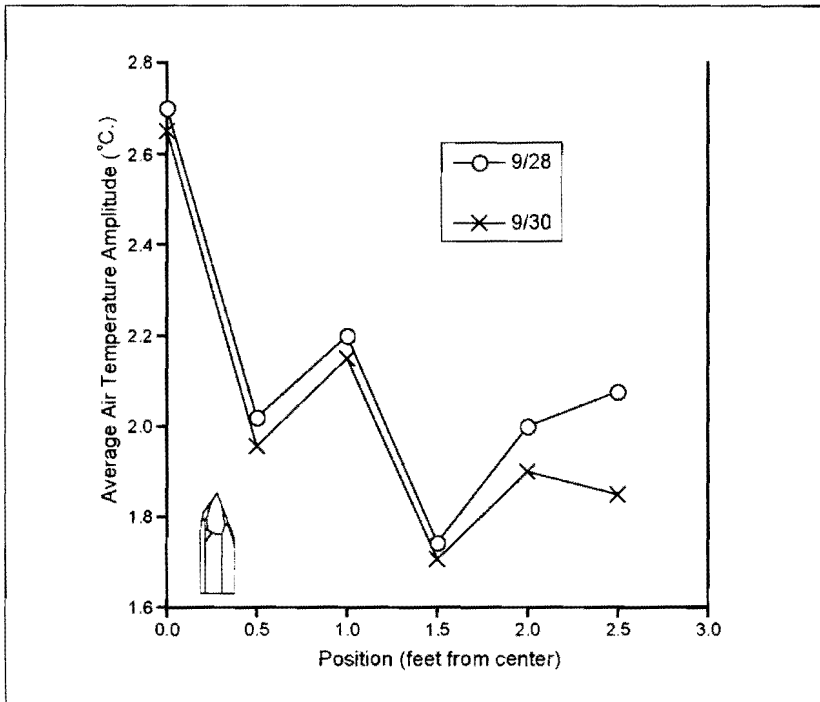
**Figure 12.** Showing very anomalous harmonic frequency phenomenon.



**Figure 13.** Average air, T-oscillation amplitude vs. distance plot, one and two days after removal of the Faraday cage and water vessel (the former Faraday cage edge was located at 0.5 feet).

Figure 13 is the air temperature oscillation pattern on this date, September 26, and on a day later, the 27<sup>th</sup>. It takes weeks to months for this to decay. There is some stuff there from this vacuum level of reality that resides and slowly decays when you remove the source. Now we did another heretical thing. We took a large natural quartz crystal and we placed it with the C-axis up in the region where the Faraday cage and the water vessel were and which we had removed. We noted something really very important. Here is the case for the C-axis being up, and what we see is that there is an increase in the amplitude of the oscillations by about 0.2 degrees (see Figure 14). And they sharpen up, and a day, two days later, they haven't decayed as far. Well, that was interesting. The next thing we did to this crystal was just rotate it ninety degrees to lie down on one of these flat prism faces and lie with the tip pointing along the line of the thermisters. Immediately we saw an abrupt change in the temper-

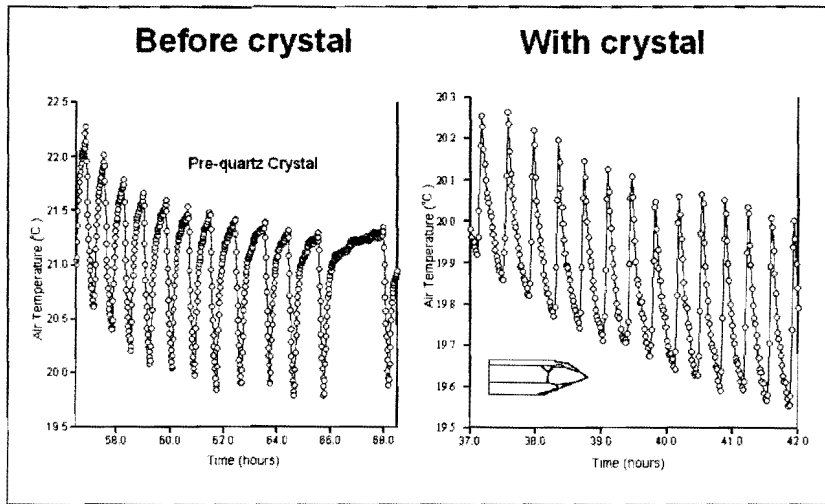




**Figure 14.** Average air,  $T$ -oscillation amplitude vs. distance plot on the “phantom” profile immediately after placing a natural quartz crystal ( $c$ -axis up) between position 0.0 and 0.5 feet as shown.

ature oscillation waveform (see Figure 15). And I say immediately! It went from the left kind of wave pattern to its inverse. The amplitude reduced abruptly, by factors of two to three. The frequency went up by factors of three to five. So if this indeed is the stuff of the vacuum, we have a way to perturb that and thus to begin to play with the stuff of the vacuum. This was one of the last things that we did in Minnesota in 2000 when we had to leave that site.

Basically we think we’re accessing a magnetic monopole effect. We think that the oscillations come from the vacuum level of reality. Therefore putting them together, we think that the magnetic monopoles exist at the vacuum level of physical reality. There is information—that I’ll tell you about in a minute—which suggests that they’re there, that they’re going faster than light. And if



*Figure 15. Showing wave-shape and amplitude changes between before placing crystal vertical and then with crystal placed horizontal in the space.*

they're going faster than light, then in an unconditioned space with the normal instruments we have, no one on this planet would have been able to detect such things.

**W**hat we deduced from this, what it means to us, is that this embedding of consciousness into a device and the device in the room, within three months something comes out of the device to lift the gauge symmetry state of the room; to increase the thermodynamic free energy per unit volume of the room. Now, in normal physical reality, at the atom/molecule level, all the processes are such as to reduce potential and increase entropy. Here, consciousness is involved from a deep state of self and we see the opposite. We see the potential, the thermodynamic potential increasing and the entropy decreasing. One would speculate that the growth of consciousness is restoring the potential of the universe, rather than it being degraded, as it has been for a long, long time. So that's really neat and very interesting.

Now the importance of it being a higher thermodynamic free energy level in an IIED-conditioned space is that if you could connect that with a normal

world unconditioned space, then it could do work, useful work on any process, electrical, optical, chemical, mechanical, etc. I mean that's the way physics works. And then I thought, "Well, I wonder if when a baby is born there is an organ or a system in the human body that is at this higher gauge symmetry state." Because if it was, it would be like what we've called the life force. It would drive all the processes, or could drive all the processes, of the body.

So we did an experiment, and we used humans. We tested various muscle groups using kinesiology with a very expert kinesiologist. We found the muscle strength associated with that particular group, and then brought the south-pole of a DC magnet into the near field of that muscle group and found that it increased the muscle strength. Then we reversed the polarity of the magnet and brought the north pole close to this same muscle group and found it decreased the muscle strength. Ergo, there is a DC magnetic field polarity effect in humans. If you look more deeply into it, the muscle group is connected to the acupuncture system or meridian system, and that, in turn, is connected to the chakra system. So in essence, it says that in humans – and probably all vertebrates, and maybe more—the acupuncture meridian/chakra system is at the higher gauge symmetry level. We've already shown that if you're at a higher gauge symmetry level, then human intention can modulate a process that can access this deeper level of reality, this vacuum level of reality. So new physics can enter, and that's what allows you to make these changes in properties. I have called this a chi-prana pump.

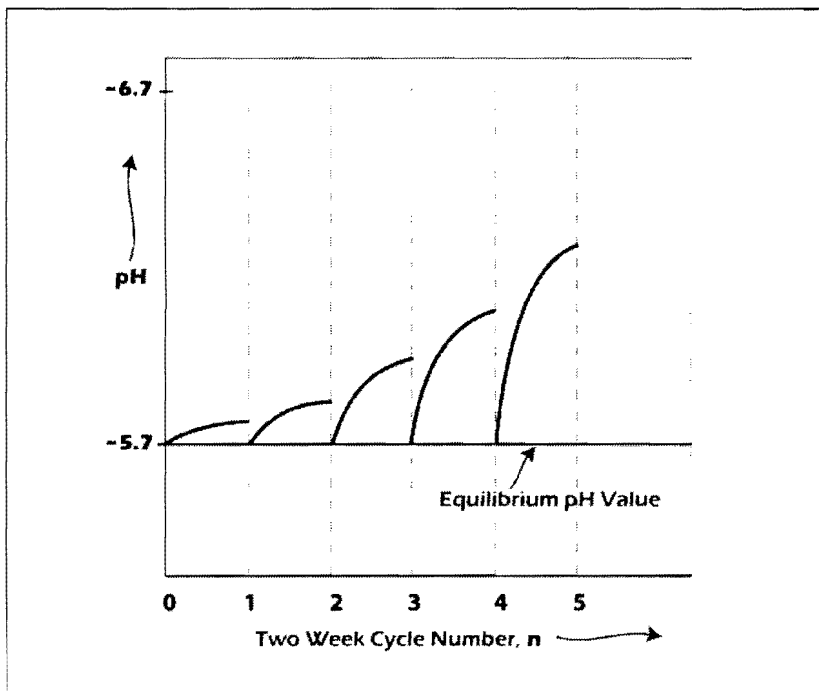
**N**ow if I have a chance to talk about theory, we get to the place where this new energy—the one that is involved with the information entanglement is very important. Here, it's the movement of the magnetic charge that will generate electric fields, just as the converse electromagnetism is electric charge movement which generates a magnetic field. So I called this new energy Magnetolectric Energy, and I think of the spectrum of magnetolectric energy as being the spectrum of chi. I haven't proven it yet, but in essence it allows the Chi concept to be connected, and we all have this capacity within us. Every single one of us. It is this aspect in ourselves which allows us—if we work with it—to move from a normal individual, to an adept, to a master like a Qigong master who can influence things from thousands of miles away, to an avatar. All of us have the instrumentation within us. It is the use of consciousness—continuous, sustained intention—that

builds us, allows us to climb this ladder, from what we are today to what all of us eventually will become. It is our path, it is our choice.

The data also says that bioelectromagnetism is quite different than Maxwellian electromagnetism. Most of the conventional scientific community think of bioelectromagnetism as just Maxwellian electromagnetism applied to biology. Not true! Certainly not with respect to humans because you have EM at the atom/molecule level, but you have at this deeper level, magnetoelectrism, which is a higher energy structure that consciousness can interact with. It has it's own photon (which still has to be proven).

**T**he next step in any new science like this is you have got to do replication studies and get others involved. You've got to see if other people can do what you've done. So I found some money to do an external experiment. I got about half the money I wanted or needed, but it was enough. We started with four sites in the United States, and eventually two more sites came online in Europe. The work started at Stanford in 1997, then went to Minnesota because it was a more favorable environment for the work. Jean and I moved to Payson in 1998, built a lab there in 2000, and started this work there after we left Minnesota. Bob Nunley in Kansas, and Norm Shealy in Missouri were the first two sites to get involved with this replication study. Later on, two in Bethesda and Baltimore became involved.

We ordered equipment for them to be delivered from the manufacturer to their laboratories and water to be delivered from the manufacturer to their laboratories. We told him how to set it up and how to test and make sure it was working all right. Then we said, "gather background data and then ship us diskettes of that data by snail mail." I wanted to minimize digital interaction as much as possible. The idea was to basically do continuous monitoring of the pH and the temperature, and to change the water every two weeks, recalibrate the electrode, and then put fresh water in the vessel, and just keep going with it. After gathering the baseline data, we sent IIED's, and this is the part we did in our Payson laboratory. We did the IIED part and then shipped it to them by FedEx. They put it in the room and turned it on, and then they started this particular process of cyclical measuring. We set up a control system, a control station within two to twenty miles of where they were. There were controls for each of these three sites, close by the IIED site. A control site *never* had an IIED present on its premises.



*Figure 16. One of the most important findings was that, when fresh water was placed in the pH-monitoring vessel on a two-week cycle and continuously monitored, the pH quickly dropped to the theoretical equilibrium value and then began to rise in an approximately exponential fashion with  $\Delta\text{pH}$  increasing with time.*

**F**igure 16 illustrates the way the data went basically. With the first cycle we saw a small exponential increase and then the water was changed. In the second cycle the amplitude increased and was still exponential, then bigger and bigger and bigger, until we got the kind of data that you might see in Figure 17. The pH went up, in this particular case 0.86 pH units, if I remember correctly, in typical exponential fashion. Other examples are still exponential but a little more noisy. At any one site, in essence, what we found with respect to these figures was, we did indeed get the replication of the pH increasing, but we found it *also* occurred at the control sites, which were two to twenty miles away. And again it's that information entanglement thing; this was at room temperature and these are macroscopic size sites. We thought, wow, isn't that interesting.

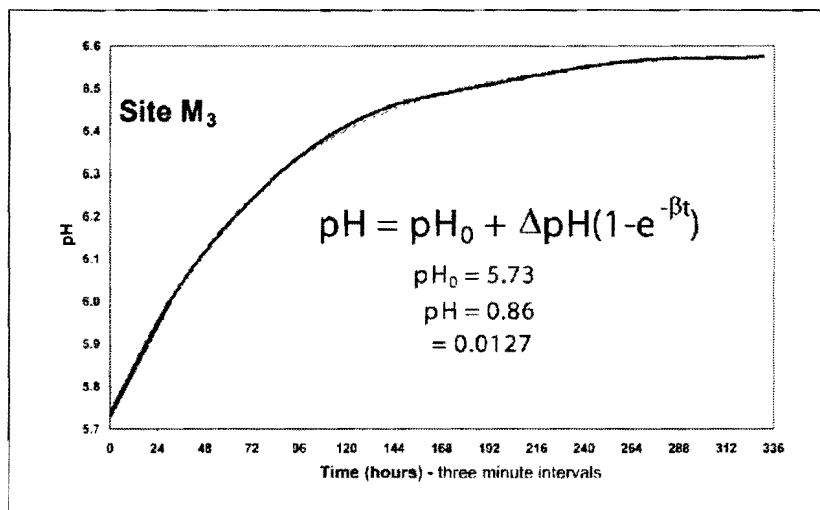
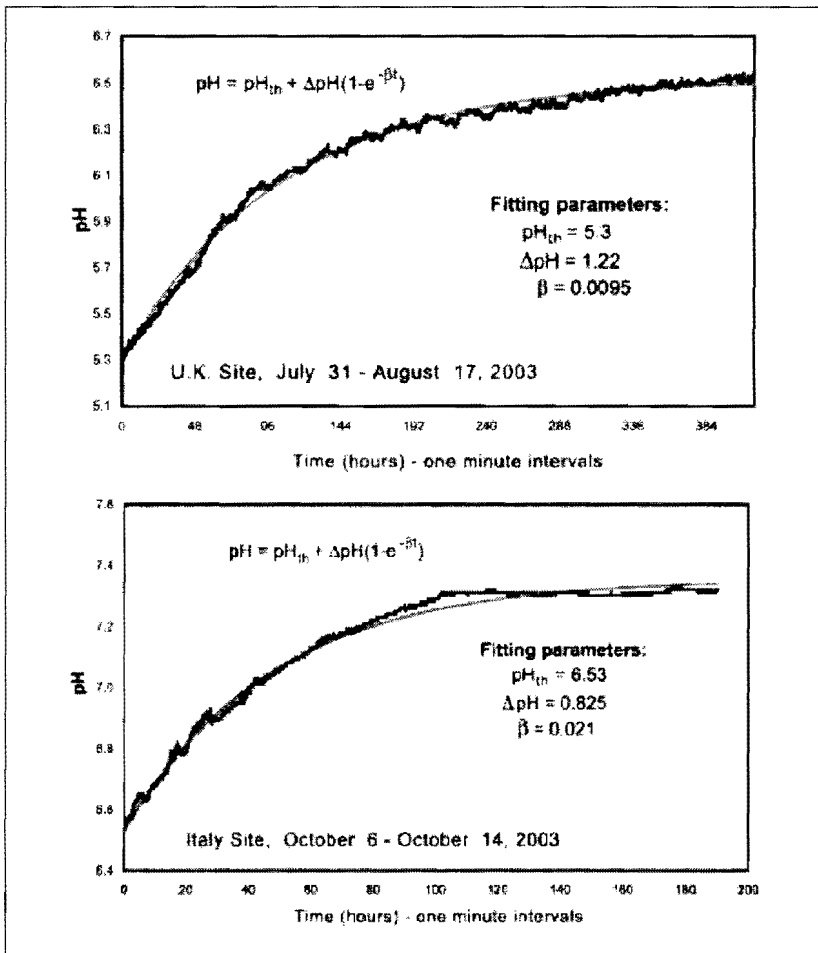


Figure 17. A typical exponential  $pH(t)$  plot from the Missouri control site.

Well, what to do about that. We thought, let's then use the sites in Baltimore and Bethesda as control sites for this whole system by having them follow the standard protocol but without an IIED. So we did that there and lo and behold, within the order of two months, the same thing happened—an exponential increase of pH. Now the information entanglement has extended itself about fifteen hundred miles.

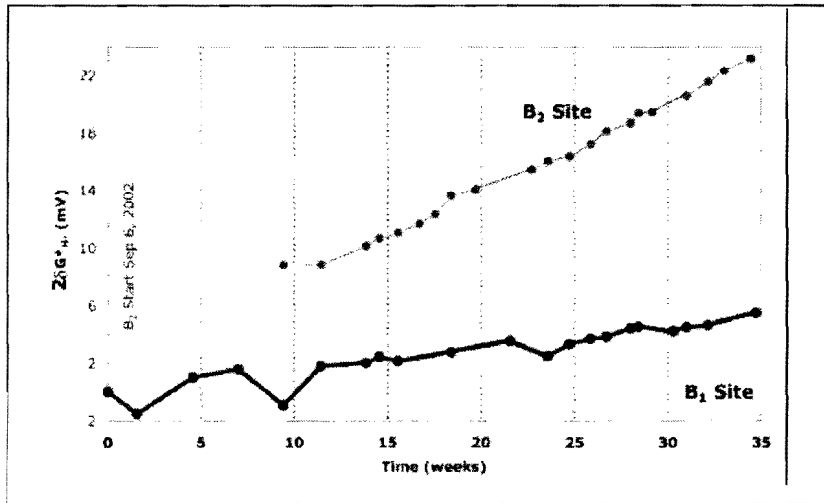
Then, fortuitously or so it seems, a couple of groups of investigators—one from the UK near London, and later one from Milan in Italy—contacted us. They said they'd like to get involved with this. "We've read your book *Conscious Acts of Creation*. Is there anything we can do?" We said, "Okay, why don't you order this same type of equipment and set it up; this water—purified water—and set it up. Then just gather baseline data and three months later we will send you an IIED."

We found that, in three weeks after startup, for the London group, the pH went up by one full pH unit. We'd never met these people, we didn't know where the site actually was. Three months later, the Milan group came online and within one week it went up by one full pH unit. Example of the U.K. and Milan site data is given in Figure 18.



**Figure 18.** At both European sites, exponential, time-dependent pH-behavior was observed.

During the course of doing this, we discovered a procedure for taking the data and converting it into a measure of this thermodynamic energy, the elevation of the space as it's being conditioned. So we had on the one side a source to condition the space, and now we also had a procedure and a technique for continuously showing how far it had gone in excess thermodynamic energy so we have an actual measurement system (detector system) too.



**Figure 19.**  $\delta G^*_{H^+}$  vs. time plot for B1 and B2 sites. Note strongly linear nature of the  $\delta G^*_{H^+}$  behavior for the B2 site. After 10 weeks, the  $\delta G^*_{H^+}(t)$  behavior for the B1 site is also strongly linear but with a much reduced slope compared to B2.

**F**or this excess thermodynamic free energy, Figure 19 shows data for the Baltimore and Bethesda site. The excess  $\Delta G^*_{H^+}$ , here for the  $H^+$  ion is basically above the average thermal energy,  $kT$ . That means that in that space, at this time, the thermodynamic free energy had gone up ~50% above the average thermal energy for any atom and molecule in it's space. The plot for B<sub>1</sub>-site is not quite as good as for the B<sub>2</sub>-site—much more noisy, because of humans actually, but we can get back to that. What we found then when we said, okay, let's make a plot of the distance between all these sites versus the time to make delta pH be 0.9. The Italy group and the control site in Missouri were both at 1.7 pH units and were both below ground sites. The two sites, UK and Payson, were at ground level, and they went up 1 pH unit. The other two sites, Baltimore and Bethesda, were three stories up in the air and they only got up to 0.8. What that says is that it's kind of the inverse of electromagnetism. Electromagnetism prefers to go through the air, magneto-electricism appears to prefer to go through the ground. Interesting.

The main conclusions of this part (and hopefully I'll have a bit of time for theory) is that the unstated assumption of conventional science is very, very,

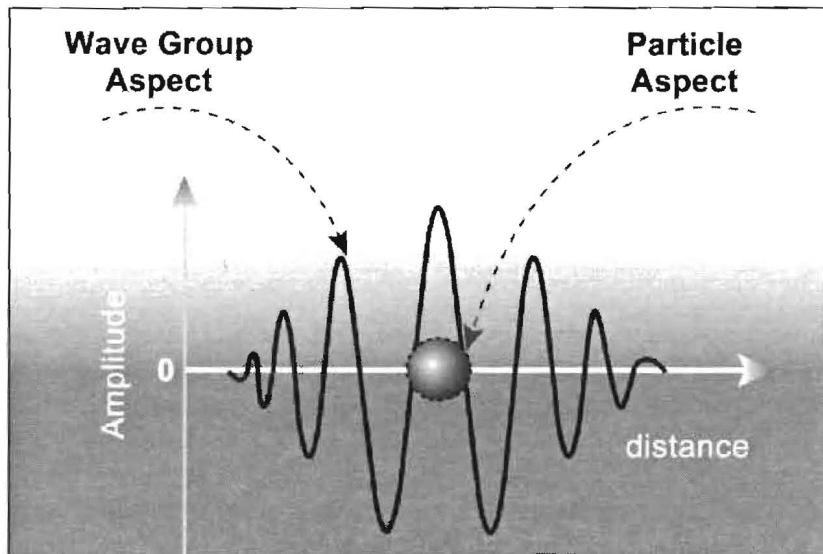


very wrong. The second conclusion is that there are *two* domains to physical reality, not just one. There is the electric, atom/molecule domain, and there is the magnetic, physical vacuum domain. An experimental measurement is basically like that given in a simple two-term equation. One term is a value for the atom/molecule level,  $Q_D$  and the second term is a value for the coarse physical vacuum level,  $Q_R$ , and there is a coupling coefficient which couples these two together. Under normal reality this coupling coefficient is negligible, it's non-zero, but you can't distinguish it from the noise. However, if you use this consciousness procedure to increase the magnitude of this coupler, you lift the gauge symmetry state, and this second term can become bigger than the first term. So this says that material properties are gauge symmetry state specific. If you lift the gauge symmetry state, things behave differently than you anticipate and from all your other experience.

As I've said, bioelectromagnetism is not Maxwellian-electromagnetism, and there is this carrier wave information entanglement now, over at least six thousand miles. And these are macroscopic spaces ten thousand cubic feet to thousands of cubic feet in size at room temperature. Very different than quantum entanglement kinds of things. It means that we have entered this new era in which we don't deal with what science has dealt with in the past—which is just a mass to energy relationship with Einstein quantifying this—but now another term enters which leads to consciousness. And as we go forward and learn about this, we'll add the next term, which is basically love, the source of all creation. But it really changes things.

**W**e have learned how to do science under the simplest case, where objects don't interact with each other. Now it's time to do the science where things interact with each other, and the investigator interacts with his or her experiments. And we have to deal with it. The issue is humans have within themselves the capacity to do what these IED devices do. And that's going to change the world. That is going to move it to places that we've thought about in terms of mythology, and it's going to be a wonderful adventure. The door has been opened.

I've taught the details of this, if you are interested, in the book of ours, *Some Science Adventures with Real Magic*, that's in the bookstore which you can read. I'm going to skip along because I want to indicate how you should look



*Figure 20. The de Broglie particle/pilot wave concept of the 1920's, proposed that every particle had a pilot wave envelope enclosing it and moving at the particle's velocity. This was eventually to be called "the wave particle duality of  $Q_M$ ".*

at this new science. I won't tell you what's wrong with quantum mechanics, but the part I would like to keep from today's quantum mechanics, is the de Broglie's particle/pilot wave concept. The wrong interpretation has been given to that in the past, but that's all right for now.

In essence Figure 20 is what this concept looks like if you plot it in a spacetime format. You have a wave group surrounding a particle which is moving at some velocity. The waves come in from the left side, and travel rapidly through this wave envelope. These waves all go faster than light. For quantum mechanics and relativity theory to be internally self-consistent, you have to have a result like this. You find that the product of the particle velocity and the wave velocity, that make up the pilot wave, has to be  $c^2$ .

Relativity theory says that the velocity of the particles are always less than the velocity of light, therefore the velocity of the waves always have to be faster than the velocity of light. The reference frame I think we need to use to look at this stuff goes beyond spacetime. It's a duplex reference frame, and they are

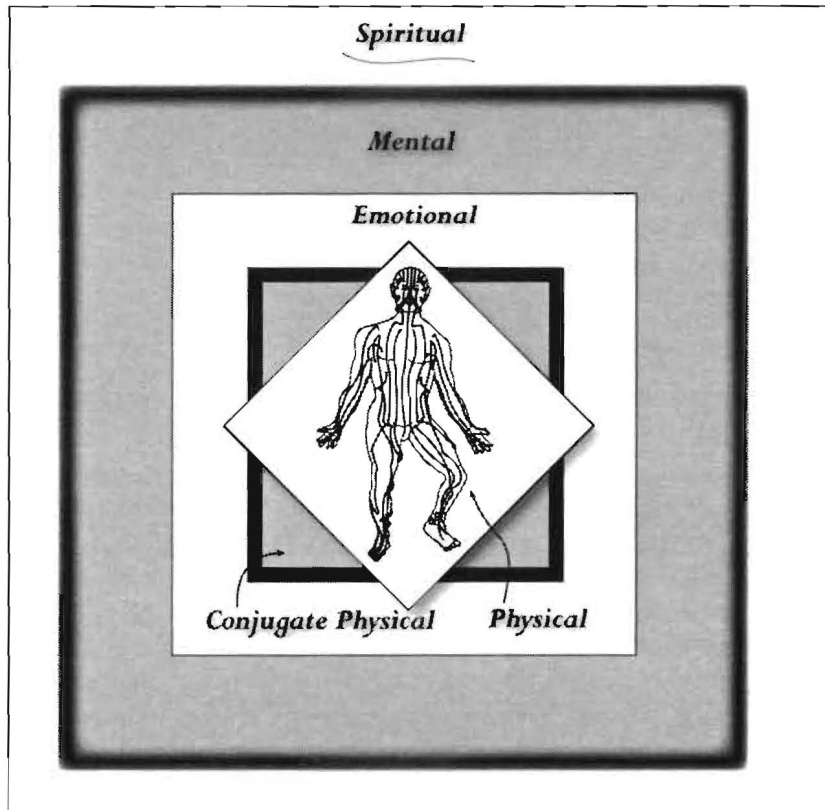
reciprocal four-spaces with one of them being spacetime. The word reciprocal is important. The spacetime reference frame is the one for particles, the reciprocal is the one for waves.

I also invented a particle from a higher dimensional domain, outside of spacetime, so that relativity theory does not enter, and this moiety can go faster than EM light or slower than EM light. It can interact with the electric stuff going slower than light; it can interact with the magnetic information wave stuff going faster than light. Those I call deltrons; they're from the domain of emotion.

**F**igure 21 is what the model, the multidimensional picture, looks like. In figure 21a we have the direct space, spacetime and it's reciprocal is just behind it. It's basically a frequency domain, because one over distance and one over time are both frequencies. For any quality in this direct space, there is an equilibrium conjugate quality in this reciprocal space. These, in turn, are embedded in a nine-dimensional domain of emotion and that is embedded in a ten-dimensional domain of mind. I think of this whole device as a playpen that the universe gave us.

In order to change futures, in order to change our universe, in order for us at the spirit level to use this, it's like a computer teaching machine where we learn as souls to grow. If you look at it in an energy kind of structure, then it would look like Figure 21b. For these domains, if you want to use the metaphor from *What the Bleep do we know?* of how far down the rabbit hole do you want to go, then this zero energy line, which is arbitrary, separates the levels above zero and they are all positive energies; they are above the rabbit hole.

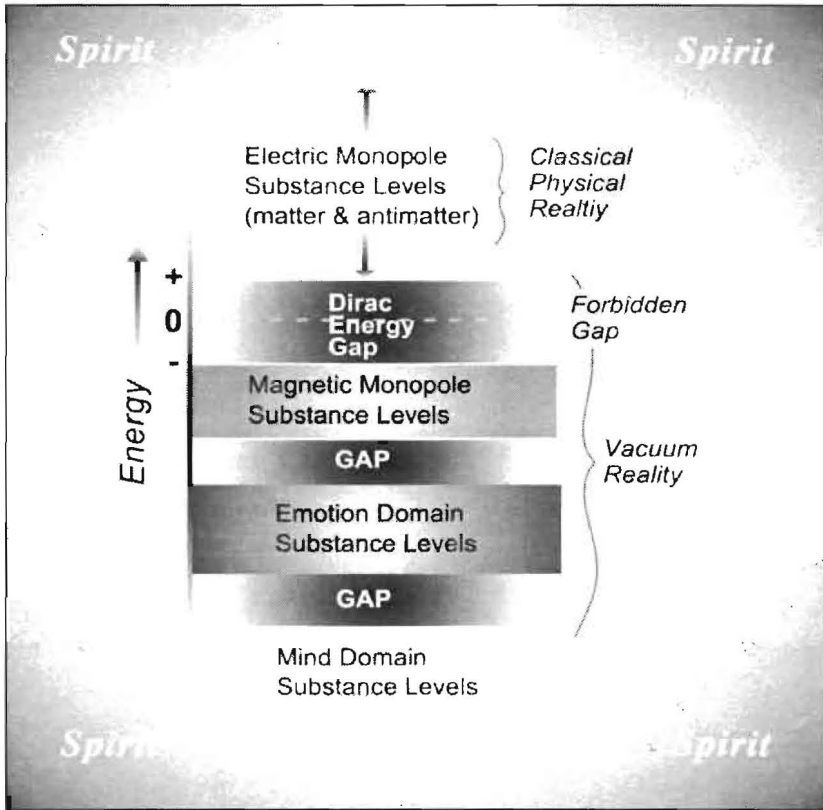
As you move down the rabbit hole, the reciprocal space stuff is the first stuff you meet. And as you go down further, the emotion domain stuff is the second stuff you meet and, as you go further, the mind domain stuff is what you meet, and as you go further you're in the domain of spirit. Now the energies (magnitude) stored in this domain are beyond imagining, compared to all the mass energies of all the stars and all the planets out to a radius of fifteen billion light years. The energy stored in the vacuum level of a single hydrogen atom is greater than all that other stuff. So you can imagine now, this is going to be our playing field for consciousness as we go forward. This is the energy



*Figure 21a. A structural representation of our RF with the duplex space in the center. If one counts the entire duplex space as a 4-space, then the entire multidimensional representation is a 7-space. If instead, we count the duplex space as a unique member of the general 8-space, then our RF is eleven-dimensional.*

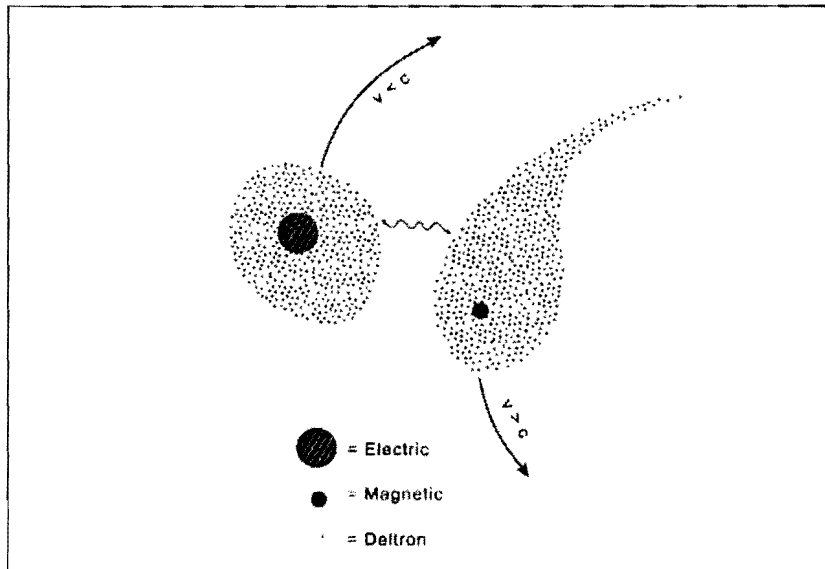
that we will use, not only to become, but to shape this playpen and learn the real rules of this larger universe until we eventually graduate from it.

Now I want to skip ahead and I have three things to say. One is how these particles interact with slower than light and faster than light, with a deltron sheath around them as in Figure 22 and so the interaction becomes deltron to deltron. If we consider an electron in a classical atom, as the deltrons increase in concentration, they interact with these magnetic moieties at a deeper level



*Figure 21b. An energy level diagram embracing both classical physical substances and "unseen" vacuum substances.*

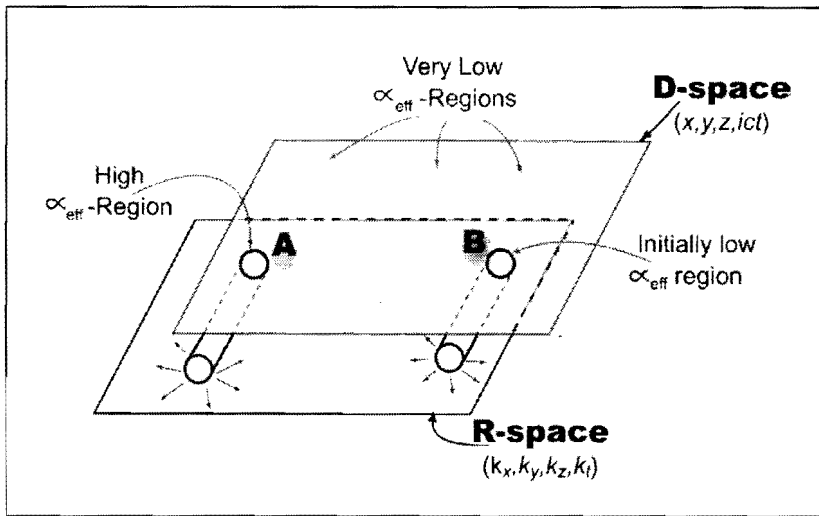
of the vacuum that go faster and faster. Then you would begin to see strange movements of the electrons that you didn't anticipate. If you see this behavior in outer space, people would call it dark energy, dark matter, acceleration of the universe. This is how it happens from our intentions, from the domain of spirit that imprint on the domain of mind, that gives another imprint into this magnetic monopole domain, and it activates the deltrons. They act as a kind of copy machine toner between the reciprocal four-space and the direct four-space. And so boom, information gets transferred into our normal atom/molecule body and we've got lots of mechanisms there to turn that into action in our physical world.



**Figure 22.** Illustration of deltron sheaths around both  $v < c$  and  $v > c$  moieties. Deltron-deltron interaction produces the coupling between such moieties.

Many of you are practitioners, and the thing you need to realize is that this is the system that you are always working with when you are working with a client. Your biofield emissions influence the gauge symmetry state of the space. So as you do this, connectivity between you and the client increases. What happens as you increase this coupling between these two levels of physical reality, is that it is increasing connectivity between objects, between humans, and between humans and objects. If there's a device like an electrodermal diagnostic instrument or such that you use, you impregnate that with your deltrons so you lift its gauge symmetry state and you and the device become a synergistic system. And you can access information in the universe because you are coupled to the higher dimensional aspects of reality. It's you and the device, it's not one or the other. The unseen is always there, always playing a role. It should be recognized, because it can be tremendously powerful, and in our imprinting of the IIED's it's the unseen that does the heavy lifting.

In terms of the long range information entanglement, here is a way to look at it (see Figure 23). These are two world-sheets. The top one is the



**Figure 23.** A schematic illustration of D-space and R-space as a construct.

atom/molecule level; this lower one is the frequency domain of the reciprocal four-space. Suppose that we have two very different sites wherein they have the same physical—let’s say measurement apparatus, pH measurement apparatus. At A you put the IIED. It conditions this local space and increases the coupling between these two world-sheet levels and, because of all the instrumentation and everything else here, it builds the conjugate pattern in the frequency domain. Once that process starts and it really gets to build a significant pattern, it is everywhere in spacetime. It is like an archetype, but at a lower level. Ultimately it builds to the mind level, but basically it’s here in this lower layer. So that pattern is also here at B, but now there aren’t any deltrons at B so it starts working to make the spacetime B-site its equilibrium conjugate. But the deltrons are moving through this reciprocal space and therefore the pattern is pumping them across the interface into spacetime at B. So ultimately, the B-connection looks very much like the A-connection, and the information goes “pshh.” It’s like a black hole for information transfer, but tangible and is ultimately quantifiable.

I want to close with this statement about us as humans. The acupuncture meridian/chakra system are chi-prana pumps via sustained intention. Right

action with right thoughts, causes the building of the internal muscles of this structure and we become. We become an adept, we become a master, we become an avatar, and our sociology becomes very, very different. We are different inside. Our outside world is very different, and we are raising the gauge symmetry state more and more and more. Every time you make a significant change in level, you can be in the same space and not detectable by the instrumentation of one level to the other. The consciousness, our intentions, are what makes it all happen!

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## QUESTIONS AND RESPONSES

**Ann Trechak:** I saw the exciting formula emerging. How do we get love in some measurable way? But just a suggestion that maybe you could get a group of researchers who have all been trained in HeartMath and they've all been able to achieve a high level of love coherence, and then you select the other group of researchers who are notably grumpy, and you just see if there is a difference. And also one question about just how you use the word coherence and if it's accurate to use it in the HeartMath terminology, or are we just confusing everything?

**WT:** *I spent four years contributing a day per week of my time to HeartMath back in the early 90's, helping them to learn how to do science. I published a number of papers with them that described all of that work. And in my book **Science and Human Transformation**, in chapter five, coherence is also dealt with there. You've got to come to see the world through your heart, ultimately. The issue of having groups, and we have an experimental procedure now. We would like to make stand-alone devices so that, in fact, a group could practice or an individual could practice. It would be a biofeedback device to show them how much they are raising the gauge symmetry state. That's a tool that we will need to build these new muscles. It's money that's stopping that at this point. But the universe will provide someday, sometime.*

*For all you folks who meditate—the first time I worked with the HeartMath people and used their technique, the heart entrainment mode occurred immediately. And the deeper levels occur with a little bit of practice. So people who are already doing normal meditations, they are very close to using this. The advantage I found about the HeartMath technique was that you can do that kind of meditation while you are driving a car. You*



*can do it in every aspect of your life, of pumping the world through your heart. Pumping to others. As you do, you are putting out deltrons. And that is lifting the environment and all of the people in that environment. So what has to happen ultimately is when you do work with groups, you first have to become coherent within yourself to be effective. What that means, is sustained disciplined behavior so that all of your actions are in phase with each other. And because when you are coherent, it's the summed amplitude of all that is squared and that is what is important in obtaining a large group effort regarding your qualities.*

*If you have a group and each of them have individual amplitudes, we'll call it A. If they're not coherent with each other, then the very best you can get is the number times A squared. Because the energy output goes up with the square of the amplitude. But generally they're not coherent and therefore there's lots of cancellation and you may not even get one A squared out of a group. But when you do make them coherent with each other, then you have NA and the product is squared, so you got N squared times A squared. As a simple example to illustrate this, I thought, "why would God want one more to be coherent with itself." I thought, suppose God is a million coherent souls, and you or I are one more soul, so the equation to be evaluated is 1 million plus one quantity squared. You get a million squared from the first term. That's what God was before we came along plus one squared. That's what you or I contribute. But the cross product is two million. A very big effect indeed.*

*So you can see that, for a group, as they learn to become coherent with each other the power manifested goes up—can go up astronomically as the square. Now you need to do that. You need instruments like the kind of thing I'm talking about, to be able to see a result. You need procedures to maintain phase. You have to use one individual in the group as a kind of metronome to entrain others to the intention of that individual. The more you learn to entrain, then the more the group will come into alignment. It could be any person in the group. You could designate a different person on different days, but the issue is if you've already learned to make yourself coherent, it's not difficult to entrain to another. That's how it happens. Devices will be there for both, ultimately, to show group manifestation. And devices will be there for an individual to use in a biofeedback mode to build the muscles and move toward mastery and avatarship.*

**Attendee 1:** I'm not hearing a distinction between intention and attention of focus. I work with a lot of people who are on a spiritual path and I encounter much disappointment in their misinterpretation of what intention is.

**WT:** Well, the issue is you must attend before you intend. So both are necessary. You must attend because that becomes the point of focus and the intention is very specific

to that point of focus. In our case for these experiments, it was a particular intention statement. But it was the issue for us as sitters. We try to do the same thing that really special healers do when you ask them what do they do to get such great results, and they say they don't really do anything other than try to be a clear and perfect channel for the universe to work through. We try to do exactly the same thing, and so if one attends to something and intends with this way of being such a channel, and you've already attuned to interconnect with the unseen, you would be amazed at the energies that flow through.

**Attendee 1:** So then I have another question. What's the source of intention?

**WT:** *The source of intention is us as spirits. This is the creative process. This is part of us. This is how we work in the world. Everything we do is an act of intention, but it's become subconscious more often than not. You're not walking without intending. From your subconscious level, you're not speaking, you're not doing anything—from the level of your deeper self—without intending. You may not be conscious of it, because you've done it by habit for so long. So the source in my modeling is it comes from the domain of spirit. The first imprint is on the domain of mind, and that activates sources which radiates waves of consciousness. They diffract and they do all the things that wave diffraction does in a holographic way. They ultimately cause these things to happen in this lowest level of nature's expression.*

**Attendee 1:** So it has nothing to do with the individual I. Is that what you are saying?

**WT:** *You can decide to pour that through your heart, through your eye, through your left foot, the choice is yours. All of these organs are valuable; do you see what I'm getting at? You are radiating all the time, you have a biofield. I'm saying that as you intend, when you really intend like an actor who wants to quietly project his voice to the furthest corner of the room, as you increase the intensity—not necessarily the volume but the focus of it—that's the emotional part of yourself that's doing that. But in essence the intention is to activate that within yourself. So you are modifying your biofield in a particularly specific way, with a particularly specific intention, and probably, if one were able to scan it—if we had the instruments—you would see the intensity of these various spectral components. Those related to deltrons, those related to magnetoelectrics, etc., increase tremendously. You just keep doing that, you build that muscle. It just becomes a natural thing and as you do you build infrastructure in yourself. They start as little fibers of infrastructure and as you practice they become busbars, where you can put megawatts of power to it. Or willpower. Sure, I mean all of these things, basically the heart, the will, the light, the wisdom, all of these grow as you specify.*

**John Neety:** I'm from Penn State College of Medicine, and occasionally a member unofficially of the Material Science Dept. of Penn State University. A couple of things. I'm a biologist, and one of the things that's puzzled me from early on is this unusual organ in the developing embryo called the neurocrest. And for those of you who don't know, it's an organ that develops along the whole line, the central line of the body, then disperses itself throughout the embryo, makes major organs in the developing embryo, and then regresses to just the points of the sympathetic ganglia and a few other places. Very similar to chakras. I've often wondered, and I'll throw it out as to whether this could in fact be the antenna for vitalism, which is developing a resurgence after beaten to death by science, and I'll just throw that out for people to think about.

*WT: In essence, if you look at chapter six of my latest book, I use the acupuncture meridian system as an antenna array, a phased antenna array to manifest psychokinesis effects. It's totally consistent with what you are saying.*

**John Neely:** Another observation we have in the lab is, we're doing some work with the device similar to what you described. A friend of mine was using it to try to reduce the damage to newborns who develop hypoxia and have brain damage. He was using an animal model where he put half the animals in the presence of this device and half the animals a distance away, and found a thirty percent reduction in the damage to hypoxia to the brain. Now he had a very very skeptical and angry technician who just refused to believe this. So we of course, repeated the experiment with the technician being extremely angry—saying she'd take a hammer to that box—and everything and of course the second time around, did not work. And I think that's a good example of where an intention...

*WT: This is called the experimenter effect in our work. We have done such studies. We've done studies every time in our lab, which is a very sensitive laboratory, when the technician goes to extract the diskette, the information, to process it and such, we see a dip in the pH everyday, same kind of time. But over the weekend, when no one is there, the data just keeps growing.*

**John Neely:** And is your box, I guess I'd say, recyclable? In other words, can you redo an intention on it in a different way?

*WT: We basically do and we have to perform some kind of information annihilation process; we have to let it decay in essence. We haven't tried actually to find a nice easy way to erase, but that's coming. Instead, we just have a large enough supply that we just let them sit in a Faraday cage and they just naturally decay, probably over six months or*

so. And when we do sit with such a device, we take a small time to erase the old imprint, and then generate the new imprint.

**Margaret Moga:** I'm an anatomist in Indiana University. I was curious on these oscillations you see in the temperature. Would you see them in an area an intuitive would call a dirty space? And then after clearing would they disappear, or would they appear? What would you predict?

**WT:** *I would say that they certainly appear in every space that we have tried, and we've tried dirty spaces as well as clean spaces.*

**Margaret Moga:** Is it a different frequency?

**WT:** *Not much, but in a dirty space it takes longer to percolate.*

**Margaret Moga:** What do you mean? Takes longer to die down?

**WT:** *To potentize the system, to lift it to the place where the oscillations occur. For example, we can have oscillations and we can bring in a certain material and the oscillations will stop, maybe for a week or two weeks, and then they reappear with that material. So different materials which are part of the aspect of a dirty space will cause this to happen. It's a question of the tuning of it. It is as if the dirty material saps some of this stuff—whatever it is—that gives rise to these phenomena, but it gets saturated eventually, and then the system will go on. So basically we just keep giving it more.*

**Margaret Moga:** Okay. Well I'm thinking of a group of healers coming into a room and doing a healing. Can you actually see the effects experimentally?

**WT:** *One would, using the kind of techniques that we are talking about. Yes.*

**Darlene:** Your conditioned space—is the definition of your conditioned space always the increased pH, or is it just the presence of an intention imprinted on the device?

**WT:** *It's always increased thermodynamic free energy per unit volume for the hydrated ion, the hydrogen H<sup>+</sup>. Now the intention could be to have it decrease the space pH. I was talking in our replication experiment about the pH increasing by one full pH unit. I didn't make that clear. So for the data in that case, the pH was always going up. If the imprint intention had been to reduce the pH, or the water in these different sites, it would have gone down. And we've done them where it's gone up, and then we send them an IIED for it to go down and you see it go down, over a normal period. So we've done both.*

**Darlene:** Given your results, is there a concern at all that this entanglement might somehow impact unintended recipients?

**WT:** *We have not and this has always puzzled me—as to how it knows where to go, rather than the people surrounding it, and the example I gave you at the end was the way that I see it now, is that the site had already set up the equipment which was the same analogous equipment as in our laboratory. So all that was required there was to kick it a little bit from reciprocal space to develop the linkage, you have to develop the linkage between this frequency domain and the spacetime domain. That's the issue. That occurs fairly quickly, if the enthusiasm is strong. If the enthusiasm is negative, as John was saying, that's where we get low results in the space of  $H^+$ , or bumpy data. But if you were to talk about the place next door or down the street, that equipment isn't there, and there is no linkage, there's no way to enhance the coupling to that space. That's part of it, and it may also be, in all honesty, that the unseen are helping and they know what's next door or not next door. But I don't know about that. All of that has to be explored down the road.*

**Sunny:** I'm one that works with energy from a layperson's perspective, and helps people to heal. When we go to have a session prior to them arriving, I ask for the universal healing force to shine down throughout my little healing space to make it sacred, to make it a sacred sanctuary. And then ask that any energies that are in the space that are less than my heart's vibration, or the one with whom I'm going to be working, to immediately leave and that they cannot influence what will be happening there in that space in any way. This is to help assist with not allowing lower energies to infiltrate or entangle, so to speak. So perhaps it might be something that you might want to try for fun. . .

**WT:** *We do that sort of thing. Basically the connection with the unseen is a very strong one, and as I say it, I think the unseen does the heavy lifting.*

**Sunny:** If you also just specifically asked for silver energy to come down, it is a protective energy, and if you were to perhaps ask it to surround your one black box, and find out whether it then would allow the transfer of energy to the other or not.

**WT:** *That's a good suggestion. Thank you.*

**Beverly Rubik, Biophysicist:** I stand in awe of your work Bill. It's really remarkable and I want to congratulate you. But I have a question also. I know you are a material scientist as well, and I'm curious about your selection of your material target systems. I can understand pure water obviously, a simple single substance. Why

alkaline phosphatase, why the drosophilae energy system, why the zinc carbonate water interface?

*WT: Well it's interesting because basically the alkaline phosphatase, and the fruit fly larva, that's from Michael Kohane. Michael was a real expert biologist in fruit flies, and he had equipment. There was also equipment left there in Minnesota where we were doing the experiments that let us deal with the alkaline phosphatase. But it was Michael that said let's try and extend this out of the inanimate world to the biological and then the living biological systems. Now the business of the calcium, the carbonate, basically the water pH is very much controlled by carbonate. And Walter Dibble is a Ph.D. geochemist, so it was natural for Walter to suggest that. So that's why we went in that direction. All of the things that we're doing in the laboratory, they're simple, physical chemistry experiments because they are easy to do.*

*Now we're no longer doing biological experiments because Michael is not with us. He's up in Minnesota, so of all of the things that we're doing; we're doing oxidation reduction potential, we're doing pH. . . We see in a conditioned space; we're studying mass, so we see mass oscillations; we look at Geiger counter effects; we see oscillations in a conditioned space, not in an unconditioned space; we see it with instruments that are not connected to the line voltage or things like that. We see it in solar cells; we see it in all kinds of things. It is a marker for a conditioned space, so we have a bunch of that data in the newest book. But we're seeing effects that are really like the Peltier effect in conventional science. It is in that case a Soret effect and so on. They are sort of Onsager coupling relationship between one kind of force and another kind of potential, and visa versa. So we're seeing effects of that nature in this very complex system where we appear to be interacting with a parallel universe. It's not really a parallel universe, but you can treat it that way. It's a simple way to think about it.*

**Attendee 2:** May I just make a suggestion based on results from healing research, and that is for example an optimized organism like bacteria, the effects of the healer are very small in such a system, but if you damage a system say with heat shock, I'm thinking of a denatured enzyme exposed to heat, or a cell culture that's exposed to heat, and then try the same experiment with intent to heal, and I'll bet it will magnify and make your result more robust.

*WT: Well I agree, I remember the Sister Justice Smith work long long ago with that kind of thing. Thank you very much Beverly.*

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