Integrating Physics and Biology: The Coming Medical Revolution

A lecture prepared by Peter Fraser for medical and other professional users of NES products. It is designed to elucidate a theoretical bridge between medicine and bioenergetics at a basic level.

Introduction to the Dance

Upon first looking into science, you get the impression that it is cut and dried and well arranged, and somehow timeless and satisfying because of that. In fact, scientists like to imagine that this is so because they are the great truth seekers, and nobody wants everything to change too much or too quickly so as to upset their power base in the knowledge game.

As life goes on, you realize, as I have, that science as it stands does not give us quite the solidity we wanted it to and still retains some severe practical problems. Among the most severe problems for me is the fact that the theory of medicine and the theory of physics don't match up, and that the problem is not a little problem of ragged edges or grey areas but a problem greater in scope. These two scientific disciplines are not even in the same ball game! There is a historical reason for this: allopathic medical theory developed from the ideas of industrial chemistry, and it was backed by an industry that wants to use chemicals for agriculture and medicine. Modern quantum physics did not develop until the mid-1920's and has been continually refined since then.

In this lecture I shall try to show how the cleavage continues, having been created and maintained willingly by both groups of scholars, but with the result that there is massive disconnect in medicine, as well as severe disarray in physics. We can further delineate this problem by noting that the cleavage in medicine was so deep that in the early part of the twentieth century those who believed that biochemistry lay at the heart of understanding medicine waged war on those who didn't—the practitioners of energy medicine. This battle resulted in the expulsion of the energetic practitioners of herbal medicine, one of the schools of medicine still extant in Europe and North America at the start of the twentieth century. Other practitioners were also driven out or threatened, such as those of the more ancient school of thought—homeopathy. The results of the commissioned Flexner Report and other inquiries were such that the biologists and others who believed in a field theory were prohibited from practicing in the United States, although they held out until the 1940's in some European countries.
Can you imagine the expulsion of whole groups of thought or entire departments from a university in these days of broader educational understanding? No, of course it would be a scandal. But that is what happened in the 1920s in Anglophoile universities all over the world—England, the United States, Australia, New Zealand, South Africa, and Canada. Barbara Griggs's *Green Pharmacy* records some of the history of these expulsions and is destined to be a classic of the history of the evolution of herbal medicine.

Suppression of ideas does not always have the effect one would like it to have, and this is certainly the case here. John Stewart Mill, not so long ago, reminded us that you never know whether or not you are suppressing truth when you suppress an idea or a thought. Nobody has the entire truth, so it is best to be as tolerant as possible, even of your enemies.

One of the effects of the drive to eradicate energetic medicine from tertiary education was to stop its development and cause a withering away of its basis—research funds. So bioenergetic medicine stopped in its tracks in the 1920's and failed to develop the huge infrastructure of belief that has attended the biochemical medical model. Yes, the present medical model is basically a belief structure, like anything else. And when someone's belief structure becomes damaged beyond repair when its weaknesses are pointed out, there is inevitably a great hue and cry. One would expect this phase to last a very long time, so heavily propagandized is the medical model; yet ideas can change very suddenly when there is reason to do so. Science does not change unless it can offer better explanations for reported events.

We have initially to ask which discipline is at fault if the two systems—biochemical medicine and physics—do not connect well with each other. Here it is a little like marriage counseling, and we have to say that there is

fault on both sides. A great deal has been written about the failings of modern medicine but little indeed on the fault lines in modern quantum physics, which is the science underlying bioenergetic medicine. All writers seek to paper over difficulties and contradictions, and perhaps I am no exception. So in trying to get medicine and physics back together again, it is perhaps a good idea to do away with the fault-finding and replace it with a genuine effort to lace these two ideational systems together for the benefit of all of us.

Against us in this effort are those who are invested in the current systems, but I truly believe that the way ahead for everyone is to abandon ideas that don't work and won't fit into a greater whole. I cannot tell you how many times I have completely rearranged in my head a whole set of data emanating from medical education due to the experimental data coming from my inquiries into quantum physics. It is at once exhausting and exhilarating. So I expect that many of you may be deeply aggravated by this lecture. I ask you to bear with the ideas and accept that your anxiety may be due to the natural resistance we all have to massive rearrangements of ideas concerning who we are and how we work.

Physics—The View from the Top of the Mountain

When you undertake to learn physics in the tertiary system, you start at the bottom and are encouraged to look upwards; and perhaps you can't see very far. You believe what you are told, and it becomes part of your belief system when you are given a great deal of data that supports the ideas. In the case of physics, the evidence is experimental data, backed by mathematical models. This mathematics does not *prove* things, but it does delineate the ideas clearly. In other words, in physics we have to go beyond linguistic clarity to mathematics, which is symbolic clarity. When we do, we have good science, because we have set up models of systems that can relate to each other. Science, according to Dr Edgar Mitchell, has to be in accord with nature, as well as with mathematics. But nature takes precedence!

Proof, if there is such a thing, is a two-edged sword. By using analysis, we see whether or not an idea is able to survive a process of pulling it apart into its components. That is one edge of the sword we are able to use without any bother. But the other edge of the sword requires that the information be able to meld with other information. This is called coherence, and it is a higher-level process than analysis. Not a large number of people have the gift of being able to see the big picture and then to assemble data within that picture.

Of course, the analysis part comes first and the coherence part comes second since you can't piece things together into a pattern until you have the pieces. This is a very important statement, because for more than 150 years a huge bank of experimental data has been accumulated by physics, and the job of making this data coherent is a great one. Such a great scientist appears rarely, and, of course, Einstein was one—revered not so much for his hairstyle but for his ability to see broadly, beyond the small data to the way in which data works together. But science did not end with Einstein. It goes on, whether or not Einstein was right or even partly right. Einstein becomes a part of our lecture because of his wariness about quantum physics, a reserve that turns out to be worthy of address. There are many, many schools of thought in quantum physics, and we, in this lecture, will be reviewing the schools of thought following John Archibald Wheeler, Richard Feynman, John Cramer and Milo Wolff.

Here we are, at the start of another new, amazing century, so perhaps it's now time to step back and view the wider landscape of science to see where the fault lines may be apparent. The fault lines are only apparent to those who can fly above it all and see the full picture. You need to be an eagle, rather than a rabbit, to get the bigger picture. And I have found such an eagle! Here I freely acknowledge the wonderfully coherent ideas of Milo Wolff in his book *Exploring the Physics of the Unknown Universe*, published in California in 1994. I recommend this book, but it's not for the faint of heart. It is not about technology but about real science, the basis of our amazing technology. At last I have found a candid scientist who can communicate! This he does, and his chosen subject matter is the Unified Field Theory.

Bear in mind the mindset in which we have become mired when thinking about medical biochemistry, where we have models of molecules as rigid and geometrically arranged structures, with bonds and receptors and orientations of surfaces and folding of regions. It is as if a molecule is some kind of mechanical arrangement, although, of course, very small in size. We have ions and electrons, and they make paths. Sometimes we have too many particles left over after a reaction in the body, and these have to go somewhere. We have

membranes that allow the passage of some ions but not others. For the most part, physiology is based entirely on this kind of mechanically arranged action and interaction.

But from a different point of view, we have to ask why atoms and molecules arrange themselves in patterns in space and show all sorts of strange characteristics, like bonds and charge and different states. Of course, biochemistry is a derivative science, and to answer questions about it we have to go to the mother of biochemistry, which is, of course, physics, the queen of sciences. The language of physics is the queen of languages—mathematics. So when you open a modern book on quantum mechanics, you feel somewhat as if you are on another planet, where the education system is . . . well . . . different.

The Landscape Outside the Medical Department Is Very Unfamiliar, Moon-like Even

First of all, contrary to what you may have thought or been taught, the idea of the electron is by no means settled, and neither is the idea of a photon. If we can get to the bottom of this dilemma, then we have made some real progress in uniting medicine with the source of its knowledge—physics. The reasoning behind this approach is that electrons and photons are common ground for both biochemistry and physics, and in sorting this out, we might make some real leaps into the future.

The actual evidence for the particle concept is seemingly weak, even though it is universal in teaching institutions the world over. A central structure for the electron has never been discovered, although decades of effort have been made. Worse still, quantum mechanics cannot mathematically account for the size, mass and charge of electrons. The idea of a particle's mass is made tenuous by the fact that mass can be converted into electromagnetic energy.[1]

If there is a *particle* called an electron, then it seems to make sense that it could be measured in terms of space and time. Werner Heisenberg said, in this respect, that there are limitations to measurements of the location or momentum of the electron, limitations related to Planck's Constant.[2] As a result, there is an inherent fuzziness to the nature of reality, which has troubled many philosophers since the Heisenberg Principle was proposed. It means that if you know the momentum of a particle, then you cannot also know the position of that particle with equal accuracy. Naturally, many people did not take kindly to the idea of a science where you cannot know things. After all, the word "science" comes from the root word meaning "knowledge." But what we really lose here is something we always took for granted—that a particle is a thing. We lose our commonsense view of what we mean by "particle." And that, of course, is what quantum is all about at its very heart—particle-wave duality. But do we really need to resort to such paradoxes? Perhaps not.

So, the paradox of quantum physics tells us that an electron or a photon is *both* a particle and a wave. The size of an electron, if it is an oscillating wave rather than a particle, is also the subject of some drama. Of course, if there is a quantum wave that makes a field, then why can it not be detected? After all, we can detect wavelengths of light (photons) with our technology without difficulty. Or can we? What is the essential difference between electrons and photons?

Louis de Broglie, in the 1920's, put forward the idea of a matter wave produced by the electron and other particles, and although his theory was purely mathematical, evidence that he was right came a few years after his paper was published. He was later awarded a Nobel Prize for his work. The de Broglie wavelength is inversely proportional to the momentum of the particle, so an electron wavelength will be a million times smaller than that of visible green light and something that no machine can detect.[3] The frequency is just too high. Semiconductors will not function at that level—nowhere near it.

What do we know about the wave idea of an electron? Davisson and Germer, in 1927, gave us some data about the electron, in which it seemed to obey the same rules as a photon.[4] When electrons were fired through metal foil (which had a crystal-like lattice composition) onto an X-ray photographic plate, there

[1] Milo Wolff, *Exploring the Physics of the Unknown Universe*, 133-34
[2] Wolff, 138
[3] Wolff, 134
[4] Wolff, 128

appeared sets of concentric rings, indicating the electron's wave properties. The measurements of the energy and momentum agreed exactly with de Broglie's predictions.

This experiment and others, such as the variations on the famous double-slit experiment that have taken place over the last several decades, clearly show that electrons and photons have wave qualities. So, we have to ask why it was historically that particles became the dominant way of expressing the idea of quantum "things." Much of this talk is concerned with addressing that question. Physicist Milo Wolff provides as good an answer as any I have heard. Mass has to be at a precise point for the purposes of engineering calculations, so it is handy to think of electrons and such as particles. What's more, since all wavelengths smaller than visible light appear to our eyes as points, we have to blame our faulty perceptual apparatus. As Wolff points out, scientists have perceptual and emotional needs for particles. Waves simply are not so easy to accommodate in the psyche. A lot could be written about the psychology of science. Because we are human, psychology rules us as much as any other set of ideas does.

Perhaps it is a good idea to look deeper into waves and their qualities before we go any further. If waves can replace most particles, as Milo Wolff shows they can, then the wave nature of the quantum realm becomes the area we should be most familiar with. Our narrow education systems have left us with ideas in our heads that we must eventually discard. The only kind of wave found in our education systems is the electromagnetic wave type, which has one or two dimensions only: wavelength and time (if we use the original idea of Maxwell from the mid-nineteenth century). Practical people realized Maxwell could not be right, and the wave ended up with wavelength and amplitude, as well as time. So it is best called frequency.

Yet a moment of reflection will reveal that there are sound waves which are linear, which can travel away from you or move towards you. There are also standing waves, as in a musical instrument, where standing waves exist on vibrating strings. Then there are radial waves as well, where the wave goes outwards in all directions at once, inwards in all directions at once, or, for example, can form a standing wave on the surface of a drum. And lastly there are spherical waves, like the outwave from an explosion in three dimensions. In the whispering gallery we get a spherical wave created by the reflections of the gallery, where the waves are incoming. And we can have a combination of inwave and outwave, as in the cavity of a musical instrument, which seems to act as an amplifier. We are talking about standing waves of a spherical, three-dimensional quality, and I ask you to think of a river in flood going over a series of rocks. This is where you will see stationary standing waves. The field (the water in the river) moves, but the structure (the rock) is stationary. This model is similar to the model adopted by Milo Wolff—of waves going out of and coming in to an electron.

An important thing just happened: I spoke about waves coming towards you and going away from you, and you never flinched. Waves come and go? Back and forth? *Why?* Another thing also just happened that never happens in the education system: we are talking about different orders of waves, some uni-dimensional, some two-dimensional, and some three-dimensional. Scientists don't always describe the world in three dimensions, even though we assume that they are intelligent enough to do so. How many dimensions are represented by the Maxwell Equations?

As we all know, or should know by now, wavelength multiplied by frequency equals velocity, and different wave types go at different speeds, from sound waves to light waves—1100 feet per second to 300,000,000 metres per second. Waves do not move unless there is a medium in which they can travel, but their function is to move energy from one place to another by a sort of displacement of kinetic and potential energy. All types of waves are related to the properties of space, curiously, even though they are vastly different. Electromagnetic waves are said to travel in space without medium; yet they do, in fact, have a medium—it is space itself!

Waves can also be polarized, which means simply that the amplitude is directional. Light is usually polarized perpendicularly to the direction of travel. Two polarized waves can get together to form a helix in space if they are oppositely polarized. But there is a specialized type of wave that has no direction, yet it also has amplitude, and the amplitude of the wave is a number called a "scalar."[5] So we have a scalar wave, which, when combined with another similar wave going in the opposite direction, is said to be a "standing wave." A standing wave is transferring energy, yet it always stays in the same place. From these waves we can get

[5] Wolff, 111

reflections of energy, partial or total, and we can also get interferences called "beats." This is how your piano tuner tunes your piano—by listening to the beat frequencies. They are real. In fact, repeated reflection of waves off a surface can create standing waves in space if we have two waves of the same frequency confined in the same space . . . space in this case being the medium.[6]

The essential difference between different kinds of waves in physics is whether or not they obey the same set of rules so far as speed of propagation is concerned. Here I remind you that while sound waves vary greatly in speed, electromagnetic waves travel at light speed (c), which is a fundamental constant of nature so far as energy transfer is concerned. So while we know a great deal about the medium of sound waves and how that medium affects them, the medium of the electromagnetic wave, which is space, has hardly been investigated. Space does have qualities, and the study of it belongs essentially to quantum physics.

Here we come to the great divide in science. Most of the activity of scientists to date, in the realm of physics at least, has been to understand energy transfer. In the case of waves this is hugely important, and since we know that photons are the way in which energy is transferred between electrons, it becomes doubly interesting. But just suppose for one instant that instead of energy transfer, you wanted instead to study *information* transfer from one place to another in the universe. Here there is not so much knowledge, or even theory, available to us; yet it seems that the transfer of information is of equal importance to the transfer of energy in the case of living things. Even inanimate things such as chemical reactions rely on information transfer.

You may never have wondered how the atoms and molecules "know" how to react with one another. To even start to understand this, we must look at two things: linearity and modulation.[7] If you have an electronic circuit that acts like an amplifier, then it is linear if it produces output exactly in accordance to what is put into it. The graph of the input versus the output has to be a straight line, hence the word "linear"—making a line. If the output is *not* proportional to the input, then that system is said to be "nonlinear."

When nonlinear amplification occurs in electronics, there is phase distortion, as well as distortion of the sine waves, which may produce unwanted harmonics. If two signals are mixed, then they each contain components of the other. One signal has *information* about the other signal. Information transfer occurs when there is nonlinearity.

Our ears are nonlinear devices, so we can actually hear the beats when there are two or more frequencies together in a standing wave, such as when you strike a note on the piano. The beats are the nonlinear information responses caused by the mixing of two linear sound waves. There are not only beats but harmonics as well, caused by the addition and subtraction of the basic frequencies of the sounds.

The extraordinary thing I have to relate is that *all* of the physiological processes of the body are nonlinear. To check this, if you want to know more, any modern text on psychology or perception will do. Even specialists' books on biology will tell you that the body's regulating mechanisms are nonlinear in nature. They are all in need of energy exchanges in other words.

If the body has a control system—of energy *and* information—that is above and beyond the biochemical one, then that is the one that should be treated by physicians, instead of the derivative chemical one. From this point of view, the chemical model of the body is *derived* from the nonlinear energetic one. So, when we want high-quality sound reproduction, the electronics must be as linear as possible; this is to minimize distortion. Yet, when we want instead to impress information onto a radio signal or a television signal, we need nonlinearity to transfer information. Information transfer occurs due to distortion of a wave pattern! This is called "modulation" in technical language. It makes the occurrence of interference patterns in physics especially interesting, for that is where we will find nonlinearity. And interference patterns are indeed there, in the realm of the super high-frequency field created by the so-called subatomic particles.

What has just happened is that we have made a huge link between the worlds of biology and physics, which then connects us directly to quantum mechanics. Why so? Because quantum mechanics is concerned

[6] Wolff, 114
[7] Wolff, 117

basically with the behaviour of waves in space.[8] We already know a lot about the rules of engagement of these quantum waves in space, and I think it is best to say what they are: they are like light waves, since they can add to each other or cancel each other out. The result is that you get both allowable and non-allowable frequencies, rather like the harmonics that are "allowed" in the case of sound waves.

The allowed frequencies are, in fact, represented by all the elements of the periodic table, and hydrogen, of course, is the simplest, being represented by a single electron with a proton (and with a spherical arrangement of the electron). This is how it looks at its lowest energy or frequency state. Once it reaches a higher energy state, there are lobes which appear in the sphere; so we are looking at hydrogen as if it is a collection of standing waves in space. To get hydrogen to happen, the waves must take the same path every time they move, to set up a standing wave due to the inherent amplitude pattern.

No, there are no orbits for quantum particles![9] The idea of orbits is over, finished, and dead—but it is still taught to every child in the world who learns science. Nowadays you must learn that we describe the atoms by latitudes, longitudes, and radii, all of these being the things we need for describing a place on a sphere. We can look at polar standing waves or equatorial standing waves, and all of them are related to amplitude. "Amplitude" is just a word for the amount of disturbance in space a wave creates.

Physics explains nature from the very small to the very large, from the subatomic to the cosmological in terms of scale. As matter is grouped together in larger and larger lumps, we pass from the rules governing the particles of quantum physics to the larger realm where classical Newtonian physics takes over. We don't yet know why the rules change as we go from very small to very big, but as humans, we lie right in the middle, so we are subject to both sets of laws. So both sets will apply to biology as well as to medicine.

Science, like God, works in many mysterious ways, and one of the most mysterious was the arrival of the photon as a subatomic particle. Light was shown to be able to form packets of energy, or "quanta," first suggested by Einstein and recorded in his photoelectric effect paper of 1905.[10] Even though there was not then, nor is there now, any evidence to show that light is, in fact, a particle, it was given a particle name ten years later. So now it's a particle!

Einstein gained a Nobel Prize for his photoelectric effect work, but not one for his later work on relativity. In fact, he was forbidden to mention relativity at his Nobel Prize acceptance speech, so he refused to attend it.[11] The motion of matter was the basis of Einstein's relativity theory. Of course, the motion of matter occurs in quantum, so it was natural that relativity was rather easily accommodated into most of quantum theory. Paul Dirac discovered, in 1933, that a different mathematical approach to the original Schrödinger equations meant that, magically, accurate values of spin and magnetic moment could be derived for the electron. This was really the beginning of quantum electrodynamics, something that was later taken up by Richard Feynman, John Wheeler, and many others.

Nowadays, physics is concerned with just three basic "particles," as we can call them, and these are electrons, protons, and neutrons, having a charge of -1, +1 or 0, respectively. Of course, they also have other characteristics, such as frequency, spin, and magnetic moment.

A great deal of inquiry in quantum physics is devoted to spin, which at its most basic can be explained as an angular momentum within the matter wave whose value is always a multiple of one half. Note that there are only two allowed directions of spin. A different spin means a different particle! This characteristic is still the subject of puzzlement in physics. But it has proven useful: it generated the Pauli Exclusion Principle, a key to modern chemistry, which says that no two sets of interference waves (or particles) with one-half spin can occupy the same state together. This rule applies to the three basic particles, all of which have half spin. The idea is of such importance that it has determined the structure of the periodic table of elements; and here we can say that the periodic table itself is a map of the allowable frequencies in the system of wave interactions of particles.

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[8] Wollf, 120-21
[9] Wolff, 122
[10] For the history of relativity, and of quantum electrodynamics as mentioned in this paragraph, see John S. Rigden's book, *Einstein 1905.*

Another set of rules for quantum behaviour is that of magnetic moment. This property is related to the spin of the particle and is a vector of rotation . . . but *not* of orbital rotation! It is, in fact, a measure of a sort of loop current flowing in the spherical arrangement of the atom. It is a curious phenomenon that is not well understood because, for example, the neutron, which is charge neutral, has a magnetic moment. This seems impossible; we are used to the idea of charge generating a magnetic potential. But magnetic moments are really just another measurement of the energy arrangement in atoms—that is all. They are obtained by placing the atom in a magnetic field, then measuring the spectral lines, which split in two. The difference between the two spectral lines is measured, with the difference representing twice the energy. That's all we know![12]

There are many letters of the Greek alphabet used to represent these variations of mass, spin and frequency. These variations are not discrete because one can change into another in a fraction of a second. The world of so-called particle physics is truly at odds with our world as perceived by our senses. The lighter mass particles are bigger, and heavier mass particles are smaller . . . a topsy-turvy world. It has to be said that although the word "particle" is in the language of physics, it has no meaning. Quantum particles have no borders or boundaries. They do not have shape. They do not have specific locations.[13] Many of the so-called particles have fantastically short lives and cannot even be said to "exist," if we can use that word at all.

By now you will be wondering, if you have had the benefit of medical education, where the ideas of medical physiology can be placed in this new system of physics thought, which has developed in the hundred years since biochemistry itself was first born in the late nineteenth century. Now that Einstein has been dead a long time, it is time to reassess what physics really has as its foundation. According to Dr. Milo Wolff, there is a short list of basic laws that form the roots of the tree of our knowledge about how energy behaves. The details are much too technical for most people, so I will only list them, according to Milo Wolff, as follows[14]:

1. Newton's Second Law of Motion
2. Coulomb's Law of Electric Charge Force
3. Newton's Law of Gravitational Force
4. Rules of Quantum Mechanics
5. Rules of Special Relativity
6. Law of the Conservation of Energy

What is soon overlooked is that the underlying basis for these laws is not fully understood, so you can understand the puzzlement that scientists experience when trying to explain nature. But imagine the worst case scenario, where you have just emerged from an AMA-sponsored time capsule that was closed in 1875 and now confront the application of these six basic laws to medicine! I imagine you are suffering from acute shock. Get back into the capsule fast!

Qualities of Space and Effects on the Human Body

As Dr. Milo Wolff so correctly reminds us, the qualities of space itself have not been studied in any detail. I, like Wolff, had a great deal of curiosity about space, but did not much understand it. A chance remark by my colleague Harry Massey resulted in quite a remarkable insight. In 2002 I was in California, trying yet again to get some backing for my ideas on quantum biology. By that time, I had already produced some NES Infoceuticals (water and micro-mineral based "remedies" that are imprinted with information). They followed the well-worn path of the traditional Chinese acupuncture meridians, but the Infoceuticals are based on pure energy concepts rather than on the already existing analogues of the human body-field created accidentally by minerals and herbs of various types. I was talking to Harry Massey, hoping against hope that the project would start up soon, when I remarked that all we had to do was correct the structure of space in order to correct the behaviour of the human body and its complex chemistry, which so often goes wrong. And Harry said, "Well, why don't we just do that?" I realized that back in 1999 I had already tried to do that, but, at the time, could not imagine how it could be done so far as measurement was concerned. Then when talking to

[12] Wolff, 149-150
[13] Wolff, 150
[14] Wolff, 156

Harry in 2002, I suddenly realized that all we had to do was to measure *how space was behaving when it was inhabited by different frequencies.* I thought to myself, "Of course! It is the different frequencies that are the trouble!" But then I remembered that they are the frequencies of quantum physics, which are supposed to be impossible to measure.

That thought did not stop me. I went straight away and tried the impossible. I used the apparatus I had first created in Australia and simply began to measure nothingness! But I surmised that there may be ranges of frequencies in the decadry scale, and, to my great surprise, sets of data appeared where, of course, there was supposed to be nothing. I was measuring space and how it was structured at different frequencies! So the discovery was made in the USA, at the prompting of Harry Massey.

I had always thought that the NES Infoceuticals should work a lot better than they did, and, of course, when I added "corrections to space" to the existing Infoceuticals, they began to work many times stronger and very much quicker. Nobody was more amazed than I was. At the time, I did not quite realize what I had done, but it became clearer as the science unfolded about the nature of space and its relationships with matter. Of course, many of you who use NES will realize I am referring to the set of twelve "compartments" in space (which would become the "Energetic Integrators" of the NES system).

As you now know, the compartments, which I will from now on call "Integrators," went from very long waves of several kilometers to very short waves in the realm of infrared just before light. Just how and why the Integrators were so important for the functioning of the human body was of course, at the time, a big hunch that had very little reasoning behind it and that could not be explained easily to anybody. In fact, I think it is fair to say that nobody knew what on earth Harry and I were talking about! But now the very latest physics is available to tell us that space is not empty but crisscrossed by many frequencies, which are interference patterns of the three major "particles"—or waves**,** as it turns out in reality. Space is the "medium" through which these particle-waves are transmitted, so space is able to affect them in a measurable way.

Imagine my surprise when in 2002 I found that the twelve Integrators of space not only were related to ranges of frequencies based on the power of ten, but also that they corresponded exactly with the twelve groups of Chinese acupuncture meridians! (I had been studying the Traditional Chinese Medicine (TCM) meridians since 1983 in my project to try to understand the science behind acupuncture.) By the word "corresponded," I mean that there was a *direct match* in my testing between the data for space at certain frequency ranges and the TCM meridians. I forgot to say that by then the 92 meridians I had spent so many years getting imprinted into sealed ampoules of liquid had been simplified into twelve groups. This occurred when the Integrators were tested for matches between the various types of meridians recognized for thousands of years by the Chinese doctors.

As I had feared, the acupuncture people I had spent years working with were, by now, working for large salaries in a tertiary institution in Victoria, Australia. Most of them were under the influence of the traditional education system, so they considered acupuncture as a series of chemical events in the body! Yet here I was, thinking that the meridians had a lot to do with the structure of space. I was, by then, working late at night in a shed, and sometimes on the kitchen table, with a strange group of machines and some ampoules containing . . . nothing! (Actually, as I would learn, they contained imprinted information!) I had little income and few friends in the business, and nobody had a clue what I was talking about. But when I realized slowly what was going on, something that of course took some years (with the human mind being so slow on the uptake of new ideas), I was quite amazed at my good fortune. So far as my former colleagues in Australia were concerned, I might as well have been up the Amazon looking for mushrooms. Everyone I knew in the healing business was meshed into a system of thought that did not work very well, and very few people were prepared to abandon their world view and replace it with another—not without substantial evidence. All I had was experimental techniques that came up with sets of data, none of which anyone could quite get their heads around. That kind of data is not considered "substantial" data.

Of course, you can surmise about how much substantial data surrounds some of the shibboleths of science. In many cases there is absolutely none, yet ideas get accepted because there is no other idea at the time that seems a likely bet. No arrows in the back for these people, the ones who happen to be around at the right place at the right time! Science is indeed puzzling so far as its politics is concerned. Too often people literally believe whatever they want to believe, regardless of fact, because they have so much invested in

that belief. However, quantum physics has taken some good turns in the last few years, and it has helped explain what I found in all those quirky experiments. I shall outline the physics in the following sections.

Correcting the Errors of the Past—A New Model Appears

The Transactional Interpretation of Quantum Mechanics (QM) was proposed in the mid-1980's by John G. Cramer, of the physics department of Washington University.[15] His theory was an advance at last on the Copenhagen Interpretation of QM and, by extension, it dissolved some of the paradoxes and willing schizophrenia associated with it. The Copenhagen Interpretation as generally conceived includes the ideas of Werner Heisenberg, dating from 1927, and the Uncertainly Principle, leaving us with a universe we cannot know about with complete accuracy. It resulted in the statistical model as the basis of reality, from Max Born in 1926, meaning that we must use statistics rather than direct observation to understand the universe. It also involves the concept of wave-particle duality, and it raises the question of measurement (in physics, measurement causes the "collapse of the wave function").

Cramer theorizes that waves are real (and particles may not be), and he gets, of course, to that most thorny of issues, the non-local effects, which are also often called "action at a distance." Non-locality, to put it simply, means that an event in one place in space can be directly linked with another event in another place in space. It is a weird way of just saying "information transfer." Change something in one of the connected pair of particles, and the other particle changes instantly, no matter how close or far apart the two particles are. One particle can "know" what another particle has done or is doing, and, perhaps, what it will do as well. Dirac, Wheeler, and Feynman were all physicists who used the idea of a "transaction," or a dynamic interaction taking place in space with respect to the alleged particles.

Once we are allowed waves, then they can be outgoing or ingoing and can be used to describe quantum interactions where information transfer is occurring. Cramer arranges the waves so that an excited electron can send out an emitter wave, which is of one dimension only. So it's linear, or looks like a long line. This means too that there is a "confirmation" wave that comes back the other way, and this double event is called a "transaction," which, of course, occurs in space-time. This theory can be seen as an attempt to correct errors of the past, which were still causing trouble in 1986, even though the ideas of outwaves and inwaves had been current since the mid 1940's, after Wheeler and Feynman popularised them.

What was really needed, however, was a completely new model, based on the Cramer model but applying to three-dimensional reality and leaving behind forever the one- and two-dimensional worlds invented by physicists to make their lives easy. (I say that because I have been told the math is very difficult!) I think anyone outside a tertiary institution will realize that reality is at least three-dimensional.

Another physicist, named Milo Wolff, began to wonder what the origin of the de Broglie wavelength was, a frequency emitted by all particles that was discovered in the 1920's. Wolff proposed a new interpretation of quantum, one based almost entirely on waves in space, where the properties of space are the basis of all physical laws as well as of matter. In effect, he does away with the need for almost all particles!

Our education has left us with the notion that space is empty, but there is no such thing as empty space. It has characteristics. My own experiments, over the years from 1990 to the present, led me to think that space was capable of some amazing things. I had by this time snatched data out of space that, when added to Infoceuticals, greatly increased their effectiveness. Space has the ability to store energy when it is a capacitor and to alter its ability to allow things to pass through it—which I call "permittivity." And this is because space has the ability to form resonances in the form of standing waves. Other interesting experiments have shown that space has memory and that the memory of information can last a very long time-—months or years. Wolff talks too of the density of space—how much electromagnetic information it holds in the form of waves.[16]

By the time I found out about the Wolff model, I had already formed many ideas about the electron, its apparent structure, and its information-carrying ability. But nothing had quite prepared me for the shock of

[15] See *Reviews of Modern Physics* 58 (July 1986): 647-688
[16] Wolff, 188

Wolff's idea of an electron: it has one centre and two sets of scalar waves, one set moving outwards and the other, at the same frequency, moving inwards. The electron can be said to be in space, in the centre of the rings, which are, in fact, little spheres as the electron goes into three-dimensions for the first time in its life. The spherical waves go on forever, getting lesser in amplitude as they travel, but the central part of the electron stays where it is, a stationary spherical wave. At the centre of the electron, the waves reverse direction, making for some very interesting possibilities so far as information exchange between particles is concerned.

To be blunt, if you don't have any action at a distance, then all information exchange can only be by atoms rubbing up against each other. No human body-field is possible, and every cell in the body is unable to know what every other cell is doing, so regulation of the organism is clearly impossible. So somehow, huge amounts of data have to be made available very rapidly to every cell in the network for biology to be possible. A wave model makes such action-at-a-distance more understandable.

Charge, we all know, belongs to the electron, which is negative. Not so. There is *no* evidence that the electron is itself charged.[17] Yes, there is charge *associated* with it. But electrons have no specific charge at all; in fact, there are at least 15 different levels of negative charge possible! Wolff recognized this fact and wondered whether it's the space around electrons that is charged. I mention this in case you are a biochemist with ideas about the charge of ions.

Wolff's model is the only bit of physics I can actually relate to after years of battling with turgid and incomprehensible texts by academics. The whole point about the three basic particles is said to be energy exchange, but as someone interested in the body-field and healing, I am interested mainly in information exchange, the poor relation in physics. But to my amazement and delight, the two occur together in Wolff's theoretical model.

Once two space-resonating systems get together, there has to be something that happens to show that an event has taken place. This is the event of recognition of similar information systems, the core of the science I have been pursuing for many years. When two systems of space-resonance communicate, there is an energy exchange, and this event is expressed in the form of an ever-so-slight frequency shift that indicates that the permittivity of space between them has changed. This was my whole technique, and my only one for studying what happens in information systems in a field.

So naturally, when late in 2005 I read Milo Wolff's book, I ran to the laboratory to see what happened when there was a complex "match" between information systems. Would there be any change in the data I had been measuring for many years past? Until then I had found that nothing could alter the data, so I was completely delighted to find out that both data sources changed—one a little increased, one a little decreased—when a match was tested. The action of the match was enough to change the data! More amazing still was that when the experiment was over and the carriers of information were retested separately, they had actually reverted to their original data! So it appears that electrons have memory! They remembered what data they had contained before they were matched.

Remember your psychology teacher telling you that doing an experiment changes the experiment? Now you know why! The extraordinary thing was that I had always thought that the space in the vicinity of the match testing was what actually caused the change in the galvanic skin responses of a person connected with the machine that does the matching. Human body-fields are extremely responsive to what is in space around them. This is no news to anyone except academics perhaps, but it is also a key factor in health and sickness.

Human body-fields are also very responsive to the radiation around them, and I don't refer just to sunlight but to a whole range of radiation. So it is not surprising to find that Wolff concedes that a very old idea, suggested in 1922 by Tetrode, actually may be correct.[18] Tetrode thought that radiation was an energy-exchange mechanism. The resulting idea actually is quite well known: that oscillators are able to couple via their space resonances. According to Wolff, the three major particles are dual oscillators, sending out

[17] Wolff, 193
[18] Wolff, 199

frequencies and receiving them at the same frequency. The results are coded in the central part of the electron as a phase difference between the two waves!

The various other particles and effects, such as light, are put down to *appearances* created by the wave interactions of the three major particles. Once I found this out I was quite relieved, as there was absolutely no explanation in conventional physics for the fact that visible light does not carry the sort of information I am convinced is used in the body-field information model I have built up. If the photon is nothing but an *appearance* caused by interference patterns of other particles, however, then of course it will not be part of the major information system. All living things as a matter of course will emit what look like photons if there are electrons present of the right frequencies to cause interference patterns in the realm of light frequencies.

So to be as clear as possible, the energy exchange in the universe is done via the matching of space resonances, while the information exchange is done at the centre of the three major particles—electrons, protons and neutrons—under the guise of a phase error of from zero to 180 degrees. When there is an energy exchange, there is also an information exchange. You can't have one without the other—a bit like love and marriage, at least in the song.

The information the body wants is right at the heart of the electron, neutron, or proton, although in practice it may be the electron that is most important. The electron is a very dense piece of space—the link between the inwave and the outwave. In NES, if we allow 15 degrees of arc for each of our frequency Integrators, then we will get twelve of them in the 180 degrees allowed by the Wolff theory of quantum. I have already checked this experimentally, and it works in practice; that is to say, there is a match between every Integrator and the 15 degrees required, and there is no match with 14 degrees or 16 degrees, or other "non-allowable" degrees. The whole thing is arranged to work like a Swiss watch—very accurately. Accuracy, of course, is necessary for life to occur.

If we allow our "information packages" to represent a degree (to indicate where the information belongs in the NES Integrator), a vector (so as to recognize the three-dimensionality of space), and the sum of the inwave and the outwave, then we have a data set that could form nice mathematics. We also have a pattern that could be recognized by the body-field. These ideas have not been tested, so it remains a theory, pure and simple. The idea here is to show the possibilities of the model.

The great thought experiment of 1935, called The Einstein, Podolsky, Rosen (EPR) Experiment[19], gave thinking a new meaning and showed us how certain science disciplines disregard data they disagree with—at least initially. The EPR thought experiment eventually ended decades later in experimental results that confirmed the quantum paradox of non-locality, or action at a distance. What do these experiments also purport to show? Simply that while the speed of light is the outer limit for energy exchange, information exchange (presumably at the centre of the three particles) is apparently instantaneous, even over large distances. The word *apparently* is important, for information exchange isn't quite instantaneous. If information exchange can only properly occur when there is energy exchange, we have to really modify our thoughts and say that one *part* of information exchange is instantaneous—the outwave part!

Remember, the wave of the Wolff model is a standing wave in space and is therefore able to act a little bit as though it were a medium of information exchange. Most people have no trouble with the idea of the outwave, but may doubt the existence of the inwave.[20] The best I can say is that its existence stands to be proven, but it works beautifully in Wolff's theoretical model.

Here is another factor to consider. All chemical reactions must result in a slight change of frequency of the atoms taking part in the exchange. If some chemical reactions advance the phase of the surrounding field, then the Law of Conservation of Energy demands that other reactions will have a similar effect in retarding the phase. Phase and energy state are related ultimately. Put them together and chemistry, even biochemistry, is related to both frequency change and phase change. Any decent sort of medicine would be involved in making sure that frequency and phase are correct in the case of all of the body's chemical activities.

[19] Wolff, 140-43
[20] Wolff, 210

Frequency and phase represent the extent to which chemical reactions can influence the health of the entire body organism, rather than just one part of a cell, or even less, a molecule. So orthomolecular science is right on the verge of looking into what controls the "ortho," which is, of course, the field surrounding the chemical reaction. "Ortho" simply means "correct." Every *ortho*molecular doctor is right on the verge of taking a revolutionary step—into quantum field energetics.

A Comedy of Errors in Quantum Physics 1850 – 2006

As I indicated, I had never been able to pick up a physics book and read it with interest until I came across the work of Milo Wolff. Wolff does a lot of smooth driving along the rocky road built for us by the following luminaries of quantum mechanics. Here is a brief history of how quantum physics developed, missing the point of resolution of inner conflict again and again. It helps us understand why physics and biology are not only poorly integrated but actually are in conflict.

Max Planck

In 1900, a physics revolution was initiated by Max Planck, who had made a momentous observation concerning the behaviour of what is called "black body" radiation. The radiation could not be explained by the prevailing ideas of how radiation of electromagnetic waves functions, something owed to Maxwell, who fifty years or so before had described electromagnetic-wave propagation with a series of four equations.

Planck observed that the energy radiated from a black metal box behaved like little packets rather than like continuous waves, and the word *quanta,* from Latin, was used to describe these packets of energy. Planck astonished the scientific community by proving that a constant (now known as Planck's Constant) was required to correct the errors that were observed as differing from the predicted behaviour of the Maxwellian equations. It is, in fact, not a very large number, but because its influence grows as frequency grows, it can be of great importance in practice. The great law found by Planck is:

E (for energy) = h (the Constant) multiplied by f (frequency of the wave, or particle).

The great controversy of the last hundred years in physics has been because of Max Planck's simple need for correction of an energy formula. It led to no end of trouble.

Albert Einstein

Already by 1905, the unknown clerk in the Berne patents office had used Planck's new arrangement of energy to explain the photoelectric effect, a very puzzling phenomenon which can best be explained by saying that metal surfaces can radiate light when irradiated by electrons. This does not seem to be a problem now, particularly if you don't think about it much, since even until recently no one could understand how a photon could be ejected by an electron . . . or how an electron could absorb a photon. The problem of emission and reabsorption that occurs in atoms remained a problem, one that was not addressed properly until the last 25 years. Most of the time physicists worried about transfer of energy inwaves and packets.

Since Newton's time, the wave nature of light had been accepted by science practitioners, at first most grudgingly. The idea that little packets of energy could occur was quite a heresy, because the continuous wave nature of light, already accepted since the pioneering work of Newton's optics, entertained only the wave theory. Yet even in the eighteenth century, the packet-of-energy idea had been greatly advanced by the construction of little light windmills, ones that still are made, where in a partial vacuum the blades of the windmill, bright on one side and dark on the other, are seen to turn every time the apparatus is placed in strong light.

Of course, the light packets are hitting the blades where they are bright and being absorbed on the black side, so making the windmill go around . . . or so it was thought in the eighteenth century and beyond. Something with mass hits the blade, you see. So it moves the blade, you see. But you don't see at all! The effect is apparent. We may not need to have what we might call the "itinerant" particle at all! And that is really what this lecture is about: how particles don't move, yet still communicate with each other.

Einstein, in his long and productive life, never warmed to particle physics or to quantum particle theory. He admitted that he did not know why light appears to behave like discrete particles. The photon was never named by him; it was, in fact, named by someone else ten years after the publication of his 1905 paper. Now you know why. He may not have believed it was a particle. He said that he did not know what a photon is.

Unfortunately for us all, however, the duality of modern particle physics had begun in earnest and was to last 100 years. Few scientists would drop the idea of waves, perhaps because of Newton, and others balked at the idea of particles on their own, so the duality of wave and particle began. Both could not be entirely right; yet matter appeared to act like one or the other depending on the circumstance.

Einstein was there just when the idea of how the atom was arranged was still open to deep question. Provisionally, he adopted the idea of particle-like packets, because of his work on the photon and the electron, and hoped later in his life to describe how these could be united in a new grand theory involving continuous force fields projected through space. As it turned out he never found a grand unified field theory, and, perhaps more tragically, he never needed to! He, himself, realized that his quest could have been in vain.

From our vantage point in 2006, the 100-year-old wave-versus-particle idea in physics may have been nothing more than a wild goose chase that consumed the lives of many scientists; yet we are still beset with the four energy forces in the universe:

Electromagnetic Fields

Gravitational Attraction

The Weak Force

The Strong Force

Why do we have them? Because Einstein thought they were needed. Some are odd, such as the weak force, which exerts a force for about 14 minutes. However, the most troublesome of these forces is gravity, which irritates physicists by acting instantaneously. Furthermore, because no gravity particle has ever been found, gravity has been accepted by many as somehow inherent in the mass of atoms themselves.

There are particle-physics specialists everywhere, yet not one of them has ever seen the particles they study. One of the particles—the proton—began life simply as a space inside the atom, only to become a particle once academics got hold of it. The 300 to 400 particles now with us as a result of basic particle-physics research are supposed to be moved around by these four forces I just mentioned. These particles are supposed to have spin, magnetic moment, and other characteristics. A field is supposed to be created when one or more of these particles move from one place to another under the influence of the forces. What creates the forces? Not known.

Unfortunately, these four forces have never been united or their origins explained, even after a century of the best brains on the planet working for their lifetimes, as Einstein did, without a positive result. Even as a failed scientist, which he is by his own attempts to achieve a unity in science, Einstein managed to attract enormous prestige for what he did discover. Still, Einstein, to his great credit, never accepted the idea proposed by some quantum physicists—and a quite baffling idea it was—of the apparent randomness of the behaviour of the quanta, or “particles.” He could never accept, perhaps rightly, that there seemed to be no underlying law relating to the behaviour of matter. His most famous quip is still worth invoking here: “God does not play dice with the Cosmos.”

So the legacy of Einstein and others is that matter behaves sometimes like a wave, with one set of laws, and at other times like a particle, with another set of laws, perhaps even more puzzling ones. But it has changed in one respect: it can now be said, from experiments by a group of Indian scientists in the 1980’s, that matter behaves not so much like one or the other but like both at the *same instant of time*. More on this later.

Niels Bohr

The idea of the particle being the basis of reality, rather than the wave, began in the days of Niels Bohr, who decided that waves were somehow unreal, while particles or packets of energy were somehow more real, giving us two universes to explain instead of just one. The idea of a "real" universe and an "unreal" one is still with us. Bohr taught for his whole life that waves in quantum were not "real" waves. Waves and particles were supposed to be incomplete descriptions of matter that were somehow complementary, and this problem could be overcome by using mathematics—or, worse, statistics—to describe the material world. This is called the Copenhagen Doctrine, since Bohr was Danish.

Direct observation of the subatomic nature of matter was not possible at that time, so observation was replaced by recourse to statistical models, and direct observations of the behaviour of matter at normal room temperatures and pressures was never considered possible. Heisenberg even concocted an Uncertainty Principle (not a law because there was nothing to make a law about!), which discouraged scientists from attempting to set up direct measurement experiments from 1926 onwards. Low-energy particle physics was doomed from the start. There are no low-energy particle physics departments.

Erwin Schrödinger

Like many nineteenth-century scientists before him, Erwin Schrödinger believed in "real" waves and said so very famously:

> "Particles are just *schauenkommen* (appearances). The world is given to me only once,
> not one existing and one perceived. Subject and object are only one."

In retrospect, Schrödinger has greatness in that he not only greatly distrusted quantum mechanics, but also because he developed the distinction between the electromagnetic wave model of Maxwell, which was two-dimensional at best and emanated from uni-dimensional data, and the newer idea of the standing scalar wave, which has three dimensions and therefore three axes. You can see a standing scalar wave when you expose dry sand on a plate to low-frequency sound waves. The sand forms little heaps in patterns, showing the outline of sets of waves. The scalar wave, as we shall see, had more distance to travel.

Louis Duc de Broglie

On his first entry into science, Louis de Broglie wrote a degree paper that scored a Nobel Prize in 1929, after which he returned to the honest pursuits of an aristocrat. His paper was about matter waves and their frequencies. Electrons, he theorized, were not so much particles as waves of only certain allowable frequencies. So it has been accepted since 1929 that electrons do have specific wave, as well as frequency, properties, but due to the politics of science, we do not have departments of wave physics but departments of particle physics dotting our countryside. In his Noble Prize speech, Louis de Broglie said:

> "Determination of the stable motion of electrons in the atom introduces integers,
> and up to this point the only phenomena involving integers in physics were those
> of normal modes of vibration. This fact suggests to me the idea that electrons
> too could not be considered simply as particles, but that frequency must be assigned
> to them also."

De Broglie's ideas turned out to be of greater significance than at first appeared, when late in the twentieth century his work was revisited with interesting implications, which I shall discuss below. It turned out that de Broglie waves could be seen as the result of a Doppler shift effect created by two other waves!

De Broglie also did not like the recourse to statistics in understanding matter, as it was envisioned by Bohr. He suspected, as did Einstein, that statistics covered a multitude of things that might actually obscure our efforts to understand the structure of matter. De Broglie said that statistics, in the assessment of the structure of matter, "hide a completely determined and ascertainable reality behind variables which elude our experimental techniques."

So it is of great importance to note that de Broglie, Schrödinger and Einstein were all very unhappy about the development of quantum theory from its earliest days. None of them liked the idea of a chaotic universe

where there was apparent randomness in the behavior of what was then considered to be particles. Even in 1954, when he was close to his end, Einstein was still quietly backing wave theory, showing that it never entirely went out of fashion. On his website (spaceandmotion.com/physics-NielsBohr.htm), Milo Wolff has written something that Einstein might agree with:

> "Experiments on interference made with particle rays have given brilliant proof that the wave character of the phenomena of motion as assumed by the theory does really correspond with the facts."

On the other side of the story, the scientists Max Born and Werner Heisenberg pursued the idea of a probability wave, one constructed from a statistical idea of uniting wave with particle. Heisenberg had famously issued the directive that we can never "know" or "measure" the position and velocity of a particle at the same time with equal accuracy. Could this be because the particle did not, in fact, *have* a velocity in the way they imagined it? No one ever said that, so far as we know.

Surprisingly, the dictum of Heisenberg met with little resistance, and it ended up in every textbook, even though it denies the one true hallmark of science: the insistence on direct observation of data to form the basis of scientific thought. It is curious to develop a theory saying that something can never be known. It gives us some insight into the quiet desperation of the quantum physicist, and little else.

So why indeed did the particle appear to win over the wave, even though de Broglie had been honoured for his stunning work on waves? Here we have to put it down to the gratuitous discovery by Born, in 1928, that the square of an element of the quantum wave equations of de Broglie produced mathematics that could apparently predict the place where a "particle" might be found. The wave-theory people suffered another setback in 1936 when Einstein backed Born's statistical interpretation of the structure of matter. By then Einstein had developed the idea that the four force fields could be extended forever in space and could, therefore, accommodate an idea of waves and particles in a statistical matrix. Yes, he was contradicting what he had said earlier in his life . . . but he was the first one to consider the idea of a matrix of force fields in space and even was led to wonder what on earth space actually *is*.

Paul Dirac

If you are looking for a sensible physicist, you need look no further. Dirac acknowledged in 1974 that Born's statistical idea from 1928 was universally accepted, but he also said the following[21]:

> "I must say that I do not like indeterminism. I have to accept it because it is certainly the best that we can do with our present knowledge. One can always hope that there will be, in the future, developments that will lead to a drastically different theory from the present quantum mechanics, and for which there may be a partial return to determinism."

Dirac always thought, it seems, that the electron was a wave structure without particle characteristics attributed to it. And, in fact, Dirac's desire, expressed thirty years ago now, was realized in the last decade in several ways by several people. Now we have time to examine the proposed solutions to the impasse that quantum physics had trapped itself into from 1900 onwards, with more and more rails being constructed around the corral and with little effect when it comes to satisfying those who desire a sensible, orderly universe.

Richard Feynman

With Einstein long dead, the endless search for a unified force-field theory languished somewhat, and particle physics had become blighted by endless confusion. This can be mirrored in these quotes from Richard Feynman, who was no stranger to exasperation[22]:

[21] At a talk delivered at the Development of Quantum Mechanics Conference, 14 April 1972, Rome.

[22] Feynman, *The Pleasure of Finding Things Out,* 186-87.

"I think it safe to say that no one understands quantum mechanics."

"Science is the belief in the ignorance of experts."

Feynman made a dent in the randomness of the matter theories of quantum mechanics by developing to a higher state of perfection the ability of scientists to predict correctly the position and apparent velocity of a quanta, or packet of energy. He developed a system, described in his own books, called path integral calculation to predict what Heisenberg said could never be known: the expected location of a quantum of energy. Yet the mathematics proved very troublesome, and Feynman himself acknowledged in 1985 that it was a cause of some distress. The solutions to his calculations frequently included infinities, which had to be cancelled, in a process called "renormalization"—perhaps a sign that something was wrong with the theory in the first place!

Even greater than his path integral approach, however, was an idea that Feynman developed that has enabled quantum physics to move out of Dry Gulch. The idea of a real world accompanied by what Plato had called "shadows of reality," outlined in *The Republic* long ago, was the dry gulch that the physicists had entered in 1900 or thereabouts. The idea of a real world with an accompanying virtual world was not intellectually pleasing in ancient Greece, and it is not now. I call it the dry gulch because it was not a fertile idea and led nowhere. After all, physics is supposed to be just that—the study of the physical world—while metaphysics is concerned with the virtual world, the "shadows of reality" mentioned by Plato. If something is real, it can be measured, even if not always directly. We don't want two universes. We don't want different degrees of reality. Yet what if we could accommodate a matter structure that allows for all of the good science of the last century, as well as some interesting possibilities for the next? This is what this article is about, and Feynman helps us get there.

Feynman's new idea came from studying H. A. Lorentz's theory of the electron. Lorentz had proposed an electron structure theory in the very early part of the twentieth century and was awarded the Nobel Prize for just that in 1902. Feynman, in around 1945, along with John Wheeler, updated Lorentz's idea by replacing "force fields" with the idea of a spherical electromagnetic wave, a wave that Maxwell had decreed was two-dimensional. Because of its electrical origins, the new area of physics that resulted from these ideas was quantum electrodynamics (QED), and it assumed that there were particles that were being moved around by something. Feynman was so successful with his new concept that he received the Nobel Prize in 1965.

Feynman thought there had to be an inwave and an outwave in the particle—or wave, as he should perhaps have called it. The spherical wave was certainly new and quite different from the familiar sinusoidal wave of popular electronics. In fact, there are no solutions to Maxwell's equations that can be placed in a spherical wave pattern. The spherical wave was also a stationary or standing wave, that is, its velocity relative to the observer was zero.

The ideas had moved from two-dimensional waves to three-dimensional ones, but Feynman had overlooked one important thing: Schrödinger's idea of using a scalar wave instead of a Maxwellian wave. Feynman would not ditch the particle as a concept, although he did see the problem as perhaps a linguistic one. But something had happened at last. Better results in practice were obtained from Feynman's concepts, and his stature grew. However, he was still a long way from the idea that was to emerge in the 1980's, an idea which curiously mirrored the view of physicist William Clifford, who in 1876, just after Maxwell delivered his famous four equations, said, "Matter is undulations in the fabric of space."

We have to ask, since all the clues were there, why did it take so long for physics to move on in its understanding? Isn't it obvious that matter is three-dimensional at least? If we look at the problem from the point of view of the physicists themselves, you can understand their dilemma. Maxwell described momentum versus time in his equations. This is possibly uni-dimensional if time is not seen as a dimension. This understanding apparently got confused in the end with Hamilton's half-wave mathematics from the century before Maxwell, where frequency versus amplitude was described—in other words, two dimensions. If three dimensions were to be used to describe matter, it would involve an enormous amount of rearrangement of the deck chairs on the Titanic. By this, I mean that physics is concerned here with spin, charge, magnetic fields, velocity, mass, and amplitude, and all have to be accounted for in a model of the atom and its

particles or waves. So although Feynman's move to three dimensions was obviously needed, it took some rethinking to do it!

Feynman had to tread carefully so as not to upset the chaps in the profession. There are holy grails in science, or holy cows depending upon how you view things, and one of these is called cause and effect. This is usually conceived of as a time-related phenomenon, so that the cause always precedes effect. When it doesn't, some people get restless. This means, of course, that any model of matter has to account for one thing happening before another in a time sequence. This is okay for you and me because, well, we are not really institutionalised scientists as such. We know what time is. (Physicists don't! It's curious that they know what time is before they go to college, and when they come out, they don't!) Feynman's idea was great, but it has a serious flaw, for it couldn't account for the arrow of time.

Dropping particles entirely was not to Feynman's taste, and it was not until experiments on quantum super-placement were carried out, where it was clearly shown that a particle could "appear" in two different places at the same instant of time, that the game was up for the particle theory. We are forced back to Schrödinger's great statement that particles are *schaumkommen*—appearances. They appear and then disappear; that is known, of course, to be true. It is very hard to build a universe out of things that come and go without apparent reason. So it is logical to ask if particles might simply be manifestations of energy exchange occurring somewhere else?

In science, nothing changes unless there is a compelling reason for it to do so, for reasons of logic and harmony and mathematical necessity. Science changes on the basis of observed events in nature, and there was about to be a profound change in the most basic part of a basic science.

Milo Wolff

In 1986 Milo Wolff discovered an important correspondence in a key area of quantum theory not previously noticed: a mathematical coherence between the characteristics of a spherical scalar wave and the existing mathematics done by de Broglie on the matter wave of the electron. Remember, de Broglie had found specific frequencies for the electrons of each element.

No progress is made in science unless the newer idea explains things that the older idea cannot; so how did the idea of using a standing scalar wave with de Broglie's mathematics of the electron fare in this respect? Very well! Wolff had noticed that the sum of the outwave and inwave in Feynman's QED physics model equaled the frequency of the electron noted in 1929 by de Broglie. This made QED more solid than before. Could it explain the transfer of energy, the basic reason for there being quantum physics in the first place? Yes! The energy transfer appeared to happen by way of resonant coupling in space between two oscillating systems. At present it appears that the Wolff model is able to satisfy, in terms of mathematics, the following physics laws or principles: conservation of energy, quantum theory, Dirac's equation, QED and Feynman diagrams, special relativity, electric charge and Maxwell's equations and Newton's second law (F = ma).

Here is what is really new about the Wolff model: there are *two* points from which spherical waves are produced. In the case of the electron, these two points are in the same place. So that makes four waves possible in cases where the points move apart because of the simple phenomenon of heterodyning.[23] Heterodyning means, to put it simply, two oscillating waves, when mixed, will produce four waves. But this heterodyning does not happen at rest because the inwave and outwave are at the same frequency. This frequency stability or rest period changes when information is exchanged. Frequency change in an oscillating system means heterodyning will occur. All through my experiments over 25 years, I have found sets of four waves in my data. This is why I found four waves, no doubt.

If every particle depends on every other particle for its existence, then we must have a system, such as envisaged in 1883 by Ernst Mach, which allows for intercommunication among all particles in the universe. Wolff liked this idea because of his background is astrophysics. He could see the big picture. So he attempted to solve the time problem by giving all particles an oscillatory system that could keep time.

[23] Heterodyning means a system of alternating currents of two different frequencies that are combined to produce two new frequencies, which are the sum and difference of the original frequencies.

Again, it has to be remembered that gravity, inertial force, and magnetic fields affect other things instantaneously and do not, as it were, travel around at the speed of light. This gives some inkling that they are inherent somehow in matter. So Wolff had to find somewhere in his model where they could be expressed. Let's look a bit further . . .

A Walk Through Wolff's Space Resonance Theory

The new Wolff model has two spherical waves, one moving outward infinitely and the other moving inward towards a central point. This central point is where one imagines the electron to be. These two waves set up an oscillation at a certain frequency, and this, in turn, makes a space resonance that is able to interact with other space resonances. Quantum theory gives us the following simple formula:

$$F \text{ (frequency)} = \frac{m \text{ (mass) multiplied by } c \text{ (speed of light)}}{h \text{ (Planck's Constant)}}$$

The two waves form a standing scalar wave. Spin occurs when the reversal of the inwave occurs at the central point, where it becomes the outwave. There is a 180-degree phase shift possible in either direction. The spherical standing wave provides us with two types of electrons, because there are two ways of superimposing inwaves and outwaves. This gives us an electron and a positron, representing two types of charge, and they can annihilate each other.

Energy exchange takes place due to these space resonances. If one oscillator increases in frequency, the other one decreases, according to the Law of Conservation of Energy. This is the manner in which energy exchange takes place.

Space, which is called a "vacuum" in physics' jargon, is not something with nothing in it. It has density because of the matter waves produced by all the matter in the universe. According to the Wolff model, *an electron is a change in the space density at the centre of a spherical wave.*

By now it will be clear that a frequency shift means an energy change to a higher or lower value. This shift occurs when there is an interaction between particles, and this effect can take place over a distance because the exploratory outwave has infinite extension.

A characteristic of the Wolff system is that the 50,000 waves which might be found in the atoms of a molecule in a biological system are able to bind together and form a simple unity, making a simple wave form characteristic of that compound. Nature simplifies itself to become efficient!

The question arises, for companies like NES, whether or not this electron model is useful for gaining a new understanding of medical pathology. The answer is, "Yes," if the change in frequency is matched, as it must be, by a much greater phase difference at the central high-amplitude point of the electron's existence. The frequency changes themselves are not great. Some of these phase shifts, as well as the places within the Integrators where certain cells belong, have been catalogued by NES, a task which took many years. We have found that all normal tissues and cells of the body can be assigned a value, in degrees, between zero and 15. For the non-technical reader, we have to say that phase is about the coordination between waves—how and where they fit into space. Waves are "in phase" when they fit together, and they fit together right at the most space-dense part of the electron, neutron, or proton.

So it is worth reporting here that NES research so far shows that as frequency and phase change to higher values, therefore increasing the energy of a biological system, the severity of some diseases increases. For example, greater and greater phase errors can explain the difference between primary and secondary cancers. As the phase reaches a higher level of error, the phase matches to tissues that can be represented by that phase error. Because bone marrow and liver cells, for example, are very high in the phase error stakes, secondary growths will likely appear in those places. The cancer does not have to be transported there by any medium other than the unseen matter wave.

We can also attribute errors in the diagnosis of cancer to the phase shift effect. For example, it has been found that cancer is always of a mass and temperature different from the surrounding tissues, indicating that a phase error may lay behind this and many other pathologies that are hitherto unexplained. In this respect, the inwave is of great interest in the development of a theory of quantum medical pathology, since it relates to the completion of an interaction with another wave, which will be the equivalent of a chemical reaction.

Phase is also very likely to be disturbed due to variations in the gravitational and magnetic forces affecting the electron. In therapeutic practice, complementary medical practitioners have called this effect geopathic stress. It has been found by preliminary NES research to be a key factor in pathology.

How can the Wolff model change medicine? We are left with two worlds, and *both of them are real.* The first world we already know a lot about: the laws of physics, the five senses, laboratory instruments, and time-related events. The second world is that of the scalar wave interactions that are taking place all over the universe as a spontaneous activity of matter. Energy is exchanged only when the outwave reacts, so far as frequency is concerned, and the inwave is affected as well. This unseen but real world affects what happens in the directly observed world. In the scalar-wave world, matter has a "knowledge" of the state of other pieces of matter. Without that, no chemical reaction could take place—ever! The waves also set the universal clock so that cause and effect can be determined.

The Wolff model means that it is at last possible for us to conceive of a biological control system based on field interactions of the scalar wave. In therapy we need not try to alter frequencies, because they are determined by the matter itself and where it is located on the periodic table. Instead, it should be possible to correct phase errors between the inwave and the outwave, since it may be that the density of space is altered by a phase shift, which can lead to pathology. Every cell in the body, and in all biology, has a characteristic phase value, and these are used as identifiers in NES technology. Pathology results from the phase error being greater than or less than normal. This shift may be only a matter of several minutes of a degree. NES has, since 2000, developed a twelve-set group of space-frequency correctors called Energetic Integrator Infoceuticals, each based on a range of 15 degrees of correction, which is, of course, cumulative; there being twelve of them, we get to 180 degrees, after which the system ends for that type of particle—the electron.

I have found experimentally that the human body particularly dislikes, or tolerates badly, a phase error of 90 degrees, and this error is responsible for many disease states hitherto not amenable to any form of therapy. Why does the body not like 90 degrees or, for that matter, 180 degrees? These angles represent intersections of planar waves such that the body-field wave can be cut off, therefore impeding information flow. NES can begin to address these types of phase errors through the use of therapeutic mixtures we call Energetic Terrain Infoceuticals and Energetic Star Infoceuticals, as well as by way of the Integrator Infoceuticals.

NES Measurement of the Quantum Scalar Wave

If there is, in fact, as Wolff claims, a pair of standing scalar waves equal in frequency to the de Broglie wavelengths for the electrons of various elements, then surely there is a way in which the wave can be read. The wave will not represent only the electron but the entire particle zoo that grazes near the atom, a totality of the potentials of that element or compound.

The difference between a standing electromagnetic wave and a standing scalar wave is the addition of one dimension. Both are apparently stationary. The electromagnetic standing wave forms over an antenna tuned to just below the frequency of the wave to be measured, or "received," as the jargon has it. The difference in length between antenna length and wavelength is to accommodate changes in frequency that must occur, according to the Wolff theory.

In the case of the scalar standing wave, it should be possible to build a resonating chamber that consists of a long tube tuned to the correct wavelength for that element or compound. A resonating cavity thus created will absorb the space resonance of the outwave. NES has, in fact, conducted this research over many years and

has found that, indeed, structured magnetic spikes appear in the sealed tube representing the scalar wave measurement device. They are positive and negative-going spikes arranged into wave-like structures.

The scalar wave system works, of course, by frequency modulation, and this can be detected, with specialized equipment, in the 1000 plus megahertz range. My experiment was conducted between 1997 and 1998 based on the theory that although we might not be able to detect the waves directly (because heterodyning occurs), it might be possible to pick up spurious frequencies or even interference patterns. We did pick up such patterns, in the spikes I just mentioned.

NES has investigated the variations in the conductivity of space that occur in the presence of space resonance effects as mentioned by Wolff. These alterations in space conductivity have been used as a way of matching phase effects found when interactions occur between various cells, tissues, organ structures, chemical compounds and elements. This has been a slow trial-and-error process that has taken many decades. I was not always sure what I was measuring, but it appears that, enlightened now by the Wolff electron model, I have proceeded for years with a complex system of phase matching. When a match happens, it causes a sudden change in the conductivity of space in the vicinity of the experiment.

So, What Is Light?

Particles do have some sort of existence, as all appearances do, but they are not the prime movers; they are appearances created as interference patterns by the inwave and outwave of the electron. But what of the photon? For 100 years many scientists have puzzled about what light actually *is*. Now it appears that it is an interference pattern, coming from the electron, that looks like a quantum of energy. No wonder energy appears to be transferred from electron to photon!

In the late 1980's, an experiment designed by three Indian scientists—Home, Ghose, and Agarwal—was carried out by Hamamatsu Photonics in Japan. It was conducted to see whether photons, when placed in certain sets of prisms separated by a minute gap, would be reflected as only waves can, or if they could tunnel, as only particles can. The experiment was very clever in its concept and gave the conclusion that matter behaves like waves and particles *at the same time*. The result suggests that the duality of matter is an illusion, and the Wolff type of arrangement of matter can explain a great deal about the wave-particle controversy.[24]

Visible photons do not take part in the information-carrying process, which is now attributed by NES to the 180-degree phase shift function at the centre of the electron. The photon, in this context, is not needed to transfer information, although it does transfer energy. The basic machinery of energy transfer is an interaction of two oscillators, which creates changes in space resonance.

What is of most interest in biology, when we are considering the Wolff idea of the electron, is the concept of variations in space density. The density of space is fairly constant in all places, except for the point where the two waves of the electron converge. A non-linear condition is set up at the central point of the electron, as it is the centre of a region of changing space resonance.[25] There is some cross modulation in this region, which can be called, for the layperson, "information interference," and this interference itself might lie at the heart of a system of energetic pathology in medicine. If this non-linearity can be corrected, then a sort of information congestion at the central point region of the electron can be corrected, so long as we know how to do this. We can possibly do this by correcting the density of space, something that the NES Integrator Infoceuticals may be able to do, for they include constants related to a major part of the electromagnetic frequency range. Simply put, the NES range of Integrator Infoceuticals is designed to correct information transfer in the human body-field.

One additional point is that all subatomic particles are categorized according to their spin (which has always been measured on the basis of high-energy accelerators). As a result of spin measurements, we have two classes of particles, fermions and bosons. Yet it is clear that we cannot include both spin and phase in the mathematics for the Wolff model of the electron. However, there seems little reason why what appears to be spin cannot also be explained as phase error related to frequency.

[24] Gribbin, *Q Is for Quantum,* 525-26
[25] Wolff , 189

A Revolution in Medicine

One thing that is possible with the Wolff theory, and that is quite unsatisfactory with older models, is to have a full-wave, almost lossless system of energy that self-unites and, in doing so, self-simplifies.[26] One would expect to find photons in the cells of every living thing and not be worried about whether or not they were able to do things such as penetrate this or that layer of tissue, since it is the electrons that are pulsating centres of dynamic action that radiate spherical waves for at least one meter. These waves look like layers of an onion, ones that create interference patterns in space that look like particles. Wolff, as an astrophysicist, thinks in larger terms than the biologist!

Naturally we want to know the limitations of the energy system. Gone are the electrons buzzing about. We now have stationary standing waves sending out exploratory spherical wave messages . . . and the question remains now as to how far these messages might go. Wolff says the size of his double spheres is infinity. But amplitude decreases with distance.

The generation of a human body-field no longer requires complex wiring if the body-field can be generated by matter itself and amplified by nothing more than a cavity that behaves like a piece of space tuned to a certain frequency range. The quality factor of the space will be affected by the regularity of the space. The closer each organ conforms to a geometric pattern, the stronger the effect.

The ability of the wave forms to combine in space means that there is such a thing as a wave that represents the entire function of the organism—the full body wave. This is the entity we are trying to correct when we treat someone therapeutically. Affect one part of the body-field and you affect the whole, and so the theory itself indicates the likelihood of some interesting rearrangements of body functions before the correction is stable.

How Can a Computer Know Things?

Most biotechnologies use computers as an assessment device. NES does as well. This begs the question of how computers can interface with energy. Computers don't know anything, of course, but if you think in a new way, you will understand how they can appear to do so.

Think about the photon—the interference pattern created by high-frequency electrons—and how, when these patterns are propagated in space, objects become visible to our eyes as the patterns are reflected. The photons are part of an outwave, exploring the universe. Then, the eye picks up an inwave and interprets that to mean that there is an object there in space. In the case of hearing, because of the inwave and the outwave, the sound, when it is heard, actually seems to be outside the body, instead of where we must expect it—inside the ear!

The NES device uses the same kind of process in relation to the human body-field. An outwave is produced by a generator in the software, and then the corresponding inwave that returns instantly to the computer is simply matched to already existing data in the software. There are many outwaves and inwaves needed, of course, to read the full body-field, so the software does a number of scans (or tests) of aspects of the body-field in a single assessment. The human body-field is disturbed by the scanning process, so an assessment cannot be reliably repeated until this disturbance settles. (In NES protocol, you must wait five days between assessments).

The whole activity of outwave and inwave of the electron involves the most minute of phase and frequency changes, which will affect how the matching occurs in the computer. The NES device is designed so that the body wave being tested is close physically to the computer itself. While the infinite stretch of the outwave suggested by Wolff is correct theoretically, in practical applications, the shorter the distance the less likelihood of interference.

[26] See Gabriel La Freniere's "The Electron Phase Shift" at http://www.glafreniere.com/sa_phaseshift.htm

Things Are Real or They Ain't There

One thing to notice about the Wolff version of quantum mechanics is that there are no different orders of reality. There is no "real" and no "virtual," so there is no need for them to communicate with each other in some way. This is because de Broglie matter waves turn into the inwaves and outwaves of Wolff and the ultra high frequency electromagnetic waves propagated through space. These are of such a frequency as to be undetectable by any method yet known. The entire system is real and does not rely on holographic tricks to construct it. The universe is real and is not illusory, and there is no need to invent any new type of energy-like life energy, or *qi*, or even a zero-point field energy. Surely zero-point field energy is just another name for the matrix of energy produced by matter waves.

A magnificent quantum field stretching through the universe is made by the matter within it, and there is no place in the universe that does not have matter waves in it, which means that everything in the universe is interconnected. We do not need to resort to ten-dimensional universes and the mathematics of string theory to describe the universe at all. The most puzzling thing about the universe is that its communication is, potentially at least, instantaneous, allowing for all manner of odd events related to information transfer at a distance. The Wolff theory gives us a clue about time, as it appears that time can affect the inwave and outwave, and that they can reverse. More about that later. The main point here is that there are no weak and ephemeral subtle energies in the universe that just didn't quite make it into reality. There is one reality, and it is unified and not separated into categories.

The idea of consciousness and how you get it and make it stronger, or, even on occasion, lose it, has always intrigued scientists. Certainly consciousness is not the same as intelligence, which refers to the speed and accuracy at which we can process information coming from ideas, which in turn come from the data in the information stream that always surrounds us.

This brings us to the next point: how the information network in the universe works. The centre of the information network is the dense space in the electron. The surrounding field of inwaves and outwaves is crisscrossed by many interference patterns set up by the proximity of different electrons, and if you get many of the same atoms, you get an interference pattern in space. It naturally follows that certain atoms are much better carriers of information than others, and we can, of course, see this mirrored in biochemistry and biology generally. Biology favours a few of the elements in the first part of the periodic table and has almost nothing to do functionally with the heavier elements.

Hydrogen, carbon, oxygen, molybdenum, boron, calcium, nitrogen and so are elements that appear fairly early in the periodic table and have a lot of biological activity in the soil and in agriculture, as well as in the human body. In all there are 15 or so out of the hundred elements that are of greatest importance in biological systems. Carbon, of course, is one of the most important and has four electrons. Will carbon have four times the information-carrying capability compared with hydrogen, with its one electron? Is C-O-H, so readily found everywhere in biology, really there because of its huge information-carrying capability? Certainly it appears, from my few experiments in the area, that filtered water does not carry a huge amount of information compared to an ionized solution of minerals, including some of the heavier ones. Of course, the homeopaths settled on sugars and alcohols as the best method of carrying information about the characteristics in the quantum field of certain herbs and minerals. They had plenty of time to work out what worked best, as homeopathy is a lot older than allopathic medicine.

Yet it does not end there. In your head there is, of course, the picture of the spherical electron structure, with a neutron or a proton linked with it by an energetic bond in space, holding it in a certain configuration. It is fairly complex by the time you get to imagining what carbon must look like.

If you move a little further along, you will realize that it is possible for calcium to be a semiconductor in space, allowing information transfer only in a certain direction. Electrical semiconductors do this same task in two directions, but in the quantum field, calcium is able to control the flow of information in no less than the six directions—North, South, East, West, and up and down. This is why calcium is so important: it can block the field in certain directions, making it a key to the control mechanisms of the body-field. When calcium is out of balance, which it is in diseases like cancer and arthritis, and probably in all diseases to some extent, there are 10,000 chemical reactions that also become faulty.

Calcium, when it is linked with one of the other minerals the body likes, forms a compound that, unlike pure calcium, which does not happen in nature, makes a very, very long wavelength, several kilometers in the quantum field. I found this out from an Australian radionics farmer, John Pannan, who was using different compounds of calcium commercially to correct the way in which the soil functions. I did some testing and discovered that calcium compounds make a field at a frequency below that of Energetic Integrator 1, that is, below 1 hertz in frequency.

Another thing to remember is that Wolff's theory means that not only electrons make a field in space with their inwaves and outwaves, but so do the componets of the nuclei of atoms. Because of this, Wolff can explain the weak force and the strong force, which are so important to atomic theory.[27]

I shall tell you a little about the discovery, in the early 1990's, of calcium's activity as a semiconductor and how the experiment was carried out, since it is very interesting. A field, according to quantum mechanics, is always there, but it is easier to test when it is energized by a small amount of electromagnetic current. This is why electrical charge is so important in biology: the quantum field has to be activated to the right level of dynamism. So, in the experiment, two metallic blocks were set up with a low-level voltage between them. A display device was needed, since we needed to know when the conductivity of space changed, when the information transfer took place, and the apparent frequency at which change occurred in large groups of identical molecules. This display device was none other than one of the many electrodermal testing devices that have been used for half a century. The machine has an indicator gauge that shows any change in skin conductivity at an acupuncture point of the person being tested. We retooled the apparatus to test for changes of conductivity between ampoules imprinted with information. We set up a field, placed identical ampoules on the two metal blocks, and then tested for a "match," which would be indicated by a certain change in conductivity, as shown by movement of the indicator from its baseline (40 milliamps).

An ampoule of calcium was placed in the field between the two blocks of metal. This was pure calcium, not the carbonate laced with iodine or cobalt. To be precise, it was actually a glass ampoule containing 50% water and 50% ethanol, imprinted with the message that calcium puts out into the quantum field. (This we knew how to do because of an English researcher who recorded over his long lifetime some of the energetic data related to all the elements; but we could have used pure calcium, too.) Over a series of tests, the ampoule was placed in each of the six directions in the field, and we noted if the conductivity dropped, indicating that the quantum field had been interrupted. The conductivity meter dropped to 15 milliamps when the field was interrupted by calcium. It is important to note that quantum field switching is either "on" or "off." There is no "maybe." Every time the field was interrupted, we had to set it up again by removing the calcium ampoule and establishing that the conductivity reading had returned to 40 milliamps.

Of course, the experiment was repeated using an ampoule without the calcium information imprinted in it. It was also repeated on different days over a period of time. The results were always the same—only the calcium ampoule interrupted the field. So, even though there is an element of subjectivity in this kind of testing, the balance of probability is that there is something in the results that is important theoretically and is worthwhile for further exploration.

A Word about Action at a Distance

Even though recent experiments appear to have validated the reality of action at a distance (non-locality), this phenomenon remains a hotly debated theoretical question in physics because there is no known mechanism to explain it. If the amplitudes of the inwaves and outwaves reduce over distance, as the Wolff model predicts, then non-locality is not really valid as a concept; however, if the amplitudes are not reduced over distance, then non-locality might be correct. The jury is still out on the Wolff interpretation. Regardless of who "wins" the debate, it is important to note that the NES assessment device is designed to be used with the client present. As I mentioned earlier, the closer the client's field is to the field set up by the computer, the less interference there is, which means the assessment can be more accurate. Because of this, NES does not endorse testing at a distance. I will have more to say about the physics of action at a distance later, in another context.

[27] Wolff, 196 -97

Nature Is a Pattern-Making System

Wolff does not mention, so far as I know, that the conductivity of the immediately surrounding space changes when there is a "match" between two test items, but this phenomenon, whatever its explanation, has been the basis of natural medicine treatments for decades in Europe and North America. For 40 years it has been accepted as if it were an electrical effect. The fact is, it is not an electrical effect, and this can be verified by anyone who has one of the electrodermal machines, since they will not work in the dark. Apparently the photon has a role in facilitating the effect by transferring energy to the electron, thereby activating the quantum field. They will also not work when there is no reflective surface above the machine, like a ceiling (which will reflect the quantum field back to the tester, so forming standing waves), and they will not work on the approach of a storm because the ionization of the air upsets the quantum field to the point that it cuts it off entirely for some hours.

There are also effects related to what happens when we get a huge number of atoms together in, say, a biological molecule that might have a large atomic weight. We get even larger numbers, on the order of billions and trillions, of atoms when these molecules group to form cells and tissues**.** However, nature cannot go on indefinitely getting more and more complex, having to deal with ever greater complexities of information. Nature solves the complexity problem through a process of self-simplification, where higher levels of order emerge from lower levels of complexity. The order becomes evident when we get to the huge numbers of atoms in cells and organs, as we then have the emergence of information fields. An "information field" may be a new concept for many scientists. It emerges when information feeds back onto itself, in feedback loops, and so makes what may be called "patterns" in space. Nature recognizes *patterns* of information, rather than *individual* information items. This is how nature simplifies messages: by forming units or patterns.

The Institute of Noetic Sciences' Quantum Hologram Theory

If you can accept that organization in space goes beyond the atomic and molecular levels—something that appears to happen, and it is not entirely understood why—then you end up in a strange place. If you accept that energy transfer in the universe is parallel with information transfer, as suggested by Wolff and others, you end up in a strange place again—the same place. Which brings us back to something I discussed very briefly earlier—action at a distance.

Dr Edgar Mitchell, former astronaut and founder of the Institute of Noetic Sciences, following a satori in space, has joined scientists from around the world in a quest for more knowledge about information transfer at a distance, something traditional science does not much care to know about. In fact, traditional science does not want to know about it so much that for many years biology and its spin-off sciences, like medicine, have studiously ignored the non-local aspects of consciousness. When you don't want someone messing up your nice clean university department, you get their ideas weeded out by saying that the offending people are involved in a "para—" something or other. So we get paramedicine, parapsychology, and I guess a whole department of parascience. Of course, it does not take long to realize that once you broach the idea of consciousness and can see that it is deeply related to information transfer over long distances, you are going to run into the blades on the wheels of the traditionalist chariot.

Consider, too, the reported statement of Indira Ghandi, the late Prime Minister of India, when asked what she thought of Western civilisation. "It would be a good idea," she is supposed to have said. Now why did she say that? Did we miss something? Yes, we did! Here are a few things Western scientists missed, which can be summed up in the following questions: Is civilization a manifestation of group consciousness? Was Carl Jung civilised? Are scientists really afraid of what they call "hocus pocus?" Is statistical probability a valid method of evaluating claims that there is information transfer at a distance? What determines probability? Can we get our consciousness to increase in some way? Can science and religion get together? Whew!

When you start to sift these questions from the point of view of a scientist, you come back to the idea that experiments have to be repeatable and as objective as the framework of the experiment allows. And the

theory has to be coherent with physics. Edgar Mitchell, being a hugely talented scientist, has luckily bypassed the more outlandish ideas in this area of inquiry and sought to look carefully at what experimentation has been done on things related to non-local consciousness.

Mitchell is, however, rather partial to the idea of memory stored in water, something already investigated by the late Dr Jacques Benveniste, of France, amidst a furore that is reminiscent of the best of medieval witch-hunts, not in the year 1488, however, but in 1988!.[28] The "basic" science of Feynman, Wheeler, Cramer and Wolff is mostly left out of such discussions, as no one knows how these ideas apply to real life in the biology laboratory. But if you get to traditional immunology and the deficiencies of that theory (if it can ever be stated), well then, there are fireworks! So while Dr Mitchell is very keen on Benveniste, Rupert Sheldrake's theory of morphogenetic fields, evolutionary cosmology, and massive information streams that must be available to us all, this information is for the more conscious people and certainly not for those in rigid systems of thought. Creative thought comes from the information stream available to us all . . . but some will never experience that.

Dr Mitchell is very clear about the landscape for information transfer, and his theory has major similarities in certain respects with the physics theory of Milo Wolff that I have already discussed. You can find out more about Mitchell's ideas by reading his papers and those by his collaborators, Dr Peter Marcer and Dr Walter Schempp.[29] Walter Schempp, of Germany, has found that there are coherent emissions from matter that carry information. Information needs coherence and structure to be able to be transferred without polluting the information stream.[30] This man is of huge interest since he works with fMRI (functional magnetic resonance imaging), a technology that was developed by doubters of the medical model and is still a useful tool in debunking some of traditional medical theory.

Here is a brief summary of Mitchell's model of information transfer:

- Information transfer occurs the process of phase-conjugate-adaptive-resonance (PCAR).
- PCAR leads to the idea that there is a "sensor" for information, which is adaptive.
- Resonance occurs between standing waves.
- Information is carried in the phase relationships of the waves.

Mitchell points out that physicists have already developed the technology to make this type of information transfer more evident. His idea to test his theory involves shooting laser light into the air above a high-powered optical telescope. The phase of the light is corrected so that the information from distant stars is not interfered with by the energy in the air.

Below is a summary of the properties of Mitchell's Quantum Hologram theory:[31]

- The hologram carries information about both the present and the past.
- The hologram is non-local, so information can be transferred at a distance.
- Information transfer is apparently instantaneous (as is suggested by the Wolff model).
- The entire hologram can be reconstructed from a piece of the hologram.
- The whole is recovered via space resonance.

Of interest to this model, especially the first bullet point above, is the aspect of Wolff's theory that argues that there is indeed an arrow of time, so time symmetry is lost.[32] If you would like more information about this holographic theory and you like to Google, you can search out Elizabeth Rauscher-Bise, Ph.D., who is an expert on this theory,

The Quantum Hologram and Perception

[28] For an overview of Benveniste's work, see Lynne McTaggart's *The Field*, 64-69
[29] Peter J. Marcer, "Quantum Holography—The Paradigm of Quantum Entanglement," *American Institute of Physics*, 718
[30] See www.walterschempp.de
[31] See Edgar Mitchell's article "Nature's Mind: The Quantum Hologram"
[32] Wolff, 187-88

In physics, we have become used to theories that don't really make sense. But much of Western perceptual theory collapses neatly in a heap when you apply the ideas of Wolff and Mitchell to what is taught about perception.

There is hearing, sight, taste, touch and smell, and they all have a common function: they are somehow supposed to process incoming signals via the brain. There is a whole set of nerves for receiving that information, and then another set of nerves for motor signals which, of course, are outgoing signals. These are the afferent and efferent nerves.

But wait a minute! In Wolff's quantum mechanics theory, he says that there is an outwave and an inwave that bring a message to the brain about a local or distant holographic arrangement. The question is, does the brain create a resonator that has a phase gate to send as well as to receive signals about what lies outside the body? Mitchell says it does. This idea, if true, essentially turns modern psychology, not to mention physiology and neurology, on its head. It means that the ears must be sending *out* a signal in order to hear, the eyes must *radiate* a signal in order to see, and so on.

In the Mitchell quantum hologram model, we can at least start to understand why the body perceives the information about the world as outside of itself, rather than as inside the head. If you can't create your own quantum hologram, you may be blind or deaf. So perhaps biologists should be looking up from their anatomy books, and going out to look for small resonance spaces—cavities—within the eyes and ears! What about odd bits of perceptual organs that have great names but whose functions are not mentioned in the books! In the ears, for instance, there is the Organ of Corti. What does it do?

Mitchell talks of a reference signal that is needed to reconstruct a three-dimensional quantum hologram, and, of course, NES is looking for these in the body-field. Wolff contents that the actual quantum field signals are too high in frequency to detect, so it is important to remember that there are resonances at a much lower frequency that, like the harmonics in music, will spread over the acoustic as well as radio spectrum. I cannot help but remember a scientist, O. E. Wagner, who spent his entire career studying long waves, which he called W-waves. He spoke of all-pervading low-frequency waves that play an important role in communications.[33]

Leaving Modern Physics Behind, We Get into Quantum Field Bioenergetics

We are now about to make a conceptual leap that is vital to our understanding of non-biochemical medicine. We learned in 1926 that electrons have a matter wave. Later on, after 1986, Wolff said that the three major particles all send out outwaves, by which he explains the atomic forces called the weak and strong forces. Now, in 2006, Mitchell is saying that the shape of the structure is also sending out a characteristic quantum holographic signal. What we are left with is the theory that there are such things as quantum field effects at the *macro* level as well as at the *micro* level. As Mitchell has indicated, this theory represents a major departure from the physics of the last 75 years. While this revolutionary idea is not compatible with the Copenhagen Doctrine, it goes well with the ideas of the extended transactional interpretation of physics by John Cramer and with Milo Wolff's space resonance theory.

Now, at last, you will be able to understand the Drivers in the NES system. Think cavities in physics! Cavities amplify energy. The organs of the body are cavities, and they all seem to have a field effect, which they generate themselves. The writer of the great treatise on Chinese Medicine, the physician of the Yellow Emperor, in a time lost to us**,** says just that and calls the organs "orbs," which is an archaic word for a sphere. These spheres are what the Yellow Emperor's physician thought generated the energy for the meridian, or energy pathway, belonging to that organ, an energy pathway that wandered over the connective tissues and the skin.

Furthermore, we not only have spherical arrangements of tissues in the body, but we also have microtubules—tiny cavities—all over the body. These are found in the cytoplasm of every cell. They are wrapped around the nerves in sets of thirteen. They are found in abundance in the brain. There are myriads of microtubules in the kidneys, and the intestines look like a big tubule wound up.

[33] See Bevan Reid's article in *Frontier Perspectives* 6 (1): 1996, 41-47

As a teenager, I read books for amateur radio techs about antenna theory, as radio was the big thing back in the 1950's. The "Q," or quality factor, of an antenna (which is called a dipole by radio techs and is, in fact, a lot like our biological tubules but a lot bigger) depends on the diameter of the tube. "Quality" refers to the steepness of the sides of the resonance graph for the frequency of that tubule or antenna; so the efficiency of the tube, in its job as a resonance matcher for quantum holographic information, is related to its diameter as opposed to its length. Every tube will attract a standing wave, but to make it do so more efficiently, we also need a reflector so that there will be two stationary waves present in order to make our standing wave. In biology, we have the cell membrane as the reflective surface.

So far as the nervous system goes, Western biochemical medicine is an abject failure at explaining how it works, how to correct it, as well as how to diagnose problems affecting it. So naturally I was interested in a new quantum field theory about it. We note, however, that the coating of the axon does not allow the passage of a quantum field, so it works like an insulator for whatever it is that is going on inside the nerve sheath. The nerve sheath, then, protects the quantum field information inside. What does that mean? It suggests that nerves do not send electric impulses! Instead, nerves transmit quantum holograms! In the experiments I have done, the inside of the axon is able to match with photons, which may act as energizers in some respects for the nervous system, which, after all, changes its characteristics after dark.[34] The nervous system, so far as the quantum field goes, does not have to be continuous, and of course, the nervous system is so remarkably fractionized that it is amazing that it works at all. But there are several factors that enhance the quantum field to make the nervous system more sensitive:

- An ambient static-electric field, negative in polarity
- Photons generated by the cells inside the body, not from the sun
- An electrical charge applied to a tubule itself, generated by the electrochemistry of the nerve cells and synapses
- Low-frequency sound waves generated by the brain (possible references for the sound holograms)
- Source energy collected by brain cavities

Source Energy and the Zero-Point Field

It is best to go back to the source of things, and that was how, looking back, I came across my very own style of research into Source energy. Perhaps this Source energy is the zero-point energy spoken of by others.[35]

For thirteen years I taught Chinese Medicine without really understanding it too deeply (although I was always ahead of the students, which is the main game). There are, in Traditional Chinese Medicine, several types of Source energy, or *Yuan Qi*, which I took to mean the same type of energy that is mentioned by other cultures but by other names (such as *prana* or *ki*). This insight is just one of those cross-cultural things, you see. Sometimes the Chinese have a different way of saying things. It does not pay to be too analytical with this ancient stuff! Well, according to Chinese medicine, this Source energy was supposed to collect somehow in the kidneys (full of tubules) and the brain (full of tubules), as well as in the lungs (full of tubules).

In 2003, while still living in a tin shed in the backwoods of tropical Australia, I took the Integrator Infoceuticals I had made for lungs and kidneys and mixed them together, making what I called the Source Driver Infoceutical.[36] This Infoceutical was something that would tell me what the body-field Integrators, when combined, would match with in the universe. (To refresh your memory, the NES Energetic Integrators are the information routes in the body-field, what I used to call "compartments" in my early research.) I already knew that every Integrator matched with a number of the elements useful for biology, but the zero-point field was supposed to be a general field that, while measured in a vacuum, was actually everywhere all the time. My reasoning was that the lengths and diameters of the tubules in the body would be sensitive to this zero-point field if it was the source of an energy whose purpose was to make the body work via its body-field.

I then did some matching experiments to see what the Source Driver really did with the matter waves produced by various elements of the periodic table. And bear in mind that even when there are compounds

[34] Experiments carried out in Cooran, Queensland, Australia, in 2001.
[35] See McTaggart, 19-36.
[36] Ibid.

in matter, in the quantum field they seem to me to behave like their individual constituent elements. Source Driver, if it truly was linking with the zero-point field, should have had a very big range of matches with the elements. In theory, all matter should match the zero-point field. But, as my experiments showed, it didn't. Only the following elements matched the zero-point field:

Hydrogen	Phosphorus	Manganese
Boron	Potassium	Cobalt
Carbon	Calcium	Ruthenium
Nitrogen	Manganese	Rhodium
Oxygen	Scandium	Cadmium
Aluminium	Vanadium	
Silicon	Chromium	

Perhaps you understand Source Driver better now. It reminds the lungs and kidneys how to collect matter waves from the above elements! That is the theory. If you really want more Source energy, you get it by breathing—something sick people don't like to do—not necessarily from taking the element in a supplement. Perhaps sea air is good for you, with all the vestiges of minerals in it from the spray. Isn't that what your mother told you?

All we can deduce from this basic experiment is that some parts of the zero-point field are what the human body wants, and some are not. As you can see, once you have stepped outside the embattled space ship called "Anachronism" of the medical theory based on chemistry, the terrain is exhilarating. And I am reminded immediately of a quote from the Yellow Emperor's physician, who said, "In healing, it is necessary to go beyond the ordinary limits."

More About the Links to Electrodermal Testing

There is a long tradition in Europe and America of electrodermal testing, coming from Dr. Voll and the Dermatron and from Dr. Schimmel and the Vegatest. There are many other derivatives of these systems as well. The tradition goes back 40 years or more, and efforts over this time have been to increase the accuracy of the measurement system and make it more like a medical investigation tool.

The heart of the electrodermal systems is always a physical phenomenon called the indicator drop, where there is supposed to be a change in the conductivity of the subject's skin resistance when there is something that matches with that person's body-field. This effect has been observed by thousands of practitioners for forty years or more and is very familiar to us.

This indicator drop is known to vary according to the electrostatic charge in the air. It is also known to be subject to random errors when the testing becomes too complex; hence, the laborious system of individual point testing developed by Dr. Voll. However, in my research, I found that this indicator drop, or change in apparent conductivity of the body-field, is dependent upon many factors that were not previously recognised as problems, including the amount of ambient light and the availability of a reflective surface above the test area. So, I was forced by evidence to call the electrical nature of the device, or the apparent event, into question.

In 2006, I realised that the entire body hologram can change its reactance—the resistance of space, if you like—to a complex waveform, and that this change can occur in either direction, negative or positive. Positive and negative reactance values are studied in physics and are a legitimate measurement; and their parameters have also been studied. In simple language for the non-scientist, there is such a thing as positive resistance and negative resistance (non-scientific terms). The word "superconductivity"—which is the vanishing of all electrical resistance—has been used relentlessly in relation to biophysics. But since it is something that does not occur at room temperatures and pressures, it is not a concept that can be used in relation to electrodermal measurement in biology—or in quantum biology.

Again in non-scientific terms, a slight amount of negative resistance in the circuit created by the electrodermal test means an apparent change in resistance of the skin. This is not how a scientist would express it, however. We are talking about a *change in the reactance of space!* We need to invoke the ideas

of Milo Wolff and his oscillating electron system, since only then does the so-called negative resistance effect occur. So, the Wolff ideas can provide us a newer, more scientific view of what happens when electrodermal testing is done with the human-body hologram as a witness.

Last Thoughts About the Relevance of the Wolff Theory to Medicine

It can be difficult to envisage the way in which biochemistry actually works, so it is worth it for us to revisit two of our original questions:

- How can the electrons and other particles of one atom "know" about the presence of another molecule?
- How can there be a selective process of interaction related to the distance between molecules that can explain heat ambience, light ambience and other factors like pH, electrical ambience, pressure and so forth? Biochemistry can be affected by all of these factors and more, so our model will need to be able to explain all of them to be of any real value to us.

Remember that most of the last hundred years of quantum physics has been about trying to explain measurements and the interactions of subatomic particles under high energy conditions, where atoms or particles are bombarded with other particles in an accelerator. These conditions do not apply in the world of biology, so, of course, these cannot be our methods of inquiry.

So let us further define our challenge. We are looking for explanations of why physiology fails in a very specific context, trying to get a theory of pathology to actually work on the human body, and seeking a theory that is acceptable to all in the field. We must work with room temperatures and pressures, as well as with very low charges in the field so far as electrostatic energy is concerned. The voltages that appear in the body may not be very high, but they are critical to the function of many aspects of physiology, not the least being the nervous system itself.

The other parameters we have to consider are those of low-level electromagnetic fields and magneto-gravitational fields, such as those produced by Earth's magnetic core. If gravity is considered to be inherent in mass, then, in the Wolff model, gravity plays a part in the function of every electron.

Time is another concept that we need to incorporate into our model, even though this is perhaps not a core feature of quantum dynamics. Time, according to Wolff, will be found not in the determinism of the Swiss watchmaker, but in a flexible arrangement in the field of the inwaves and outwaves of the three particles (electron, proton, and neutron). Time is necessary in physiology to explain the speed of chemical and other reactions and how variable they can be.

So far in the NES research into the QED field, our attempts have always been to explain pathology as something going wrong at every frequency level between 0 hertz, and 10^{12} hertz. This approach is all right so far as it goes, but it does not account for the intricacies of the Wolff model. The essence of our problem is to adequately describe the ways in which a spherical scalar wave can change. So we can make no attempt at describing pathology until we know what the structure of the electron really is. No core structure for the electron or even the photon will be found in the physics textbooks, although it is conceded that such structure is a possibility.

Milo Wolff has gone so far as to give a mathematics-based view of what the electron's structure may be. In his model, there is an outwave, which he says corresponds with the de Broglie matter wave. This outwave is an exploratory wave that "finds" other particles, as a prelude to some interaction being possible when there is an environment of correct temperature, pressure, pH and electrical charge. Wolff also suggests, from pure logic, that there must be a return wave, which he calls the inwave, which "reports" on what sort of particle is out there in space. This inwave has never been measured, so far as I know, so it remains firmly entrenched as a theoretical concept only.

Wolff further suggests that the inwave and outwave have a phase relationship that can be measured at the point space where the electron "is," if we may use that most inaccurate of words. In addition, there are interference patterns created the moment an electron, or a group of two or more electrons, is located in

space. So, immediately, we are confronted with the need to have boundaries in space, and this is accomplished by the structures created by matter itself.

Wolff uses the term “phase,” which is correct since these interactions are time related, although it appears that time cannot be a constant as it is in Newtonian universes. This phase is not related to time as it is in the field of electronics, but rather as time is related to place, or position, in space. When waves do not quite match up, then we have a phase difference. Wolff suggests that phase errors can go form 0 to 180 degrees in his system before the parameters of his model change.

Phase looks as though it is the source of information in space, and it is permanently there in space as much as the particle itself is. This means that space may have memory, which is of particular interest to many researchers in parapsychology and other fields. The changes in phase that occur are about the time-based interactions of particles and their patterns in space *before* they react. The connection is obvious to the concept of a dynamic body-field. This body-field is such that it changes every second and so will be measured differently in every instant of time.

But what else is going on? Once there is an energy exchange between electrons or other real particles, then there is also a corresponding change in frequencies of these particles, and there is the real energy exchange required by and described by biochemistry. Of course, there also is a static system of the body-field that relies on its energy state, and this is able to be changed as well, but is less reactive. We have to have a solid body state, as we are not will-of-the-wisp creatures at all!

The energy state of the biological hologram can be described in terms of Milo Wolff’s model, so let’s examine that process. The electron has two centres of space resonance, and these will normally converge, so as to make the lowest energy state possible for that electron in that place and time. Particles will always return to their lowest energy state. The inwaves and outwaves will also return to their lowest possible amplitudes. These are rules of the system.

However, if the electron is energised by being in another field, electric or magnetic, or even gravitational, then these centres in the electron may move apart, creating a way of expressing a higher energy state. At a certain point, this energy shift can an electron to emit a photon, although Wolff sees this as the creation of an interference pattern. It follows, then, that the entire particle zoo may be appearances created from the varying types of electron interference patterns. Whether or not these interference patterns can be regarded as possible sources of information storage is an open question to date. The really important information may be stored as *phase* in the innermost part of each electron’s dual centres.

So now we come to the consideration of the maths of the situation, which are very interesting. If each change in the phase is progressive and can be related to a specific frequency resonance, then the phase shift can result in a transference of an electron to another, higher or lower, frequency state. Change in phase to the power of specific resonance equals the change in distance between the electron centres. There has to be a mathematical relationship between phase and energy state, and Wolff has expressed it.

It is of interest that we have found in NES research that emotions can affect phase by variable amounts, which can be recorded in degrees. Emotions have been measured at between 16 and 45 degrees of shift from left to right of a space. So we have a model that allows emotions to be built up, as well as expressed as heat when they are discharged or when the emotional holograph in space breaks down. You cannot go on adding energy to a system forever without it having to discharge itself, and this certainly occurs in the case of emotions. And when they *don’t* discharge, pathology results from the ensuing higher energy states. We have found, however, that most foods are not going to affect phase at all according to the way we measured them.

But things such as the NES Energetic Terrains can have a huge effect on the phase and, therefore, on the energy state of the body field. Energetic Terrains can be cleared by moving them from their chronic to acute stages, and this is the process we are able to observe during a client’s use of the NES Infoceuticals. Homeopaths may not have been right about everything, but their knowledge and understanding of the way we move from chronic to acute stages of illness is certainly worth keeping in a science-based system of medicine.

These ideas are in their infancy, of course, but you must already be able to see their potential for creating an entirely new world of biology, and even medicine.

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Poole UK, May 2006

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