

Quantum Biology and its impact on Academic Biology

By P H Fraser September 2006

To show how the new quantum information science affects the entire body of the life sciences, we can now look at the present thinking of biologists in the way it was presented when our present readers were at college, perhaps in the 1970's.

In the 1970's a general textbook outlining the basic ideas was edited by Claude A Ville (Harvard) and Vincent G Dethier (Princeton) in book that received wide circulation, entitled "Biological Principles and Processes". This standard text can be our accepted model of biology circa 1971. I am sure it hasn't changed much.

The cell theory of Schleiden and Schwann circa 1838 remains the original basis of organizational theories of biology, illuminated nowadays by the pictures from electron microscopy as well as x-ray diffraction and polarization optics. The cell theory has been overtaken by the fact that DNA and RNA are now the source of enormous knowledge concerning the sequencing of codes that are used in the manufacture of some of the basic molecules in the body.

Biology has shifted from cellular based theories to molecular based theories, in an attempt to explain life processes. Organisational theories of biology have at last been extended to ecology but a theory needed to explain non-chemical information transfer in biology has never been developed. There is no field-based theory taught in the biology now taught in tertiary courses or any other.

In the view of western academics, life organizes itself only by means of chemistry, all of which can be explained in terms of molecular biology. Field theories of biological organization and even of control systems, largely disappeared from biology before the Second World War. The influence of the chemical giants in industry is all too apparent in academic endeavor, since the funding of research was and is largely in their hands.

It is acknowledged that both chemistry and physics principles govern biology, but there is always the bottom line, that there is certainly no mysterious vital force, as Vitalism as a theory in science was finally rejected. Life could, if were to know enough, be recreated in a test tube, by simply applying the rules of chemistry and physics.^{1[1]} This seems as if the biologists have appropriated to themselves some of the attributes of the Deity.

Vitalism, with its brother idea of spontaneous generation of life had a great vogue in the nineteenth century, and was eventually defeated due to the lack of evidence for it. It was impossible at that time to describe, measure and replicate the life force that was supposed to be at the heart of biology. Life proceeds from existing life and does not suddenly appear from nothingness. At least, not in the short term.

Science generally, and quite correctly does not entertain ideas that are superfluous, and it always will remove ideas that cannot be quantified, since these rightly belong in the realms of philosophy. The basis of many natural therapy ideas, coming from many ancient cultures, is still largely dogged by the ideas of life force. – Prana, qi, and so on. NES has never supported vitalism or religious waffle ideas about life forces, since the idea is finally over and largely discredited.

The way on which living things regulate their energy is the prime task for the study of biology. The cell is regarded as an energy transducer, one that converts chemical energy from food into electrical mechanical or even osmotic energy. The cell itself does not however create this heat and energy. The energy from foodstuffs largely comes from glucose, and the bond energy which bonds together the carbon, and oxygen and hydrogen molecules that make up glucose. This bond energy is converted into a key chemical called adenosine triphosphate, or ATP. This ATP is not a vital force, even though it looks like one, but it is seen as the driving energy for nerve impulses, a myriad of life functions, which are all eventually dissipated, as heat. The cell does not create heat. Glucose is not "burned" in the process of creating energy in living things.

^{1[1]} Villee- Dethier "Biological Principles and Processes" 1971, W B Saunders.p 12

Now we hit the first of many big snags in the biology river. If this idea about the creation and regulation of energy in biology is right then a sample of ATP will surely make a “match” with the things it has to energize. It will, if the above theory is right, match with the hydrogen molecule, since that will include a bond, it will match with nerve cells, which are supposed to be energized by ATP, and, of course many other tissues like muscle tissue, which are supposed to be energized by the same force.

In Fraser’s experiments, no matches were found with ATP, even after several attempts, some years apart. ATP still seems energetically inert so far as energetic testing is concerned. The ATP theory coming from Oxford University in the 1940’s could not be verified by Fraser’s matching method. Has the ATP theory actually been tested?

The idea that energy is stored in molecular bonds can be tracked easily on Google, since the idea is all pervasive in science as well as other disciplines like engineering. Sure then someone will say what these bonds are. We can find ionic ones, covalent ones, metallic and several types of dipole bonds, but not what they ARE. They are ways of attempting to explain inter-atomic forces, and seem to be an expression of Coulomb’s Law about the creation of charge in space.

It is hard to comprehend the biologists who on the one hand shun the idea of life force because it is unable to be clearly explained, only to replace it with the idea of atomic bonds. These too, cannot be clearly explained. We end up with one of the current models for the atom, the “hard sphere” model favored so much by biochemists and therefore by biologists. The diameter of the molecule is equal to its crystalline structure. Objects do not share space, apparently because the electron creates a “force” around solid matter. This is of course hocus pocus at the same level as life energy ideas. With the solid spherical model there goes of course the well-known valence theory so dear to junior chemistry students, and the shell theory of the atom.

No physicist I have ever read entertains the idea of atomic structure remotely related to that created for the convenience of getting students through chemistry examinations.

Biologists appear to take the parts of physics they agree with and ignore the rest. Consider the Second Law of Thermodynamics, a long law about the way on which heat dissipates itself, the so-called law of Entropy. All living creatures dissipate heat, and, over the passage of time, become the same temperature as their immediate environment, whether it is on land, sea or in water. Warm-blooded mammals obey the Second Law of Thermodynamics only when they are dead. They dissipate heat and return to the ambient temperature. But when they are alive they concentrate energy against the great Physics Law, and the way in which they do this is by dint of a life process. This process is so accurate that in the case of primates the temperature regulation of the core of the body has to be within 1 degree C, or the organism dies. We are talking here about concentration of heat and regulation of heat, night and day, summer and winter, dry and humid. And it’s the Hydrogen bonds of glucose going about their daily work.... So then we have to ask what it is that is regulating the breaking and reforming of these bonds in the glucose, and storing them in the ATP. Different animals regulate their temperatures at different levels, even though they are all using the same glucose and ATP.

The idea of course leads up to the idea that biology has already developed, called metabolic rate. If we are not going to have a body energy field to regulate the body, and we certainly are NOT, then we have to put up another theory. Enzymes mediate metabolic processes. This works on the idea of feedback loops, which control all the metabolic processes of the cell including of course the one we wonder about, or heat. The enzymes are under genetic control.^{2[2]} Beadle and Tatum in 1941 put forward the idea that, in general, there is one gene – one enzyme, one reaction. This idea is still very much with us. It has gone into the new religion we call biology.

In this religion there is no need for a field theory, an idea which is anathema, because it can all be explained by the idea that one gene controls one enzyme, or one organic catalyst, and this in turn controls one part of the cellular function and metabolism of heat production. We have a rational and highly mechanical life system in other words.

^{2[2]} *ibid*, p 25

It sounds as though we need to understand what enzymes are, and their function in molecular biology as catalysts under genetic control. Almost any substance can function as a catalyst, and that is something that will regulate the speed at which another chemical reaction takes place. But it does not, it as you know take part in the reaction. Most of us know too that only a very small amount of the catalyst is needed to get the effect of catalysis. How do catalysts work? Easy. There is an “energy barrier” that stops the reaction from beginning.... Energy barrier? Doesn't this sound very like a body energy field that controls the reactions of the body? No, apparently not. All reactions have a need to get to a certain energy level before they will begin. If we are talking about “energy levels” surely we are getting in quantum physics. This extra “energy” is donated of course by the catalyst. So there is no body field because we have catalysts to do the work needed. Here is the official position in biology.

“Reactions catalysed by enzymes are basic to all the phenomena of life; respiration, growth, muscle contraction, nerve conduction, photosynthesis, nitrogen fixation, domination, digestion and so on. There is no need to postulate some mysterious vital force to account for these phenomena.”^{3[3]}

Enzymes, in the view of that author, the true life force, control reactions at a very specific level, in a specific substrate, and they are subject to activators and inhibitors that can be studied. They direct the pathways of all chemical reactions, and they are under the control of a specific gene. So there is no way a cell could function if its genetic material were taken out.

Enzymes can be inactivated by heat, or a change in pH, and are destroyed by enzyme poisons like fluoride and cyanide. Coenzymes can make enzymes work better.

It sounds as though the entire problem comes down to the big question which is - how are chemical reactions initiated, when there is this mysterious force that is stopping them from happening, called activation energy.

A quick visit to Wikipedia reveals that this is a threshold of energy required to be overcome in order for a reaction to be initiated. Catalyst will reduce the threshold. Then three things are supposed to happen. The molecules must collide, and there has to be enough activation energy (which appears to mean heat), and the molecules must be oriented in the correct space in relation to each other. Then only can the “bonds” break to allow the formation of a new chemical. This is science theory that is specific to biochemistry.

That so far as I can see was an attempt by a biochemist to describe the energy field that controls chemical reactions, the one that when it forms complex structures in the human body forms a controlling hologram.

So the enzyme and the quantum hologram are not the same thing at all. Enzymes are fine and all the biochemistry associated with them. But what about activation energy?

Activation energy is needed to break the bonds. What are they? The amount of energy needed to make it is the same amount needed to break it. In biology there is a tradition of converting the bond energy into heat and from there into kilocalories, so it can be quantified. The magnitude of the bond energy is determined by the electro-negativity of the two atoms bonded together. This brings us in turn to Coulomb's Law, which is about changes and forces in space. The ideas about bonds are traced back to this law, and its one of the most basic laws of physics.

Wolff's model of the atom has incorporated this law of course and it will apply to the “real” subatomic particles – the proton, the electron, and the neutron. Wolff says that the only essential difference between a proton and an electron is the charge and this can be converted simply into phase variations between 0 degrees and 180 degrees. Charge is related to relative positions between standing waves making up the atom or molecule.

So, in our activation energy idea the idea of orientation has just been converted back into charge and position. In the case of the Wolff Model the idea of having to have a physical collision of the molecules is possible but not necessary. Reactivity is determined by position of the charge. Inert chemicals will have a characteristic picture of their internal arrangement.

^{3[3]} ibid, p99.

Because the actual position of the atom or molecule in the Wolff Model differs greatly from the Hard Edge Atom, we get a different picture when we apply the idea of proximity as well as activation energy. As the Wolff Model gets to a higher energy state the two “centres” of the electron move a part altering the phase relationships in space between them. When they reach the right position, or can we call it charge, then there is a chemical reaction possible. The Wolff Model atom goes out into space forever, projecting an inwave and an outwave from the various real particles. The function of this is to make every atom in the universe capable of being aware if we can use that word, of all the others.

This is the characteristic of matter that makes the hologram control system a possibility in the Wolff Model and an impossibility in the Hard Edge Model. In the Wolff Model of the atom, there is an energy field beyond the confines of the central part of the particle, where the space density is greatest. It is this extended field that we are interested in. The difference between the NES ideas and traditional biology is mere one of imagination and visual imaging. The system of bonds being in the biology system the basis of an energy and heat system, where the bonds are captured within the hard edge. In the NES system based on the ideas of Wolff, we can go beyond the atomic boundaries with ease. We go into an information rich area. We are looking at a complex field where inter relationships of phase are paramount. The information about the atom is right at the hard edge or core, while information about its bonds and phase relationships with other molecules is right out there, beyond the confines of the hard edge atom. This means that the Wolff Model explains the function of catalysts quite nicely. Catalysts work by altering the phase of the standing waves in space of the Wolff Model of the atom.

The Gene Theory and the Body Field

In the nineteenth century biologists labored to rid it self of all religious ideas. These were seen as a limitation on the activity of the scientist.

But biology in the twentieth century wanted next to divest itself of the life energy force idea first of all, and after that the original physics ideas concerning field theories were also discouraged. Biology was entirely taken over by chemical mechanists by the time molecular biology was in vogue after the Second World War. By chemical mechanism I mean that the human body was seen as an interlocked system of self-regulating chemical mechanisms, which could be described. But worse was to come. This in turn became genetic mechanism, where man is separated from emotions, which are not a fit study for biology, where consciousness is dimly perceived as an unnecessary adjunct to the human being. Humans had at last been finally dehumanized. Let us look at this dehumanizing process of the last sixty years.

Molecular genetic had reached the stage of development by the 1950's that allowed it to finally propose the shape of the most important molecules of all – those of the genetic material inhabiting every cell of every living thing. Watson and Crick in 1953 managed to do just this. There are two chains of sugar phosphates wrapped around each other, while inside are bars of purines and pyrimidines, these two chains being held together by Hydrogen bonds between the former.

Later on it was found that in replication of this ten-plate for proteins in the body, that the double chains would unzip into two identical patterns which then could undertake the chemical processes needed to be done by other parts of the cell to make replicas of existing proteins.

This discovery was universal. The codes contained within DNA and RNA is the same for all creatures, from man right down to viruses and bacteria.

A chemical mechanism was demonstrated that showed how messenger RNA is carried to the ribosomes of the cell, which then assembles amino acids to form enzymes, or chemical catalysts.

At each step in the transfer of information from DNA to messenger RNA the process depends on “attraction” between complimentary pairs of the four types of nucleotides. The Hydrogen bonds between them play a

role in the rearrangement process. Visually these bonds are always shown as lines of energy, since it suits the model concocted by biologists.

If we look at the Wolff Model of the atom there are no little bonds as lines because the model is three dimensional, and spherical. The bonds will appear of segments of the spherical wave, even like segments of it, and of a certain size required by charge and position. Their energy values can be expressed in terms of degrees in two planes – vectors. Some of this bond energy turns into some of the 300 to 400 particles that are now supposed to exist, but most likely in my view do not exist except as a mathematical idea. The bond in the Wolff Model expresses the amount of energisation of the electron, showing how far apart the two centers of the electron really are. Bonds and energy levels are interlinked. In the case of the Hydrogen atom we get weak bonds, easily made and easily broken. Bonds can be structurally extremely complex in the Wolff Model, as there are spherical waves for proton as well as neutrons and electrons, all mixed together into a complex structure.

The field theory of biological control, once entertained widely in many quarters, has lapsed, and those who like it cannot get a job in a biology department except possibly as a cleaner. In its place there is a theory that the body metabolism is regulated by a complex system of enzymes, an idea that has been growing since Kirchoff showed that an enzyme could convert starch into sugar, in 1815.

The idea was crystallised into its present form when in 1941; Beadle and Tatum produced a key idea, which still greatly influences the chemical mechanists. A single enzymes control each chemical process in the organism and a specific gene controls the production of that enzymes in turn.^{4[4]} Hence any change in the gene can cause disease. The idea is 75 years old and now dominates some parts of medicine itself. A group that once told us that microorganisms are the cause of all disease now says it's genetic damage.

This seems to solve the problem of biological control of the whole mechanism but it does not. The problem is how every single cells of the billions of cells “know” what every other cell is doing. The genetic theory does not answer it. The biochemical model of the atom and molecule means that only things that actually collide can react. The molecule has a hard edge and cannot communicate except by mysterious unbonded particles that fly around and then apparently come right back to their home atom. The itinerant electron, no less. No bonds no fuss.

In 1971, it was not understood how the genetic mechanism was able to select which of the thousands of types of proteins was going to be replicated, if the recipes for all of them are supposed to be in every cell. It was thought that there was a protein that would “silence” all the proteins that were not needed, and this meant if there are thousands of proteins that it had to be pretty big or be in many places at once.

It is still not understood, and no conclusive theory exists. But both processes of transcription\ and translation are still dependent upon the function of the Hydrogen bond as a simple switch mechanism, and this is not chemical but.. er... energetic in nature. The Hydrogen bond appears to wander towards its neighboring molecule, as if it is partly shared. This of course is just a function of charge, and the Wolff Model predicts it.

Theorists have proposed a Master Control Gene which sets up a replication hierarchy. The Master Gene is supposed to be the first in this hierarchy. But even Master Control Genes, when they are found, will need to talk to each other. This will be by means of a protein that can go through cell walls. No, the protein has not been found.

The science method of proposing something you think might be there and then going to look for it has unhappy history. Consider the hundreds of years spent studying the canals of Mars, which meant that as time went by more and more elaborate Martian canal maps were made as careers were advanced. The careers all were over when it was found that they were bogus. We see what we want to see.

Science is good science when we ask the question “ what’s pushing it?” So we ask that question of traditional biology and we still get back to Hydrogen bonds.

Bonds and their processes in peptides have been exhaustively studied in biology. This occurs in response to the ribosome, which itself consists of both protein and RNA components. Even in simple bacteria, the

^{4[4]} Ibid , p 25

ribosomes may contain over 35 proteins. While in man they are ever so much more complex. So important is this ribosome that its entire structure was investigated by 2000 by T A Steitz at Yale. But the important thing is that these days, chemists can assure us that in replication of proteins we can see a rearrangement of Hydrogen bonds, and these rearrangements are driven by hydrolysis of ATP.

If a body field can be shown to exist even in theory, we have to admit it will be heavily dependent on the function of energetic bonds in molecules. Biology will have to drop its old fashioned and unworkable atomic theory, and physics will have to accommodate Wolff. The body field theory is being proposed in response to the need for a mechanism of communication over short distances such as we might find in a living thing. The Wolff Model allows for this as it suggests and accepts the fact that atoms are not limited, and, like de Broglie long ago suggests that there is a matter wave projected through space by all molecules. Wolff suggests that spherical standing waves can have bonds, which can be made and broken in a geometrical configuration that is redolent of the idea of receptor sites in biology.

The traditional model of the atom is hard edged, and limited spatially, and has the requirement of itinerant particles to give it some flexibility. Wolff's Model does not require itinerant anything, except perhaps itinerant biologists. In Wolff's model space is criss-crossed with millions of in and out waves, at various frequencies, which are determined originally from the de Broglie wavelength of each atom. In the Wolff Model every atom senses the position of every other, so collision theories do not need to be manufactured.

By inference the body field of living things must be related to the functions of not only Hydrogen, but of all the highly reactive elements that appear low in the Periodic Table. Hydrogen, Oxygen, Calcium, Carbon, Nitrogen must all be critical to the assembly in space of a holographic map for the body of a living thing.

Since 1953 when genetics captured the headlines and kept them for decades, very little has emerged of general therapeutic use, except for some diagnostic procedures, which have appeared. Therapy for diseases of a cost able to be borne by crumbling health systems has not.

Cancer, whose occurrence is linked by many researchers very clearly and strongly with genetic damage is still generally treated just as it was before genetics was developed. Every so often newspapers carry articles about the several hundred damaged genes associated with a certain type of cancer. So a single gene correction may not work.

Neither has any attempt been made that is visible to reduce the contact of the population with things that are known to cause genetic damage. This would be a very obvious public health measure. There are hundreds of chemicals known to be oncogenic. Some say thousands.

But to be fair, a time lag in the development of genetic treatments for cancer and other diseases might reasonably be expected. From the time of the development of the microbial theory of disease in the 1870's to the appearance of the first anti-biotics in the 1920.s, followed by more in the 1940's we are looking at half a century of development.

The same thing of course will apply to the idea of the body field – although we have preliminary good news from the limited amount of research done since 1985, the idea is worthy of the same sort of research support as the human genome project. At the moment we have only a very basic outline of what the human body field is all about. We have just this. A micro network of a holograph of different level of charge exists in the tissue of the body, and it has the innate ability to form larger and larger networks, while retaining its molecular level of effectiveness as an overall control system for the body's functions that are not already mediated by the genetic mechanisms.

The US based Tribune newspaper group carried a story on 1 September 2006 on gene therapy for cancer, and thousands of other newspapers did not. It was a story about a cancer therapy trial carried out by a group of Maryland scientists. Fifteen terminally ill clients with melanomas were injected with a genetically corrected white blood cell, in the hope that they would replicate in the body and learn to recognize the cancer that the body's own white blood cells had failed to do. Two people in the group were sent into remission, about a 13% success rate. Perhaps they should have been avoiding publicity.

The history of gene therapy is not a happy one, so far, and early results seem to be not so much disappointing as tragic in their results. Serious ethical questions have been raised due to these failures.

What happened to preliminary NES based therapy on genetic correction? In the 1990's Fraser found that only one group of the 92 so-called meridians of acupuncture had anything whatever to do with a genetic code. This is a group called the Divergent meridians, which go to pairs of organs as well as the heart, and are entirely internal meridians, are hard to affect by needles. If they are something like a relative of the morphogenetic field suggested by Rupert Sheldrake some years ago, then they must be of great importance. This group would match with both DNA and RNA.

The most interesting thing about these 12 Divergent Meridians is that they will naturally form into sets of four, and that by doing this it was found that we could make energetic pictures of whole families of viruses and bacteria. The sets of four meant that multiples of four were found in these recipes.

Then, still in the 1990's it was found that all genetically significant things call all be put into one single compartment of the 12 compartments suggested by the NES research. This is Compartment 10, the one that relates to the entire circulation system.

So, it seemed then that genetics accounts for one twelfth of the total compass of healing. This means that there is more that can go wrong in the body than just the human genome getting errors. I was more surprised by this than anyone else, since we are all brainwashed daily by the apparent advances in genetics. But it is coherent with a perfectly good gene therapy experiment getting such a low percentage of success.

Because so little has been done by NES in this field it is not really fair to say very much, but our experience generally is that it is best to leave so called genetic things alone. It was found that certain combinations of the Energetic Integrators would also have some genetic effect so far as our matching experiments were concerned. But no therapeutic effects could be noted in the simple observations that we were able to do with no money and no institutional help.

I have already suggested that the ATP energy field matching experiments have so far failed to work. Yet others did. Experiments have been already carried out that show that bond energy can be quantified in terms of the holographic theory. Hydrogen number sets were taken, with Oxygen, and the sum total of the two Hydrogen and one Oxygen was measured. This was compared to water, and the difference between the two was taken to represent the bonds in water. of which there are two.

The NES idea is that the bonds are not just bonds, but that they actually form a complex network or structure, that serves the purpose of high-level information transfer between cells, between organs, between nerves and even between people. It is a complex network of phase relationships in space.

I have been very interested to find out that Hydrogen bonds are not static as to their length. It is possible for them to elongate and in doing so cause great disruption to the function of the body field.

Bioenergetics is the study of energy transformations in living things, and biologists do it as well as NES. Biological molecules are responsible for the transfer of energy and these should be listed:

Fats

Carbohydrates

Steroids

Proteins

Nucleic acids.

And holding together these energy transformers are the Hydrogen bonds, which are covalent or ionic. Hydrogen bonds have a specific length, as well as directionality. They have to be very precise geometrically so that the correct molecular structure is maintained.

Lengthening of the H bond in NES research has been seen as an indicator of serious disease. H-bonds are quantized energetically, according to NES research done in the 1990's. They jump from 4:7:11 in their proportions as they become more energized. The last figure is found in secondary cancer tissues. These I

managed to obtain by various means of skullduggery from a London Hospital. Cancer seems to be an over energized state. The H-bonds are so distorted that normal physiology cannot take place, and the cancer patient is not able to survive. It is not so much as battle, as an over energized state of the body field causing collapse of physiological functions.

How far has Physics as a basic science actually filtered into biology? The two main rules of physics that are clearly accepted are those relating to the conservation of energy laws applied to a bio-system. So much energy in, so much out. And cancer can be clearly seen in the NES research as a disruption to this law. So much energy goes in, but it cannot get out, hence greatly elongated H-bonds. The other rule that is applied is the second law of thermodynamics.

But what is not taken into biology from physics is the entire theory of wave physics. It is all particle physics in biology. Waves mean fields. FEAR!

The orbital model of the atom appears a lot, even though it was only entertained as a likely model for the atom for a brief period in 1905.

Space is not a part of the biochemist's field of vision. Atoms are presented visually as compact and the vast amounts of space disappear. Space is a subject of study by physics so getting it disappears is not in line with modern thinking.

Bonds, which are really interesting three-dimensional charge pictures with many angles in physics, become single or double lines in biology. All subatomic particles disappear with the exception of the electron. Photons appear only in plants. There are no photons with a great role in man.

And so if you ask how it was that the body field of living things has passed by the attention of so many people for so long, it is because they are not looking for it, and if any one did, the mindset prevailing in biology of not physics will certainly obscure any insight.

You may ask why it was for so long that it was not immediately obvious that the earth revolves around the sun and not otherwise. The answer is that the mindset was that created by a non-investigative religion. The earth is clearly the center of the universe.

Visual imaging is terribly important in getting science to work, and of course of the visual images are as wrong and deadheaded as the presently present model of the atom produced by bio-physics, then that is a coherent explanation. The visual model of the molecule, from the DNA molecule up, will not allow for a body field.

But in modern physics things are looking different. Space is seen as having qualities, and these are to be studied. Feynman himself has acknowledged that. Conductive pathways through this space are of great interest.

Feynman reference

Living organisms are really in space and this space is filled with many fields of many types, and their effects are never acknowledged enough by biology experiments.

Electrostatic fields

Gravity fields

Air pressure systems, sound waves

Geomagnetic fields

Stratospheric magnetic fields

Electromagnetic fields

Light and heat

At first these seems like alien things for life but if we consider the ideas of the Physicists who study the Quantum Electro Dynamic field, then all of the above will have an effect, and a very clear one, on biological systems. The ideas of QED fields have developed from the 1940's right to the present.

This means that we are proposing a new Bioenergetics based on the QED field rather than on biochemistry.

It looks a lot different, too. This is because it recognizes the full information communication system of the living organism.

We will be looking in modern bioenergetics at atmospheric effects on disease states, energetic qualities of herbs and minerals, disease states relative to the time of day, the influences of the magnetic fields of the Sun Earth and Moon, the effects of solar radiation and sun spots, diseases created by undercharged emotions, as well as diseases relative to one's position on earth. Even memory of disease becomes important. Stress is the failure of the body to deal with any of the foregoing things.

Emotions show up as charge in the body, and can build up quite a deal of heat as well, and have to discharge in order to restore body field function.

Consciousness too, is intimately related to all biological function, since it is seen as a totality of the working field of any organism. In modern biology consciousness has been relegated to a thing called "placebo". It is excluded from all biology experiments, even though it accounts for more than 30% of the variables in an experiment with a living person. Yes, data is scrapped because it does not fit with the model. Is this science?

In recognizing these effects on the function of all living things we also restore our own humanity, and prevent ourselves from becoming genes with a chemical factory attached.

Where Physics and biology differ

Recourse to physics only occurs in biology when there is absolute necessity to do so.

This has apparently not really occurred in the following areas; so here is the battleground.

Bond energies; how bonds are broken and restored in certain configurations during a chemical reaction.

Diffusion; explaining how it is that an inert chemical dissolves itself in a solute, so that the solution itself changes.

Osmosis; explaining how it is that inert chemicals can move through membranes at will.

Catalysis; explaining how inert chemicals can affect other chemicals during a chemical reaction.

Haemodynamics; explaining how it is that the blood, apparently propelled by the heart returns to the heart when not under pressure.

Cardiodynamics; explaining how it is that the heart, when too weak a muscle to support the weight of blood it must pump, can function.

Cell membrane dynamics; explaining how some chemical ions are able to pass through a cell membrane while others are not able to.

Placebo; explaining how consciousness can affect chemical reactions in a living organism.

The Central Dogma of Biology

Biology, having removed the study of consciousness from its borders, and creating a pseudo science of psychology to cover it preferably in another building, was then obliged to remove all idea of energy fields from its discipline.

Another medium for the transfer of information was needed. This has become the Central Dogma of all biology. When you use this word you might think of the works of St Thomas Aquinas or St Augustine. But no, this is the word used in the biology text itself.^{5[5]} This is doing violence to science, a means of acquiring knowledge by means of constant observation and refinement of these ideas on the basis of experiment.

Exhaustive experiments since the 1940's have convinced biologists that the DNA and RNA molecules are the sources of genetic information not just for humans but also for the entire realm of Nature. This information is in purely biochemical form. It rejects any appeal to a mysterious life force. So, according to the Dogma, all processes and information exchanges in the body are promulgated by proteins of various types. No protein, no information transfer.

If, however, we are putting forward a supplementary theory to this, and claiming that there is another system interfacing with the genetic model of information transfer, we really have to say where the "join" or interface occurs between the two systems since this is the area that must now be studied. I have hinted at this many times, and it is surely the bonds of Hydrogen and other common chemical molecules.

In support of a change of the Great Dogma, I have mentioned that, since 1984, physics has moved on past the biologists, and has put in place a mechanism allowing for information transfer in a much more flexible way that ever thought possible before.

The Great Dogma Engenders the Great Silence.

Having the Great Dogma in place has meant that some sweat has flowed. A lot of research work was done to keep it sailing. But Dogmas usually fail as cracks and flaws appear in them, and of course since 1940 there have been a lot of these cracks.

I knew you would want to hear about just a few of them. When cancer jumps in its energetic and physiological nature from being primary to secondary, it also changes location, and metastasises. New growths appear away from the original site of the loss of control of growth. The messenger for the new cancer is supposed to be what the Dogma says it is, a protein. It has never been found.

When a human birth is induced with acupuncture, using a point known to do this situated right at the base of the nail of the little toe, for about 20 minutes, the body releases oxytocin a hormone that affects the state of the walls of the uterus. How does the protein know that someone is stimulating the toe, and why does it take 20 minutes for the apparently energetic system to communicate with the chemical hormonal system? Where is the protein messenger?

^{5[5]} ibid,p 163

When open-heart surgery is done using acupuncture anesthesia the point stimulated is nowhere near the heart or even the thorax. It is a number centimeters above the wrist crease on the inside of the lower arm. It is called Neiguan, which is translated as "Inner Gate". Why is the heart anaesthetized, while the rest of the body is unaffected? Why does it take 20 minutes of strong stimulation to cause the reaction? No needle is placed anywhere near the head, nor the heart! Can a protein be produced in 20 minutes?

After about 40 days the embryo, that strangely controversial creature we all started off as, has not only a rudimentary brain, but its heart begins to pulse, even when there is no circulation viable, no lungs exchanging gases, and no need at all for this to happen, as the mother's blood supply is used by the embryo. Perhaps nothing in Nature ever happens without it being needed. Nature, unlike us, does not waste energy. If there is no need for the heart to pump for blood supply, could it be that it is performing another, energetic or field related function related to growth?

Insert ref from embryology book

Information flow inside the body is surely nearly all chemical and the Dogma can account for a lot of it. What about outside the body?

David Attenborough and his team have spent years making really great documentaries about the various wonders of Nature, and I owe many of the examples quoted here to his masterly series.

We have seen thousands of fish swimming in their own quiet way, who, when confronted by a predator, appear to form a moving ball, to confuse the attacker. Can anyone do the computer graphics required for a programme that for a thousand fish in three dimensions all moving at different speeds?

How does each fish know what all the other fish are doing? Are they all subject to internal emergency coding? Is there a ball in the water that they can all sense?

David Attenborough has also given us the sight of a bush covered with hundreds of fireflies, where they all switch on and off their own bioluminescence at the same instant of time. Who is going first? Who knows who is going first? Is there some signal? Why can't we do this?

Butterflies are supposed, according to the great Dogma to find their mate even over many miles of distance, by emitting a protein or a pheromone which signals their position. We do the same with our armpits, but are rarely able to send the smell as far as we might like to. But butterflies sometimes have to dilute the molecule of the pheromone so much that the chances of any other butterfly running into it are feeble indeed. Big valley, little butterfly.

Consider the great dancer, Nureyev, strained, poised, defying gravity, allowing for centrifugal forces, delicately flexing and relaxing whole sets of opposing muscles. In a very specific pattern that is deemed to be pleasing to the viewers. Every one of the spinal segments is aligned, and the arms legs fingers and toes are aligned to allow for transmission of forces that would confuse a brilliant bridge builder. Nureyev's amazing leaps are made possible by the nervous system, a hotch potch of different lengths of cables with bits scattered all over the place like cobwebs. With junctions every few centimeters that slow the nerve impulses down. Who designed this mess? But not only a few movements, because the dance is about pictures and forms, which Nureyev is able to construct into his movements. His movements are heavily structured. They are making pictures, which is what ballet is about. The pictures in turn tell a story.

The Dogma of biology means that electrochemical nerve impulses and proteins are responsible for nerve messages, learning, memory, and a host of other higher realms of activity, even emotions and consciousness.

Not so. In the NES scheme of things we are able to send holograms down the nerve pathways, by passing the junctions, which slow the messages down so much. The electrochemical part of the nervous system is merely to create the QED field that carries the hologram.

So Nureyev has learned how to make - and project into space - an image in his consciousness of a pose, and a movement, and series of these makes a dance, when they are executed in sequence. And Nureyev so far as I know never studied biology.

Why would we drop the Dogma?

In science we only drop a dogma if it is so full of holes that it leaks badly when we try to teach it to a class. Natural medicine has its dogmas of the life force and “qi” and these do not fare well in the classroom these days. So does a body field theory help us to explain things we can all see? If it does, well we have a new theory to being to test and evaluate.

Are there any things that we could explain better if we adopted the Dogma Plus the Organism Body Field idea? Yes and I will deal with a number of them.

1. Spontaneous remission.

There are on going reports of many great people making spontaneous healings of their own diseases, but there appear to be few courses telling others how to do it. Mike Denney, of the San Francisco Medical Society has written at length on this subject, something medical graduates never do. He points out that the only time medical operatives will admit to mix-ups in pathology results is when the denial factor makes it necessary and this is when there is a case of unexplained healing which does not fit with the Dogma. He mentions that the Institute of Noetic Sciences has published a book by O'Regan and Hirschberg called “ Spontaneous Remission – an annotated bibliography.

Mis-diagnosis aside, we have to ask how it is that the medical people are not studying spontaneous remission and how to get it, rather than wasting their time on acting as distributors of mass market drugs.

I think nearly every adult knows that the way we think and the way our consciousness is arranged has a vast effect on our health for better, as well as for worse.

But to his great credit, Dr. Denney says there is no scientific framework for understanding spontaneous remission for all sorts of really seriously life-threatening diseases, like cancer, HIV-AIDS, Cushing's disease, Tuberculosis and so on.

I suggest that the addition of the idea of the Holographic Body field gives an excellent and clearly demonstrable framework for understanding how, if you change the way you think, you change your body field, which in turn changes your disease pattern.

Emotions are energy; they are not simply configurations of neural enzymes. This idea has been put forth since Willem Reich, an early disciple of Freud, and others in the 1920's but apparently to no avail. Reich developed a while system of bioenergetic therapy. He died shamefully in prison in the USA, and to this day security agents hold his papers. What Reich did not know was that the energy of emotions can alter the phase of the holographic field to the point of making it dysfunctional. So giving tranquilisers and hypnotics and antidepressants heals this phase error? I doubt it. But there's a PhD for someone!

I think it fair to say that the effect has not been studied in any depth.

2. The Placebo Effect

The whole idea is attributed to pharmacologists, which is odd because the homeopaths to this day use placebo pills as part of their treatment regime. A quick visit to Google reveals that after the administration of a placebo substance in a drug trial, there is generally a positive effect if the client believes that the substance is likely to have a beneficial effect.

The “positive effect” can be of 30% or more, dwarfing the statistics of the pharmacological trial by a considerable degree.

In another Google delight we find that placebo is due to “the power of suggestion”, which to me is a totally meaningless statement that explains nothing. The first one says that Placebo is the result of the administration of a placebo; the second statement says a placebo works by the power of suggestion. Which is it?

Consciousness and our thought processes and even belief systems affect the function of our holograms to a very large degree. Hence one would think that Placebo could work both ways.

Congratulations to the homeopaths and or the pharmacologists who discovered its power and then spent years trying to delete its effects for the benefit of the untold power of the biological molecule.

3. Nerve Transmission Speeds

In the study of biology you are required to swallow some enormous pills. But you want to pass the unit so you swallow the pill. And one of these is concerning the function of the electro-chemical model of the nervous system. This model has been built up over many decades by experimental investigation and has to be taken at face value. The fact that it doesn't work or make the slightest bit of sense has also to be taken at face value. Perhaps you will see why I say this in a few minutes.

We don't perceive things on a screen in or head, we see it outside of ourselves. We don't feel pain in our heads, but in the place where the injury is. This magic is called perception and also was dropped from biology and went into psychology, leaving the mechanical human to the experts, the biologists. Quantum biology has become impossible to study because it's spread out over physics, biology, psychology and medicine. It is not generally possible to do this combination of subjects.

So what do the biologists and psychologists make of the nervous system? Surely it is the biggest of all the information and communication systems in the human body.

There is no talk about “information” when talking about the nervous system. There are “impulses”, whatever that means, I cannot find out. The nervous system itself is discontinuous, and although it obviously functions as a single unit, totally integrated, if you are healthy, so far as co-ordination goes, the biology story does not support this basic presupposition.

There are 100 billion nerve cells and no two are exactly alike. The axon's lengths vary greatly from a few millimeters, to over a meter. No nerve pathway is direct, as there are junctions called synapses, where electrochemical transfers of chemicals take place, using over 30 different types of transmitting chemical. No, the “impulses” whatever they are do not actually pass through these synapses.

But the conduction of the “impulse” is not like electricity going along a wire at all. The action is transverse to the wire, in fact. Nerve conduction as it is called is due to millions of ions instantaneously changing place from inside the axon to outside, and involves Sodium, Potassium and Chloride ions. There are supposed to be “channels” for these ions in the wall of the axon but like the “channels” in the cell membrane, have never been found and possibly never will be.

The speed of conduction is related to the diameter of the axon, and therefore varies greatly from nerve to nerve. It is also related to the nerve coating, myelin, which all text books say is like a coating on a wire, although the conduction is not electrical at all but electrochemical. There are many gaps in the myelin so it can never act as an insulator at all. The texts do not say this, however. In any case the myelin-coated nerves can move an “impulse” 30 times faster than a non-coated one. A nervous system with such markedly different speeds is not really an idea when you are trying to get a body to work smoothly and think as well.

Let us remind ourselves of the great Nureyev, dancing flawlessly, changing his mental images instantly into very complex three-dimensional pictures in flesh and blood. What he is going is making and transferring holograms from his brain into movements in his body. Nothing goes down the inside of the axons except bits of the hologram. The electrical field is of course at right angles to the QED field. This is what happens in the

physics of the QED field. The coating on the outside of some of the nerve axons is of course a coating to keep out certain interferences from other holograms.

What has NES found so far with its new model of the nervous system? The myelin sheaths of the nervous system act as blockers or non-conductors of the QED field. The axon itself appears in experiments to “match” with a representation of a photon. This does not prove anything but it’s very interesting. Because it gets us immediately away from an electrochemical system that does not seem to be pleasing. We already know that the nervous system works better, electro- chemical or not, in strong ambient light.

It is ever so gently suggested that the great neurological research done to date is demonstrative only of the ability of the nervous system to create a mini QED field to carry holographic messages manufactured and propagated by the same nervous system. To do so, the body somehow will need to be able to manufacture hologram pieces, and to do this it has to be able to imprint this data into fluids, or into repeating chemical structures in the body.

By now I hope you are beginning to understand why it is that the heart of the embryo begins to beat after only 40 days. Somehow the hologram for the patterns of growth needs to be manufactured.

There is a need for decades of research to bring the model up to speed. But the bare bones of it are there.

4. Consciousness.

This has already been studied for thousands of years and a huge literature exists for it, but not in the western culture. There are religions where consciousness development is seen as an end in itself. Both Hinduism and its subsidiary Buddhism, which of course shares the identical culture, have literally tons of books on the development and maintenance of consciousness.

There is a certain amount of book learning available but there is a living tradition of the study of cleansing, breathing, yoga, and then meditation of which there are perhaps hundreds of types, all of which are to have a practical effect on consciousness.

Colours, sounds, designs, musical notes, drums and their rhythms all have specific effects. All have been studied. All of these things have been placed into Indian, and other South East Asian cultures for the very purpose of affecting consciousness. And the increase in consciousness is said to result in union with the Absolute.

So far as I can see there is absolutely no reason why consciousness cannot be studied and increased in a scientific context rather than a religious one. There are benefits, of course for health.

We can conceive of awareness as being something that can increase and decrease with one’s attention. Consciousness can inhabit space. It can move around, become shorter and longer and move in directions. It can be come concentrated and diffuse. It can be visually based, or based instead on sounds.

So culturally afraid are white people of consciousness study that several people of no color I have heard of were afraid to close their eyes while awake. Their fear was that they might be meditating.

NES has found great difficulty in finding a “formula” answer for common medical conditions, like essential hypertension. There is certainly no “formula” for this. The reason for this type of hypertension is unknown. Meditation for westerners was introduced many years ago by Maharishi, in a form that required a sound or mantra. It was found that it was great for curing hypertension of no known cause. Statistics and were written and great amounts of them were sent to Health Authorities all around the world. There they are now in the back rooms. There is a non-chemical cure for hypertension.

Consciousness is something that increases when there is not so much fizz and splutter of the daily things in the mind. Meditation can clear the backlog of things in the mind that need to be processed. We all have too much sensory input in other words. Once this clutter is processed, the blood pressure goes down, in my own experience. Blood pressure increase is the body’s way of dealing with too much information at once. Interesting. Why would the body need to do that?

The hologram, which represents us, our consciousness, is not there forever. It has to be created and maintained every day.

Meditation does just that. Consciousness seems to be what is left when the mind is quiet and is not "processing" data.

Summing up what we have

Modern studies of biology have left it without anywhere to go except into the Dogma, which involves the ideas of genetics and biochemical control systems.

Field idea of control including the idea of consciousness as a control have been left to other disciplines. Consciousness and its relative, action at a distance, have been left out even from Psychology, and have been placed in para-psychology.

Hence modern Quantum Biology, which is in the process of birth now, has nowhere to go in the academic world. It falls in between four disciplines, which owe it very little:

Molecular biology

Medicine

Genetics

Psychology, and para-psychology.

NES investigations to date hint at the possibility that bio-systems generally work on two sources of energy;

From the re arrangement of Hydrogen and other bonds

From an energy inherent in space that collects in cavities, and structures of biology generally.

Our approach is not to discount biology and its great progress, but simply to add to it in places where there is no molecular chemical answer to explaining the information transference in living things.