NES HEALTH
Through Energy & Information

Information Physics and Global Scaling

This lengthy lecture was originally prepared in 2010 by Peter Fraser for health practitioners and other professional users of NES products and rewritten in April 2011. It provides the current knowledge of how the global scaling theory of Dr Müller is applied in NES Health research and development on the human body-field.

Michael Ruse, writing in Mystery of Mysteries: Is evolution a serial construct?,[1] gives a list of the things that are valued in scientific theory. He says if a theory is good, it has predictive accuracy, in a controlled set of parameters. It will display internal coherence and not contradict already discovered coherent scientific principles. It will explain things that were perhaps previously believed to be random occurrences and it will show the innate simplicity that is a hallmark of nature. Counter-hypotheses should also be possible in good science. I hope I have shown already how many of these admired qualities are present in the theory of energy waves in space carrying information. There are many basically unprovable hypotheses in science that gain respect because they fulfil the requirements of good science. I have produced a model that predicts that when space resonance occurs, the surrounding space changes its permittivity. Space permittivity can be measured by physicists, but they have to want to do it. The theory does not contradict anything previous in science, yet it contradicts current theories that do not explain well phenomena we can all observe in nature. My model suggests that the matching of information in space is the guiding instrument inside and outside the body and this explains phenomena not well explained by existing theories. Now we can better understand bird navigation, the co-ordination of fish in shoals, the ability of fire-flies to co-ordinate their lights, and possibly thousands of events involving organisms and their environment.

As such, the space resonance theory applied to biology is a big one, as big as Darwin's theory of evolution itself, because it deals with a basic mechanism of biophysics. So, of course someone will ask about its pedigree in science. Charles Darwin, revered as possibly the greatest scientist ever in the English-speaking world, proposed an evolutionary theory that suggested a random theory of self-selection within an environment. It had no tight logic base other than this. Yet it was accepted, and continues to be so. It cannot be proven, yet is coherent.

To someone acquainted with the quantum electrodynamics (QED) field physics defined by Richard Feynman, where space phenomena appear to be random but in fact, on closer inspection, have an inner structure or mechanism, this is a fascinating observation. Darwin did not use stepped Aristotelian logic or statistical manipulation to produce his theory. He simply showed the extent of the coherence within the principles of self-selection of qualities of species.

Charles Darwin is unique in biology, since his 1859 theory, instead of dying, has gained momentum as other branches of science, like geology and genetics, have progressed. His theory of evolution is a complex interdisciplinary one, encompassing vast realms of science, but it can be reduced to one essential core process: it is concerned with explaining the selection of infor- mation by a process which appears random yet in essence cannot be. The contribution of the qualities and dynamic behaviour of information in space or, that is to say, a QED field has to my knowledge, never been considered.

Applying the new science terrain which is in the process of being proposed in this book, we can say that Charles Darwin's selection process occurs due to the interaction between the species and the natural environment, and for this to occur as rapidly as you like - instantaneously - we need information held in a QED field and selection via a process of space resonance matching. In this context, specific qualities, and even disease and the subsequent failure to reproduce, represent part of a selection process carried out by matching.

If putting a field-mediated information network into Darwin`s evolutionary theory is really helpful, coherent, creative and assists in simplifying it, then

1 Michael Ruse, Mystery of Mysteries: Is evolution a serial construct?, Harvard Press, Cambridge, MA, 1999

what might happen if we were to apply it to another area of biology, like medicine? Alas, we find that this has never happened, since although there were energy field theories in abundance in the 1920s and 1930s, no one ever added the key factor: the information theory. And due to ongoing measurement difficulties, few scientists seemed to know what to measure and all they could do was give the field theory names which were certainly not scientific—ones like qi, prana or life-energy.

The second approach is to ask if medicine experiences any great theoretical problems so far as scientific method goes, because of its chronic failure to acknowledge energy and information in a QED field. Here it gets very interesting indeed. It has to be observed that there are really three major areas of science awaiting application to the field of medicine.

The first one is the QED field theory which has as one of its proponents possibly the best physicist of the later part of the twentieth century, Richard Feynman. Since 1986 it has been rock-solid physics and not really in dispute.[2]

Secondly, there is the global scaling theory[3] which appears in itself to have had two stages of development. Since 1967, this wave effect has been observed experimentally and in relation to radioactive decay, sizes verses mass of organisms, the dynamism of embryology and physiology itself. But these experiments carried out by nature itself relate to the activity of just one sub-atomic particle: the basic one, the electron.

Here we can add as a subset Milo Wolff's work on the electron as a standing spherical wave in space that can 'be' in all places in the universe at once.

In addition there occurred, more or less simultaneously with Wolff's work, a huge development which clearly bordered on the unified field that eluded Einstein and combined the waveforms of electron, neutron and proton in a standing wave in space, linking all matter in the universe together. This was proposed by Dr Hartmut Müller in 1986, when the mathematics for it was completed. His work, being published in Russian, is not yet well known in parts of Europe and the USA. He studied physics at Leningrad University and later taught in the Volgograd Polytechnics Institute, where he carried out research from 1980 to 1989. He also carried out research at the former Academy of Science of the USSR. He received very high academic honours in Russia, but left the new Russian Federation in 1991 and returned to his native Germany.[4] His work covers such delicious subjects as gravity, faster than light, cold fusion, long-distance telecommunication.

In addition, Dr Rainer Viehweger has written an introduction to global scaling theory which has been published in English.[5] He has shown how, using Müller's development of global scaling, we can see the world differently.

Thirdly, there is the information theory concerning how space itself arranges information, by organising it into magnetic particle codes, and concerning how these codes, information and energy fields propagate themselves by various means which have been the subject of preliminary investigations for some decades by myself.[6] But recognition of this research hinges on the wider acceptance of knowledge about the spherical standing waves in space that carry information. The purest type of science is sparing in its theory and so only things that work and things that are needed to explain real events are retained. So let's review why it is we need these three areas of space science to contribute to biology and medicine.

The QED field replaces in paramount importance the already known electrical field. The electrical field has been applied to general physiology, neurology and cell biology for many decades. The rules under which the QED field works are that different molecules do not need to be adjacent to one another in order to 'know' they are there. So it makes a large-scale human body field possible, via action at a distance but always within the energy envelope of the skin of the body. Milo Wolff's spherical wave theory is needed by the human body-field researchers, since it removes the absolute necessity to have a moving set of energies making a moving body-field. A real energy field, you see, is created when energy moves. Every electron and photon in the body forms a large standing wave pattern. It does not need to move in new QED theory.

Lastly we need to explain why Dr Müller's composite logarithmic standing wave in space is needed for a human body-field theory. There are many reasons for this need and we can list a few of them:

- The proton cannot be left out of energetic physiology because its activity helps to determine pH, acidity and alkalinity, a really key

2 Richard P. Feynman, QED: The strange theory of light and matter. New Jersey: Princeton University Press, New Jersey, 1985

3 H. Müller. Global Scaling Theory Compendum. Institute for Space Energy Research Ltd, 2008, p.3

4 Hartmut Müller, Raum und Zeit Global Scaling, Ehlers Verlag, 2002

5 Dr R Viehweger, Understanding the Universe through Global Scaling, Quantum Health Ltd, Poole, United King- dom, 2011

6 Peter H. Fraser, Decoding the Human Body-Field. Healing Arts Press, Vermont, 2008

The proton cannot be left out of energetic physiology because its activity helps to determine pH, acidity and alkalinity, a really key be left out of a body-field theory. It is by far the most massive particle.

- There are favoured sizes and masses of all living things, which statistical methods have uncovered in very large studies. The global scaling data can not only explain this arrangement but also make predictions about it.

- Electrons do occur freely in the body during chemical reactions. Yet most of them are linked by chemical energetic bonds with protons making up the mass of the physical body.

- To facilitate body regulation of temperature, pH, blood pressure, fluid levels and hormone levels, the body needs to get information from outside itself. If it can get this information by 'sensors' all well and good. But how are these so called 'sensors' co-ordinated? We propose a second system whereby, via the Müller wave in space, information is obtained from the environment to fulfil the need of body regulation, as well as the needs suggested very specifically by Darwin's evolutionary model. As far as the information carried on the waveforms of the electron, photon and composite wave of Müller goes, it is the most ignored part of the field theories of biology. Infor- mation is just the specific arrangement of 'bits' or fragments of energy within a standing spherical wave. The standing wave guides the information it contains and, with its magnetic envelope, protects the precious data. As far as biology goes, the Fraser theories of information transfer and storage by imprinting are the most difficult to prove, due to measurement issues.

Here is a very good opportunity to give an account of the global scaling phenomenon, one that is supported by years of research and a great deal of mathematics. Yet the essence of the idea is simple (fulfilling one requirement of good science), relying on very simple mathematics well within a high school student's grasp. The concepts are both dynamic and mind-expanding. It is a predictive model as well.

The flat earth theory died a slow death in the fifteenth century because of the problem posed by the innate complexity of the orbits of the planets, then called wandering stars, as they appeared from our observation point, earth, to wander about and even sometimes go backwards for part of their orbit. When you take the observation point as the sun in a geocentric universe, the planetary orbs become almost regular ellipses. Hence the prediction of orbits is made easy. We can now, in the early twenty-first century, enjoy a similar satori when we look for flaws in the impossible system of biology developed over the last 150 years without reference to any theory of internal order, harmony or energetic structure in the form of fields of standing waves.

Just as the orbits of the planets betrayed the flat earth society membership, which is now very much diminished in numbers, so the placebo effect in medical experiments indicates that the system needs to undergo a change in its vantage point. This effect is like the reverse orbit of the planets - it does not fit into the system well.[7]

So let's go through a revolutionary change and try to grasp the implications of global scaling and what it means for medical science methodology as it is now practised.

7 David R. Hamilton, It's the Thought that Counts, David R. Hamilton, 2005; Hay House, London, 2009 edition, p.30ff.

Global Scaling as an Outgrowth of the Quantum Electrodynamic Fields

The selection process in academia has left us with a residue of academics who are unable to entertain the idea of fields having a function in biology. So in my view the problem is one of politics, not of science. Biology concepts at present are mechanistic outgrowths of biochemistry and no more.

The science of quantum fields in space has come of age since 1986 and biology must accommodate these conceptual changes. The coming medical revolution is akin to that set off the publication of Darwin's book on evolution in 1859. Evolution was not a new idea in Darwin's day and several attempts were made to describe its features. Likewise, the idea that there is an underlying structure in space, indeed the entire universe, is not at all new.

The pleasing proportions of the Golden Ratio, an irrational number beginning with 1.6180, were noted by Pythagoras and Euclid in ancient Greece. Leonardo de Vinci, during the Renaissance of classical thought, even applied it to the proportions of the human body. In the thirteenth century Fibonacci had proposed a series of numbers that rivalled the Golden Ratio. Then, during the seventeenth century, the astronomer Johannes Kepler united the Golden Ratio with the Fibonacci series.

To the ignorant, science appears to be like magic. In fact in history we see science as the means of destroying magic by explaining it, and the process went on even into the twentieth century. By 1931, Roger Penrose had realised that underlying structural forms arose from the very simple mathematics of the Golden Ratio. And by 1960, researchers could point to how these ratios were involved in the formation of quasi-crystals in certain chemical compounds based on aluminium.[8] There is an inherent structure in space which is followed by the structure of crystalline matter when it forms. The Golden Ratio has been taken into modern science by crystallography.[9]

Lesser known is the much more important work of the Swiss-born genius Leonard Euler (1707-1883), a mathematician who left us no fewer than 900 treatises on a huge range of intellectual subjects: number theory, calculus, applied mathematics, logic and astronomy. Euler studied how endless fractions occurred and described how strings oscillated in 1748. A general theory emerged about the qualities of all natural oscillation, and by 1820, when Joseph Lagrange and Joseph Fourier took his work to a new stage, other scientists fully understood what he had said. While the Greeks had looked at solid geometry, Euler had looked at dynamic motion.

Of course, sub-atomic particles exhibit the quality of natural oscillation. For example, in 1986 Milo Wolff described electrons as dual oscillators.[10] The self-arrangement of these oscillators in chemical compounds and elements is related to the formation of crystals when solutions of chemicals are cooled. And in modern electronics, quartz crystals are found to have natural oscillation frequencies of their own, related purely to their size. Euler took the natural logarithm that Mercador the map-maker had used a century before, in 1668,[11] and applied it to all forms of natural oscillation. Our normal base of logarithms is ten, but other cultures have used other numbers as the base of their counting systems and we find 8, 12, 20 and 60 can be used. Euler used a logarithmic system based on 2.718 and applied it as a general descriptor of harmony of oscillation in nature. In fact, it was an important constant of oscillating systems. The Golden Ratio, being non-dynamic, had been replaced by a dynamic system of mathematics.

Indeed, the irrational number e in Euler's mathematics shows that there is indeed an underlying harmony in nature, all of which is a state of oscillation. The number e is the basis of the development of the modern science of fractals, or repeating geographic or ideational motifs in nature. We find in fractals a storehouse of motifs for shells, ferns and leaves, and as such this should be of interest to all Darwinists, geneticists and medical biologists, who will surely find in fractals pictures of body organs like the heart.

The fractal is always thought of as just a pretty picture, due to the widespread dissemination of pictures like the Mandelbrot Set, which can be seen on the internet. My research shows information is carried somewhere on Müller logarithmic wave, representing the natural oscillation of matter itself. This information store 'fractalises' itself simply because of nature. In fact all information carried in the QED field fractalises itself, that is to say, it organises itself into a certain pattern. In turn, if you are ready for this thought, this means that every human disease has a set of fractals, some large, some small.

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8 Richard A. Dunlap, The Golden Ratio and Fibonacci Numbers, World Scientific Publishing,Singapore,1997

9 Sir Roger Penrose, OM, FRS, Shadows of the Mind: A search for the missing science of consciousness, Vantage, Oxford University Press, USA, 2005

10 Milo Wolff, Schrödinger's Universe: Einstein, waves and the origin of the natural laws, Technotran, Manhattan Beach, CA, 2008

11 J.J. O'Connor and E.F. Robertson. The Number e, http://www-history.mcs.st-andrews.ac.uk/HistTopics/e.html. Article. The Number e, Authors: J.J. O'Connor and E.F. Robertson, Sept 2001. Online article with School of Mathematics and Statistics, University of St Andrews, Scotland.

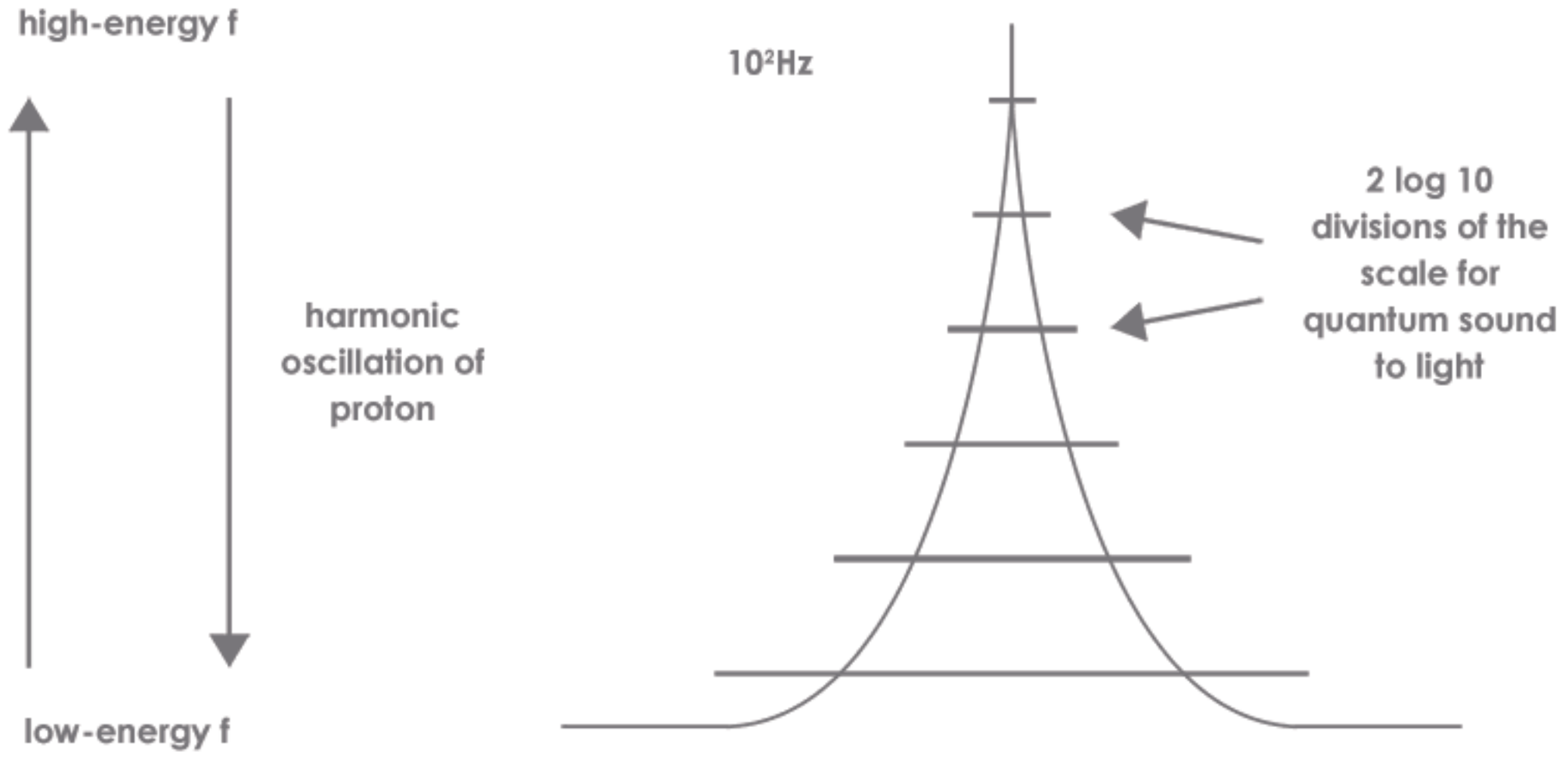
We can often see repeating harmonious motifs in clouds, water, forms, coastal arrangements of land and sea, and ranges of mountains. How does this happen? I am now asking you to exercise the fields of your brain cells which might never have been used previously. Trigonometry, which consists of tangents, sines, cosines, and so on, offers examples of solid geometrical rela- tionships which are actually in a sphere. So we might, in a standing spherical wave, expect to find a dynamic based on shapes - and this of course is trigonometry. Euler applied the natural logarithm to what in fact was a standing spherical wave.

Space is not empty; it has characteristics that come into being because of the natural logarithm e. If we take the electron and its high-energy form the photon, and then add the proton particle and use identical reasoning, it is clear that we get two fields which must actually combine, as they do in the case of molecules of matter. So our special number system is able to create a field of a standing wave going to infinity. We would expect all atoms and particles to be placed in the gigantic grid created by the oscillation of electrons and protons. Some parts of this space appear as if they are compressed, while other are less dense or expanded. The real world of electronics, with its amplitudes, its sine waves, frequencies and so on, is placed at 90° phase difference to the world of the quantum field. In order to go from one to the other, a simple phase correction is needed, and this is added or subtracted. I have tested this experimentally. It works.

The motion of the quantum field is oscillatory in nature, but it also exhibits a most curious quality, that of logarithmic scaling, a reflection of the effect of e. So a very low sound, even a subsonic sound you can't hear, will make a wave that scales logarithmically using 2.718, which makes nodes in space in the high-frequency spectrum as far as infra-red light. There is scaling from sound to light and from light to sound, and the entire 'human body field' is able to respond, not to all, but at places where there are strong or weaker nodal confluences. Nature simplifies its own huge information system so it can be managed.

Perhaps you think I am fantasising. But no, there has been evidence for this sound-to-light phenomenon since 1933, when it was first observed. It is called sono-luminenscence, and has been observed many times since the 1930s.

Here is a diagram showing how logarithmic scaling invariance of the proton, together with the electron, forms patterns in space that must be obeyed by the human body-field. The oscillatory system of nature goes from zero to about 1024 Hertz, but the system divides itself into what I call frequency compartments based on decadary logarithms multiplied by two or 2log10.

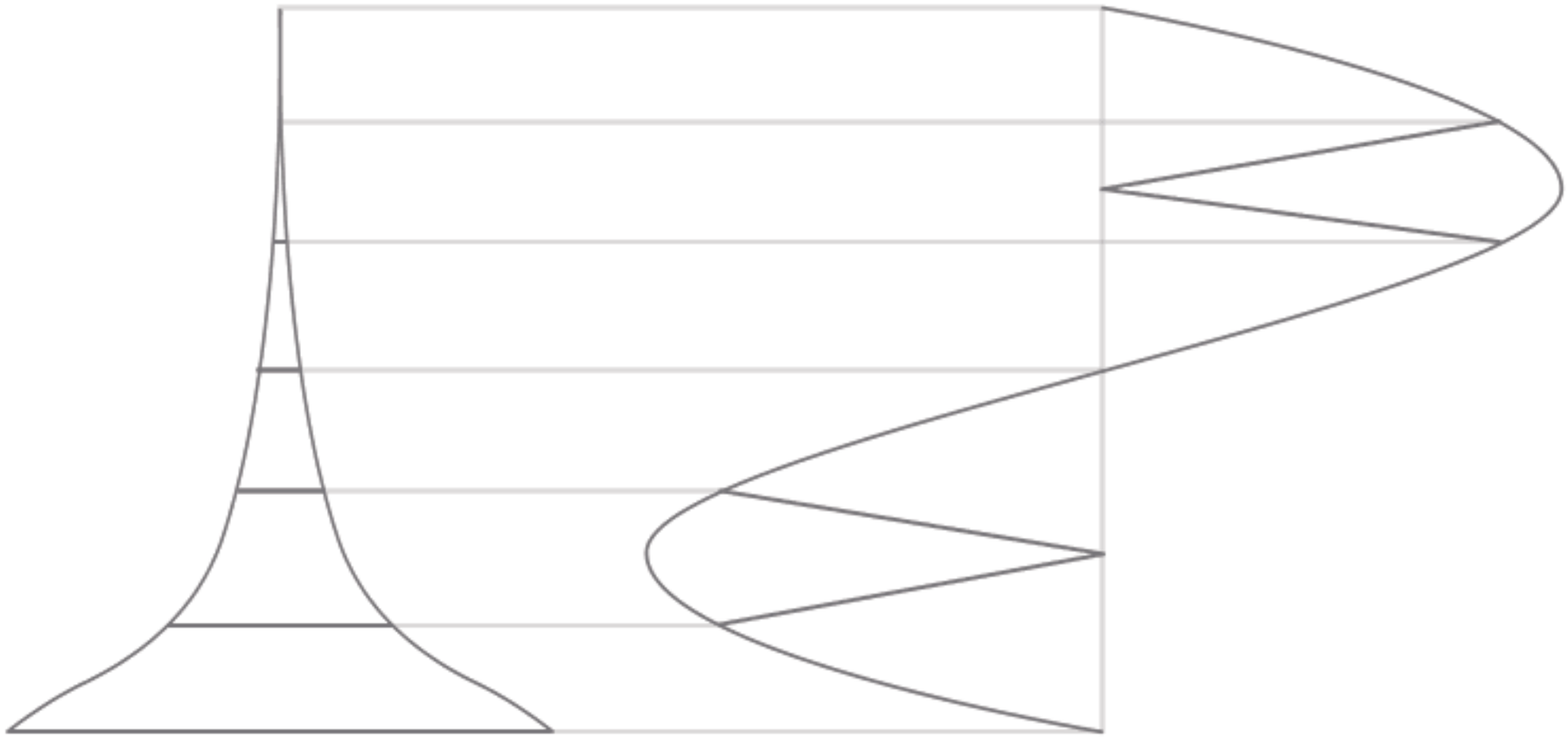


This logarithmic frequency scale has characteristics of time, temperature and electromagnetic frequency and can be measured directly. It divides naturally into 24 decadary spatial compartments.

Figure 7.1. Global scaling in the human body-field

By 2010, I had finally arranged the diagram representing the mathematics on which the human body-field must be based, so that it could be seen very quickly how the real and the quantum were related to each other. The key to this relationship is phase. This is an electronics term describing how closely aligned two sine wave signals are. It is expressed by degrees and can be positive or negative. Phase in logarithmic space is quite different and another word might be appropriate, although degrees are used to describe it. There is a huge scaling wave which goes from many kilometres long at its base to infinity at its apex. This shows logarithmic scaling and its relationship to e of Euler.

corresponds with quantum phase 60°.



Real corresponds with virtual

Figure 7.2 Quantum links to global scaling 2010. Real, on the left, represents 'size' in nature and quantum, on the right, represents 'shape' in nature. But to the right you see the waveform made by two spherical standing waves. Within this waveform we find six equal segments of 60˚ each.

The big news is that space has intrinsically a very carefully arranged structure and you can link to whatever the structure you desire, since all things are there, by using a talisman or a thought. We can explain magic!

Here we must digress into the idea of a 'morphic field' (apparently containing information) that keeps on popping up in the history of biology and medicine. According to modern specialists in biological growth, a morphic field is a group of cells that respond together to biochemical signals. In other words, the idea of a field has been deleted and replaced with chemistry. But the original idea of a morphic field was actually energetic, and was discovered and researched by Dr Alexander Gurwitsch in Russia in 1910. Perhaps 80 years ahead of his time, he described the biophoton as well. I see him as the father of energetic medicine in the West.

Dr Gurwitsc father of energetic medicine in the West. Dr Gurwitsch thought that the morphogenic field was a field that organised the orientation of cells during prenatal growth. He did experiments to indicate that it obeyed the inverse square law in physics.[12] The inverse square law is used in electromagnetic fields (from the electron) as well as gravitational fields which Müller claims emanate from the proton.

In the last decade, biologist Rupert Sheldrake has delved yet again into the many manifestations of information matching in an infinite quantised field of standing waves. Naturally he has looked carefully at Carl Jung's collective unconscious, as well as the traditional Hindu concept of the Akashic records, where all knowledge is supposed to be stored in a universal field.

12 Alexander Gurwitsch, Atlas and Outline of Embryology of Vertebrates and of Man, Only in German, J F Lehman, Germany, 1907.

So be aware that when you use the term 'morphogenic field', there are at least three possible meanings. Scientists dislike this confusion, but in this case they created it themselves. No one appears to have any hard physics or even hard electronics to support the morphogenic fields theory, which surely has merit as the very beginning of the idea of a human body-field amongst western thinkers. Most physicists are wary of the idea, but progressive ones like the British physicist David Bohm have been sympathetic to it.

What I am proposing is a fourth version of the idea and is in fact a quantised morphogenic field. It exists only in the QED field. It is a specialised part of the human body-field as a whole. There are two major parts of the human body-field, one related to real electronic frequencies. This part functions as a control for scaling or for the size of the parts of the body. This is neces- sary to prevent our body from becoming as big as a whale. The other part of the field is linked to the cellular DNA and RNA, according to my years of matching tests. It is concerned with embryology, that is, basically making the shape of the body. Of course in diseases like cancer, size is affected as well as shape. The entire HBF is in breakdown.

Let us be very specific about the clinical application of this very useful knowledge about the human body-field. If a disease is producing an increase or decrease in the size of an organ, such as might occur in athlete's heart, hepatomegaly, goitre and so on, the clinical treatment must be done using the set of 12 Energetic Integrators. But if a disease produces signs of change in shape of the body, the skin or the organs themselves, there is a special technique for accessing the quantised morphogenic field (QMGF), using a paired set of Energetic Integrators with Heart Driver. This links to the genetic material directly.

Links to the Morphogenic Field			Six Segements
1	EI 1 EI 2	+ ED 6 Heart Driver	Cardio-pulmonary
2	EI 3 EI 4	+ ED 6 Heart Driver	Brain and heart regulatory
3	EI 5 EI 6	+ ED 6 Heart Driver	Neural/uro-genital
4	EI 7 EI 8	+ ED 6 Heart Driver	Hepatic/optical
5	EI 9 EI 10	+ ED 6 Heart Driver	Circulatory/ hormonal
6	EI 11 EI 12	+ ED 6 Heart Driver	Digestive and blood

Figure 7.3 Combinations of Infoceuticals to link to the morphogenic field.

The Infoceuticals have to be used, combined, in the sequence shown in the diagram. It has to be said that the status of this information is theoretical, based on space resonance matching over many months, with many repetitions to ensure the best possible accuracy.

The role of the heart cavities in the link to the QMGF, is of particular interest to those who have studied embryology. Energetically, the heart appears to have a role in the development of the embryo, and for the first time we have a reason for the heart of the foetus to beat only 40 days after conception, even though there is almost no circulatory system at that time.

We will now take a deeper look at the Müller proton wave, which unites all of space with one wave.

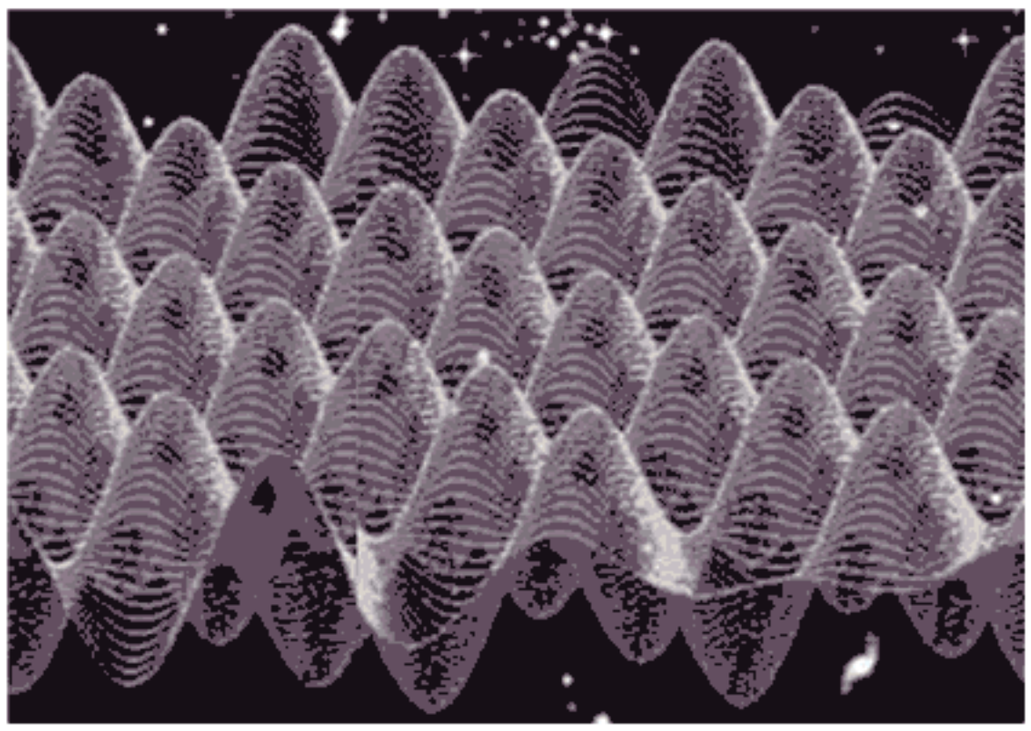


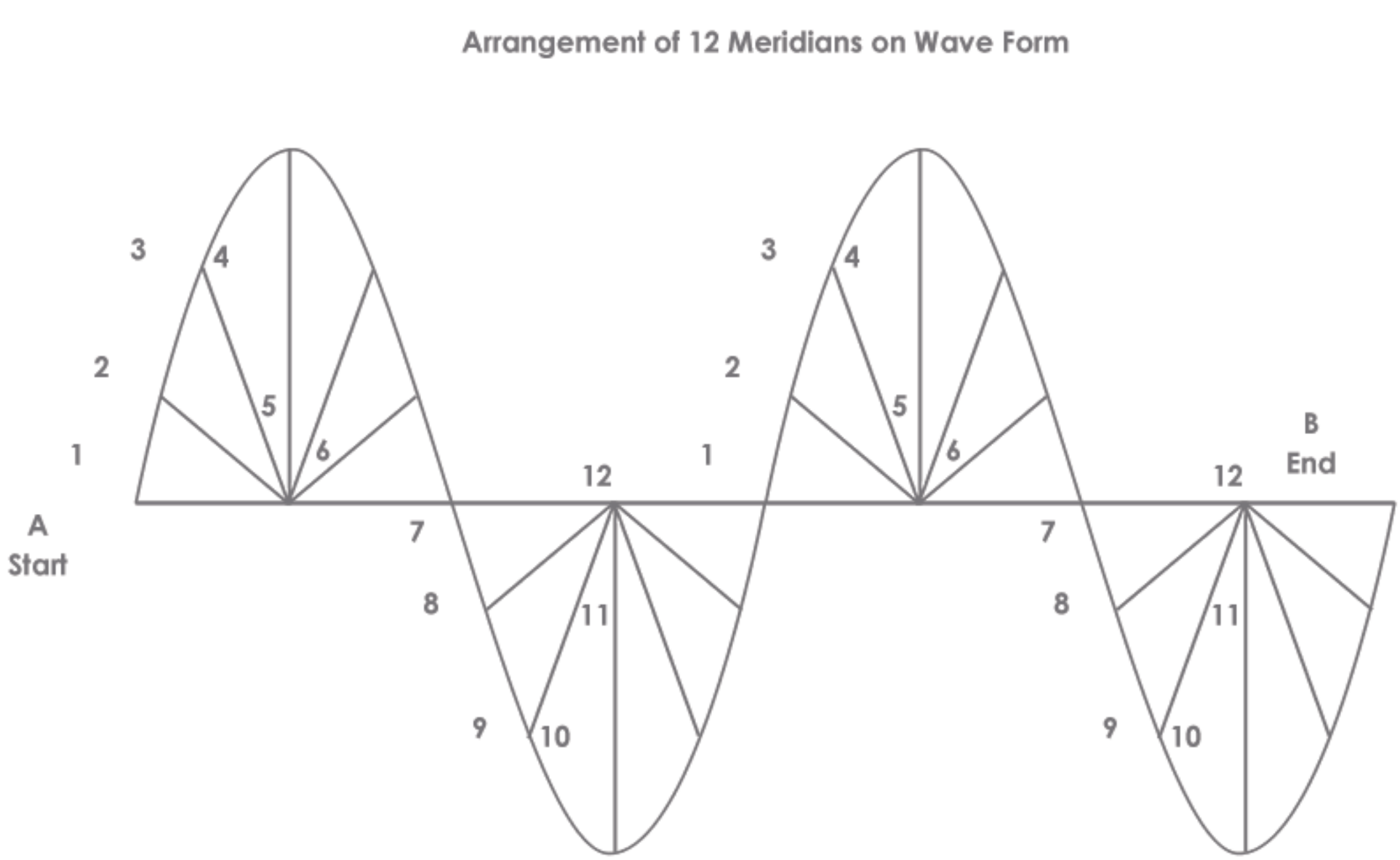
Figure 7.4 The Müller proton wave in space

How could we use another method of assessing whether or not the NES Infoceuticals were part of the huge global scaling network of the universe? It would be necessary to get a space resonance match between Dr Hartmut Müller's 1982 picture of the proton wave in space and elements of the NES system. In fact, every Infoceutical in the NES system was tested in 2010 by space resonance matching and no such link was found. I was alarmed. But I got a pair of scissors and cut the 1982 Müller diagram in half. When I presented two such diagrams (representing a double waveform), there were immediate and clear space resonance matches between the proton wave and every Infoceutical in the NES range, over 60 of them. This was very pleasing.

But there were more shocks in store for us. By way of explanation, it has to be said that I have found, experimentally in several different contexts, that it is necessary to consider that there is a double wave, not just one, in this system. You will notice too, that two Energetic Integrators are required to make the QMGF actually work in practice. This indicates that this may be one element of mathematics in a formula yet to be written.

The shock was to be broached. I was, by late 2010, making pictures of a logarithmic wave and dividing the wave into six equal divisions. This was no accidental event. There is only one advanced book in English on the basis of Chinese tradition medical theory and it has been translated from the German. It is Manfred Porket's famous book
Theoretical Foundations of Chinese

Medicine and in it he clearly entertains the idea, from 4,500 years of antiquity, of a sphere divided into six segments. This is the essential divine geometric origin of the 12 groups of acupuncture meridians or energy channels in the human body. So the coherence was growing. Naturally I checked the number of 60 for 60˚ to make sure every one of the 12 main acupuncture channels would form a space resonance match. Not one of them would do so. I tested for 30˚ and found that all of the Energetic Integrators would form a space resonance match. This was a little piece of evidence for a double wave of 12 channels.



Note: Numbers 1 to 12 refer to the NES Energetic Integrator Infoceutical numbers.

Figure 7.5 Arrangement of the 12 meridians in wave form according to my research up to 2011.

The ancient divine mathematics can still be of some use today in the context of quantum physics field theory. But science only takes the parts that work and discards the rest of the data, which go into the reject basket because they 'cannot be tested'. After a shave with Occam's razor, we are left with what is testable, and this is shown in Figure 7.5. Many will not like the idea of traditional Chinese 'Five Elements', as it is philosophy rather than science.

Now there is but one more mathematical piece of magic to consider. And again we travel to the secret divine mathematics of even greater antiquity than before. This time, however, we go to look at where and how binary logic enters into our ideas concerning how space actually works in terms of known mathematics. What happens when a space is created?

To look at this, we go to Henry Smith in 1857, and further work in the same area by Georg Cantor in 1883. Cantor found that if a space was created along a line, very strange mathematical properties could be found. For example, he found that geometric progression emerged: when parts of a line were removed, the same number of parts appeared elsewhere, from nowhere! And suddenly the line was equal to two copies of itself, so it created its own binary system. This is in agreement with what we observed concerning the Müller wave, the great space communicator: it makes another copy of itself by a binary process!

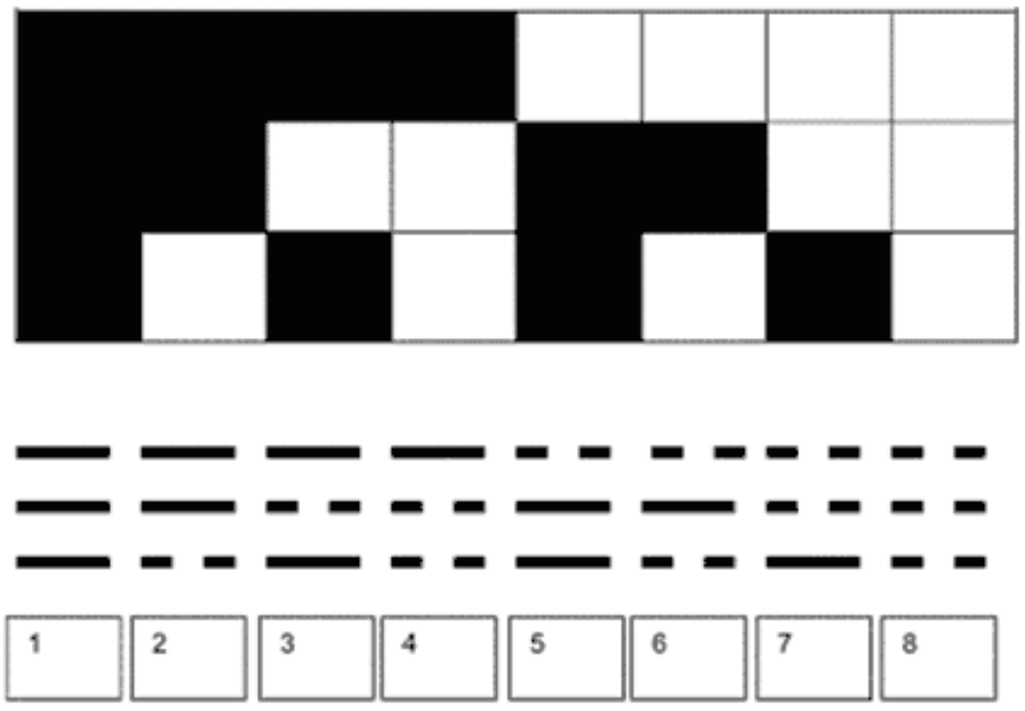
Perhaps now you will understand why the HBF is represented by a double logarithmic wave. The mathematics of Cantor says that this is what happens in a system built on lines and spaces. Our lines and spaces are of course there in the body-field as the codes for the body-field itself. What Cantor discovered is now called a fractal and is very simple mathematics that makes topographic patterns spontaneously. Many fractals have become known since Mandelbrot popularised them in the twentieth century, but Cantor's fractal is the mother of them all. It appears when a line is divided into three equal parts and the middle section is deleted, making a space.

Why I am so excited that this appears to link to a binary system? Because we need a binary system to make the NES devices work! They can of course work partially with an analogue system, but the moment you introduce spaces, you are in the binary world. The line we are referring to is the baseline, marked A to B in Figure 7.5.

Figure 7.6 The Cantor fractal. This is formed by continuous removal of the central third of the line (Image from Wikipedia.)

Unfortunately for the human ego, there is very little that is new. In fact, the further back in time you travel, the newer the ideas appear to become. The Yi Jing or Book of Changes is about divination and is still revered and used daily all around the world. Scientists are not as a rule interested in divination, due to its poor track record. But the really astonishing thing we find in this book, said to be one of the oldest in the world, with early copies dated now at about 400 bc, is the Cantor fractal and a binary code writing back to front from the European version of Cantor. Cantor says we start with the line, divide it and a binary system appears. In the Yi Jing we find a binary codes that devolves into seven key versions of Cantor's fractal. The eighth is of course not divided in the middle. A simple diagram will illustrate what could take hundreds of words. To put what I want to say about it into one sentence, I can say this: the system of lines divided into three, with a missing central portion, gives us ordinality, the ordinality of space, which is shown to be derived from the version of Cantor's nineteenth-century fractal generator.

Derivation of eight trigrams of the Yi Jing.



Seven if the eight have a line with the middle removed. Yi-Jing based on the Cantor Fractal

What can be said concerning my many discoveries about the structure of space, the ordinality of space, imprinting of information on space, and so on, is that they cannot be allowed to stand as a science except for the fact that they show extraordinary and far-reaching coherence with several major physics theories of very high repute, as well as a number of major mathematics systems which are very well known to specialists in that field.

Now, for me the ultimate arbiter in science must be no less that Albert Einstein, always a very popular figure because of his innate grasp of common sense. You can review his after-dinner talk quotes on the internet and you may conclude that he says many times that mathematics does not prove a science theory - the entire theory must work in practice. This raises huge questions for scientists and particularly for those whose job it is to design experiments. There is a nagging doubt concerning the ultimate value to science of using large-scale statistical models as a framework of proof. In the case of Darwin's huge edifice of science, with his theory covering the disciplines of geology, palaeobiology, genetics and embryology, the proof was never statistically based. Instead we see an argument based on common sense logic with a huge amount of coherence. We can still learn a lot about how science is approved from both Einstein and Darwin.

The space resonance and information matching theory is certainly as big a theory as that described in On the Origen of Species by Darwin. It also has ramifications for the scientific method itself, such as it is. That science discovery is in fact inductive was asserted by the famous essayist Francis Bacon (1561-1626) and was favoured too by J. S. Mill in the nineteenth century. Yet the validity of inductive reasoning can only be entertained if the scientist has no preconceptions concerning the area under investigation.[13] This is to prevent bias in the collection of useful data. Francisco Alaya of the Department of Ecology and Evoultionary Biology of UCLA complains that there is a disparity between what Darwin did according to his notebooks and what he said about methodology.[14] This little crack in the armour of the scientist deserves further opening. We need to ask why, if Darwin merely collected data concerning diverse species, he and only he, was able to assemble such a huge far-reaching hypothesis?

Of course, nothing is obvious if you remain caught like a rabbit in the twin headlights of induction and deduction. We can now go further. The scientific method might itself be related to naturally occurring mental abilities. Mozart wrote his symphonies in his head, then wrote a note-perfect score which required no further correction. Leibnitz, the German philosopher, wrote entire tracts of prose which came out in the wrong order but could easily be rearranged ordinally. Darwin observed carefully for many years, then described his entire hypothesis in 1859. If the mental process actually is related to space resonance matching of data, then the theory of the scientific method itself is long overdue for restatement. If this is so, and people like Newton, Darwin, Jung, Einstein, and so on are good at assembly of data ordinally according to the roles of information in space, then we can replace induction and deduction with space resonance matching.

The key quality of this system is coherence. This refers to how well the hypothesis sits with related disciplines. It is of course subject to error, just as induction and deduction are subject to error. But space resonance matching is self-correcting whenever more correct data are introduced into the system. So science itself should be self-correcting.

13 J. Francisco Alaya, Darwin and the Scientific Method, National Academy of Sciences, USA, 2009; www.pnas.org/cgi/doi/10.1073/pnas/og011404106 14 Ibid.