

Quantum physics in structured water

Introduction

In conventional science, the efficiency of all energy production systems (including man-made engines) is governed by the laws of thermodynamics, that are embedded in physics. Water can be considered in these laws, as it is matter and can produce energy and charge in a structured form.

There are 4 laws of thermodynamics, and they are considered the most important laws in physics. The laws are as follows:

- Zeroth law of thermodynamics: If two thermodynamic systems are each in thermal equilibrium with a third, then they are in thermal equilibrium with each other
- First law of thermodynamics: **Energy can neither be created nor destroyed.** It can only change forms. In any process, the total energy of the universe remains the same. In a thermodynamic cycle, the net heat supplied to the system equals the net work done by the system
- Second law of thermodynamics: The **entropy** (disorder or decay) of an isolated system not in equilibrium will tend to increase over time, approaching a maximum entropy value at equilibrium
- Third law of thermodynamic: As temperature approaches absolute zero, the **entropy** of a system approaches a constant minimum.

Firstly, energy can produce matter, however are they different. Albert Einstein's most famous equation says that energy and matter are two sides of the same coin. Energy is a bit like awareness: we can have awareness of energy, and yet never feel the same interaction as we do with matter (ie. things that we can see, touch and use). We can understand that energy and matter are different, and yet not understand why it is so significant.

Everything in our universe is made of energy (including matter). At the beginning of time there was a large amount of energy confined in a very small volume. Afterwards, as the universe expanded, energy eventually condensed into mass (stars, minerals, water, plants, etc.). Photons present at that time collided with each other and formed particles with mass (eg. electrons, protons). Mass or the type of particle formed depends upon the energy of photons (light). Magnetic fields are made of photons. The reason that you don't see them is simply because your eyes are not sensitive enough. Electric fields are also made of photons, and you do not see them either. Also, you don't see infra-red or ultra-violet radiation, because your eyes are only sensitive to very specific photon energies. Photons are particles (as in the *photoelectric effect* or *photo electrons: a phenomenon in which electrically charged particles are released from or within material when it absorbs electromagnetic radiation*). Energy is not light (although light photons have energy) and photons are more than just energy (they have other quantum dimensions).

Also, the photons from light and the photons from magnetism are the same thing, however with different energy signatures.

So, is matter a type of energy and is all matter a type of energy? Is the whole universe a form of energies? Some would say that energy is a property of matter, not something in and of itself, nor a variant of matter. However, the current theory is that everything is an excitation within a quantum field of energy. Therefore, a key point of focus in the future will be the quantum physics of thermodynamics, and perhaps leading to the quantum thermodynamics of structured water.

The reason we are at this point in this essay is that *Phi'on structured water* does not appear to obey the existing Laws of Thermodynamics (described above) and the reasons are outlined in the following sections.

Structured water behaving outside the laws of thermodynamics

Most water on this planet that is in a constant state of movement (including the ocean) would be in a structured water state due to the vortex and wave actions of the water. Therefore, it could be assumed that this water is in a permanent state of negative charge. One of the reasons that scientific literature does not address this issue is the assumption that the water charge is neutral and therefore no technology has been developed to measure the charge in water. However, Professor Gerald Pollack (University of Washington, USA) has measured the charge of cell membrane water that he calls Exclusion Zone (EZ) water as H_3O_2 (structured water) with a negative charge. Phi'ón has also developed a simple method to measure this charge in bulk water.

The Phi'ón structured water is prepared using a Phi'ón water conditioning device. This water has a permanent negative (-) charge. That is, the water's 6-sided crystalline structure (hexagonal) **does not decay** and return to a disordered, 5-sided crystalline structure (pentagonal) or a state of entropy (ie. disorder or decay as prescribed in the Second Law of Thermodynamics). Other structured water forms (eg. in a flowing river) will change to a de-structured form (within 60 hours) when the water ceases to flow or vortex.

However, the charge measurement system when attached to Phi'ón water can have periods of short perturbations when the measurement of the water charge, measured by a voltmeter, moves temporarily from a negative to a positive charge due to being over-powered by an entropy force. However, this change only lasts while the force exists near the measurement system. I have observed the charge switching from negative to positive in the presence of skeptics, people with very low cellular energy, and the effects from mobile phones and other electronic/radiation devices. What we are observing here is an effect on the measurement system (including probes, leads to the UCurrent device and the voltmeter) rather than a change to the water charge in the device. That is, the entropy forces (positively charged) impact on the measurement system and *steal* electrons from the current within these electronic

measurement systems. The structured water on the other hand, is in a syntropy form and sustains its permanent negative charge.

Phi'ón structure water has other anti-entropy or **syntropy** forces, ie:

- The water also has anti-entropy or syntropy forces and can entrain a negative charge (flow) into water that has very low negative or positive charge, provided the waters are close to each other
- The water possesses anti-pathogen properties. For example, it will eliminate E. Coli in a single pass of contaminated water (pathogens) through a device
- The water has a preservative or anti-oxidation property in that it retains the antioxidants of fruit or other food held in the water. This is also the case when wine is passed through the device, the wine does not oxidise and turn to vinegar, ever.

What we have in Phi'ón structured water is perpetual motion in time and space. Water in this quantum state can produce extraordinary things. I already suspect that the array (4 powerful negatively charged points) provides successive charged *hits* into water transit (through an inline device as *spaced chunks*), that produces quanta (Planck's term) or photon.

In 1900, Max Planck was working on how the radiation that an object emits is related to its temperature. He came up with a formula that assumed the energy of a vibrating molecule was quantised (ie. it could only take on certain values). Also, the energy had to be proportional to the frequency of vibration (motion), and it seemed to come in chunks of the frequency multiplied by a certain constant. This constant came to be known as **Planck's constant**, or h , and it has the value $6.626 \times 10^{-34} \text{ J x s}$.

At that time, Planck's results could not be explained by conventional thoughts about light. It was an extremely radical idea to suggest that energy could only come in discrete lumps, even if the lumps were very small. Based on Planck's work, Einstein proposed that light also delivers its energy in chunks; light would then consist of little particles, or **quanta**, called photons, each with an energy of Planck's constant multiplied by its frequency.

Photons are made of magnetic (rather, electromagnetic) fields. To be specific, photons are ripples in the electromagnetic field. So, a magnet is surrounded by a magnetic field. If the magnet is not moving, then the field is stationary and there are no photons. However, when we excite the magnet with water flow or a subtle energy, the field becomes excited. When this excitation propagates away from the magnet, then there are photons.

All particles including electrons, quarks, and all the others are waves in their respective fields. Electrons are stable waves in a single, universe-spanning electron field. Electron waves carry charge, so they interact with the electromagnetic field, and they disturb each other and apply forces to each other. Magnets get the photons through acceleration (increased motion). It's the same as when you create waves or ripples on the surface of a flowing river by throwing a stone into the water. The water was already there, you just had to disturb the water surface. In

the case of the magnets in a Phi'ón water device, the electromagnetic field is already present, the magnetic energy just had to interact with the flowing and vortexing (motion) water to create the **photons**.

Higher-frequency photons have more energy hence they should make the electrons come flying out faster into the water; thereby switching to light with the same intensity. This higher frequency should increase the maximum kinetic energy of the emitted electrons. When you leave the frequency the same, and crank up the intensity of the magnetic field excitation (eg. magnetic power and water flow volume, pressure and turbulence with smaller and compacted vortices), more electrons (-) should come out, because there are more photons in contact with the electrons.

So, what we may be achieving is entanglement in Phi'ón structured water. That is, when two particles or forces become intertwined (water and magnetism applied in specific chunks), the interfering magnetism instantly changes the water crystalline structure and includes a time dimension of permanence.

Either way, Phion structured water is breaking all the rules of conventional Thermodynamics as it is in constant negative charge equilibrium at its maximum potential voltage. This charge has not been observed or measured above 1.5V in Phi'ón structured water.

All charges project electric charge forces. All moving charges, as in the flowing water within a Phi'ón water device create magnetic poles that project magnetic forces, and its strength is based on the strength of the charge and the relativistic velocity of that moving charge.

Incidentally, a Phi'ón inline water device takes on a positive and negative end (like a magnet), and the permanent negative charge in the water can only be created when the water is input at the positive (South) end and exits at the negative (North) end.

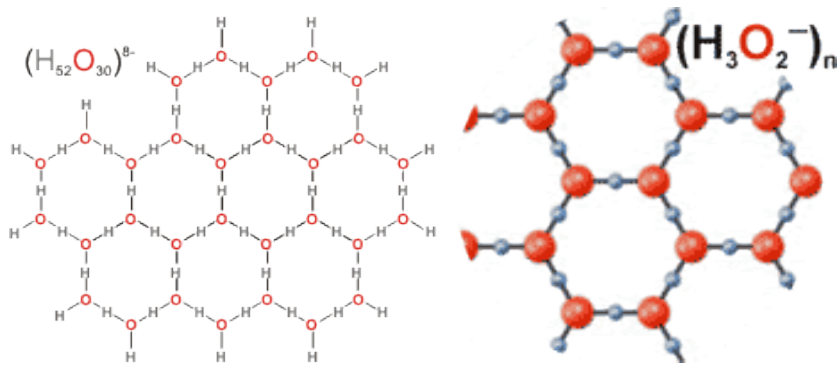


The science of syntropy in Phi'ón structured water

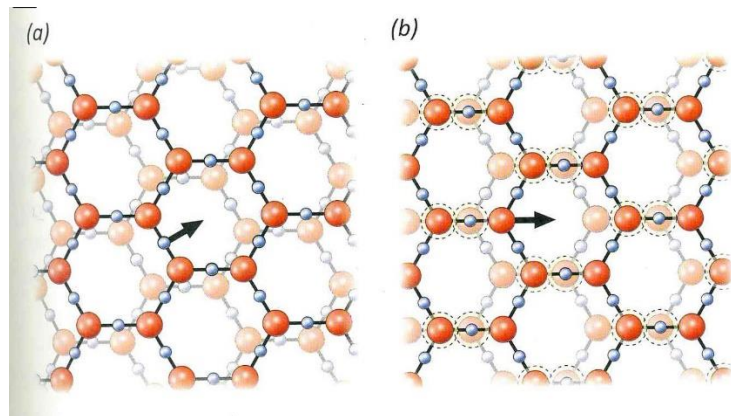
In 2016, Phi'ón was granted an Australian Innovation Patent (No. 2016100017) for its evidence of being able to create and sustain a permanent negative charge in water. This was a breakthrough moment in the science of structured water, as water that is not in a continuous flow motion (eg. in a tank, reservoir, pond, etc.) will degrade (entropy force) to either a neutral or positive charge (de-clustered water) within about 60 hours. Phi'ón achieved this

breakthrough in a device that produced magnetised, structured water, with a permanent negative charge in September 2012.

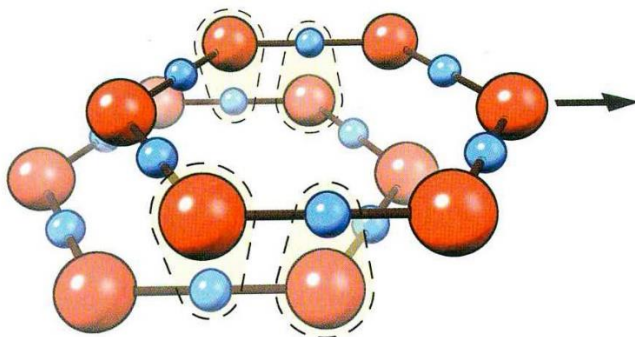
Until this patent was granted, there was no published science that could explain this phenomenon in **bulk water**. Dr. Gerald Pollack does provide some clues to this phenomenon in his book, *The Fourth Phase of Water* (2013), albeit that Pollack was primarily focussed on what he called Exclusion Zone (EZ) structured water that forms on surfaces, eg. a cell membrane. Pollack followed earlier science published by Ellis Lippincott (University of Maryland: 1969) that hypothesised a 6-sided molecular structure of polywater, whereby oxygen molecules denoted by open circles (red) and hydrogen molecules as solids (blue) in the images below.



Sheets of these structures can stack to yield volumetric structures.



*Possible plane stacking arrangements involving linear shifts. Only the shift shown on the right (b) plane yields a stable structure with overlapping opposite charges. From Pollack, *The Fourth Phase of Water*, 2013.*



*A shift of one plane to another locates opposite charges next to each other, creating attraction at a 60° shift that would hold the structure lightly together and create stability in the structure. From Pollack, *The Fourth Phase of Water*, 2013.*

Theoretically, this stacking, along with plane shifting to create regular apposition of opposite charges, creates appreciable stickiness or cohesion. This cohesion then creates high density within the stacking layers. While the shifts in planes do create some repulsion, the attraction forces are considerably greater.

In this explanation, Pollack may have made considerable scientific progress in the understanding of how to build considerably more oxygen into a stack of bulk water, and thereby increase the negativity of the water (ie. a higher negative charge)

Phi'on has observed increased negativity (negative charge) in water under the following conditions when:

- More powerful magnets are used in an array in a Phi'on device (ie. in the 2", *Zeus* device compared with a ½" *Rhea* device)
- Water stands in a Phi'on water conditioning device or in storage for a time more than about 4-6 weeks, the charge accumulates to its fullest potential.

However, the maximum negative charge observed is -1.5V (1,500mV), and this seems to be a limit of electron (-) density or oxygen saturation within the stacking of planes.

It could be postulated from these observations that:

- The stacking planes have increased in density and the oxygen within the water has increased to a saturation level
- The concentration of magnetic photons and its entanglement in the water is a factor in the creation of a powerful syntropy force in the water and this force creates permanent cohesion and the higher negative charge, in time and space.

The corollary of this natural consequence of dense stacking, increased oxygen and the water holding a permanent negative charge (cohesion) through magnetism (as a quantum force and potential entanglement) is that gravity is potentially a quantum force; capable of entanglement (forever intertwined with magnetism in water). This raises the question: what properties of structured water can be attributed to quantum gravity? Perhaps, the increase in surface tension, increased density and viscosity of structured water.

These issues are not straightforward in conventional science explanations. Quantum theory is at odds with relativity, particularly in respect of time. In the equations of quantum theory, time is not a dynamic malleable component of the universe, as it is in relativity. There are emerging ideas about time that particles create time, rather than being organised or controlled by time. That is, if particles are reorganized by magnetism/gravity then the dimensions of time and therefore entropy may be changed. There is no reason to accept that the universe obeys the 2nd Law of Thermodynamics (entropy/decay), given that the universe is potentially expanding (along with the Earth as a mass) and therefore the universe is not an entropy force (ie. energy is increasing or accumulating).

Consequently, there may be duality in time and space that is ordered by the fabric of particle ordering and interaction, and this fabric is a function of gravity and magnetism.

How does Nature create itself?

The flip side to this question is how the universe holds itself together. The theory pursued in this essay is that the universe has codes or a distinct fingerprint that is embedded in all form. That is, there is one energy field that prescribes the codes for all other energy fields (eg. gravity, magnetism, electro-magnetic energy/light, etc.), along with matter and mass (the stuff that you can sense: see, smell, touch, hear, etc.). This eventually gives form/ structure, characteristics, quality and function to all mass on Earth (including living organisms).

As humans we perceive our reality due to our senses of sight, smell, touch, hearing, etc. It follows from these senses that we think and have intuition, ideas, creativity and beliefs. We see the world in coloured images, and even in our dreams. However, imagine if this reality is not real and we are blind to the universal codes: or captured by our own senses. Perhaps this why most science tends to be focused on solids rather than energy that is beyond our senses.

The English word *scientist* is relatively recent. It was first coined by William Whewell in the 19th century. Previously, investigators of nature called themselves *natural philosophers*, and these *ideas generators* extend back 1000's of years. While empirical investigations of the natural world have been described since classical antiquity (for example by Thales and Aristotle), and scientific method has been employed since the Middle Ages, modern science began to develop in the early modern period, and in particular in the scientific revolution of 16th - and 17th century Europe. Traditionally, historians of science have defined science sufficiently broadly to include those earlier inquiries of how nature or the universe works. This included astrology. However, science no longer embraces mysticism and idealism, including the senses of feeling, inspiration, intuition and creativity. Consequently, public science, at least has lost touch with innovation and the *essence of nature*.

What we know as solid or mass is a consequence of matter that is combined to form a body with density and volume (things that we can measure). On the other hand, matter is without form, and eludes the senses (imagination and intuition). Also, pure matter cannot be transformed, however when it combines to form mass it is no longer *pure* as mass can be transformed and transmuted. This is how water and minerals were formed on the Earth and they each have rhythm/vibration.

The energy of things

Einstein's mass-energy equation ($E=mc^2$) says that at the square of the speed of light, mass tends to transform into energy. The consequence of this equation is the wave-particle duality.

Quantum theory states that particles, atoms, and molecules obey mechanical laws different from those regulating bodies of larger dimensions. Max Planck formulated in 1900 that energy has a discontinuous structure, consisting of discrete *packets* (quanta) and that light therefore

consists of photons and particles. Quantum mechanics has since demonstrated that waves and particles are different aspects of the same thing, ie. mass and energy are interchangeable. That is, at very high-speed mass turns into energy and energy can also become mass.

Quantum magnetism

The MEA Water devices have non-classical, geometric arrangements that are in harmony with the movement or dance of water. For example, physicists have observed a weird phenomenon called quantum magnetism, which describes the behaviour of single atoms as they act like tiny bar magnets.

Quantum magnetism is different from classical magnetism because individual atoms have a quality called spin, which is quantised, or present in discrete states (usually called up or down). The focus is now on atoms' spin, as this is what makes magnets magnetic with all the spins of the atoms in a magnet pointed the same way.

This opens possibilities for increasing the number of atoms in a lattice, and even creating two-dimensional, grid-like arrangements of atoms, and possibly triangular lattices as well.

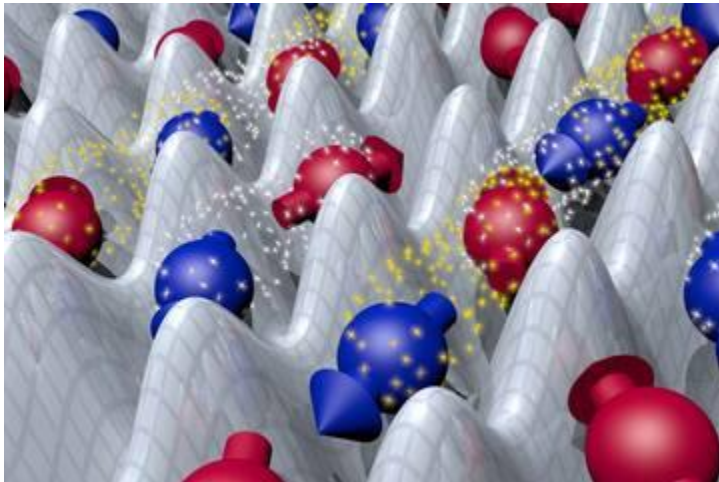


Illustration of ultra-cold fermionic atoms in an optical lattice potential. The atoms tended to tunnel into wells with others that had opposite spins and a line of atoms spontaneously organised with the spins in a non-random pattern, revealing a signature of quantum magnetism. CREDIT: Image courtesy of Thomas Uehlinger, ETH Zurich.

One debate among experts is whether at larger scales, the spontaneous ordering of atoms would happen in the same way. A random pattern would mean that in a block of iron atoms, for instance, one is just as likely to see a spin up or down in any direction. The spin states are in what is called a *spin liquid* or a mishmash of states. It could be that atoms spontaneously arrange themselves at larger scales under changed or non-classical conditions.

Such lattices could comprise configurations where the potential wells connect to three others, rather than two or four. Experiments have shown that atoms tend to jump to potential wells where the spins are opposite; but if the wells are arranged so that the atom can jump to two other atoms, it can't *choose* which well to go to as one of the two atoms will always be in the same spin state.

The question is: what happens to magnetism if the classical geometry is changed? This can happen when magnets are connected in a non-classical method (eg. connected like poles that should repel). It's no longer clear if spins should be up or down. In this quantum, magnetic state, what is the effect on water structure and function?

Light and Water Capacities

There are various aspects to water structure and its polarity. When water is moving and holds a continuous vortex action then the water will hold a negative charge. It is only when water is not moving that the water polarity changes to a positive charge (usually after about 60 hours of being held in storage)

It is already known from science that light is versatile because photon energy readily converts into other forms of energy. Examples: incident light of one wavelength converts to another wavelength, producing fluorescence; light powers the vibrational energy that drives Brownian motions (*the erratic random movement of microscopic particles in a fluid, because of continuous bombardment from molecules of the surrounding medium*). Light releases electrons in semiconductors to produce the photoelectric effect.

Light separates charge in photosynthesis.

The other aspect of water is the versatility of the spirals within water that are spirals within spirals, cascading toward infinity. When magnetic energy is arranged in a unique pattern it seems to provide a life-force order to enter these water spirals (spinning dynamic) and it may be this life-force that controls the polarity. This magnetic field shapes the water structure in a manner that holds the negative polarity indefinitely, ie. once the water embraces and holds this unique life-force energy. Ultimately, it is the negative charge in water that activates the water to support the biochemistry of water molecules and capacities of biology in water to sustain plant and animal life.

The enigma of water

This topic is well covered in Chapter 3 of the book ***The Basic Code of the Universe***, by Massimo Citro, MD. In fact, just about every book that is written on water structure and the energy of water, concludes, as Brian Josephson (winner of the Nobel Prize for Physics in 1973 and Professor at Cambridge) says: *Scientists have little knowledge on the topic of water and they tend to have a naïve vision: ie. liquid composed of H₂O molecules, isolated in movement (motion). Water, as a phenomenon, is a lot more complex, with single molecules grouped temporarily to form a lattice structure. It is not all surprising that these molecules can interact,*

thus giving rise to a mechanism that allows water to have a memory, although the existence of a such a mechanism only rings true to well-informed scientists who do not underestimate the possibility of its existence.

The Internet is full of ill-informed scientists and others who will dispute the fact that water is nothing more than H₂O and has no special properties, like the ones claimed in this paper. A good starting point for any one wanting to understand the divergence in opinions on this issue is to know that there is no truth in science: science, like philosophy, is the pursuit of facts to provide an explanation for life or nature. Consequently, there are those who follow the rules or laws of nature through discovery and explanation and those who believe that conventional science is the truth.

Water can have two forms of motion; surface movements called *Brownian motion*, and the spiralling vortex motion in flowing water. These motions allow water molecules to oscillate at certain frequencies.

Also, water can have 4 states: vapour, liquid, solid and a state between liquid and solid called liquid crystal. The state of liquid crystal is an intermediate state with several properties of both crystal and liquid that allows a variation of the molecular orientation with the application of a **magnetic field**. Water in this state has smaller clusters of molecules with low density (ie. a more liquid state). The clusters are linked together through a form of knots or nodes (hydromagnetic junctions of a fluid crystal: six-sided in structured, negative charged water). This makes the clusters behave like a liquid crystal.

Water is an important solvent because the magnetic structure of the atoms dissolves the negative and positive polarity of the solute (including salts: eg. calcium salts) into ions (molecules missing some electrons). These ions are solvated as the water molecules surround the ions like a shell. The solute and the solvent interact due to the changed structure of the water, and the new information that is now entrained and retained due to the chemical and energy signatures of the solute.

For example, Calcite that can stick to pipes and block up water systems (eg. water based evaporative systems, water-based heaters and coolers, etc.) can be converted or transformed into Aragonite that does not stick to pipes; in the presence of magnetised water. Aragonite is a carbonate mineral, one of the two most common, naturally occurring, crystal forms of calcium carbonate, CaCO₃ (the other forms being the minerals Calcite and Vaterite). Aragonite's crystal lattice differs from that of Calcite, resulting in a different crystal shape, ie. an orthorhombic crystal system with acicular crystal. The repeated twinning system results in pseudo-hexagonal forms. It is formed by biological and physical processes (including magnetism), and precipitation from marine and freshwater environments. The key advantage of **Phi'on's magnetised, structured water (hexagonal crystal shape) with a permanent negative charge**, is that the water is in a constant negatively charged state to convert Calcite to Aragonite and eventually make the pipes free of mineral salt crusts.

Homeopathic properties of water

The idea that water can hold the energy signature of a solute has been hotly debated for decades. In the case of Jacques Benveniste, who claimed in a 1988 *Nature* paper that water can retain *memories* of compounds even when diluted at a very high level. This claim caused a sensation in the press and was taken as support of homeopathy by its proponents, that other scientists were not able to replicate his findings. He consequently lost his scientific credibility due to heavy criticism of the ill-informed, misguided, self-interests of classical scientists with set beliefs about water properties.

However, if we fast forward to 2014, scientists from Germany, examined individual drops of water at an incredibly high magnification, and were able to physically see that each droplet of water has its own individual microscopic pattern, each distinguishable from the next and uniquely beautiful. A scientific experiment was carried out whereby a group of students were all encouraged to obtain one drop of water from the same body of water, all at the same time. Through close examination of the individual droplets, it was seen that each produced a different image.

A second experiment was then carried out where a real flower was placed into a body of water, and after a while a sample droplet of the water was taken out for examination. The resulting pattern in the water droplets, when hugely magnified, looked very similar. When the same experiment was done with a different species of flower, the magnified droplets had a pattern that was different from other flowers, thereby determining that a specific signature of a flower species or sub-species is evident in each droplet of water.

This discovery shows that water has memory. The German scientists believed that as water travels it picks up and stores information from the places that it has travelled through, which can thereby connect people to a lot of different places and sources of information when they drink this water, depending on the experiences and exposures of the water journey. Similarly, the addition of fluoridation and chlorination to water impregnates the water with a toxic chemical signature that is foreign to the laws of nature.

This outcome has even been compared to the human body, of which each is incredibly unique and has an individual DNA unlike any other. Whilst the human body is made up of 70% water, conclusions could be drawn from these new discoveries that human tears can hold a unique memory of an individual being, through each cell's store of water, hosting a complete *library* of information that is linked to individual experiences (diet and lifestyle) and exposures (eg. toxins in food and the air).

This would suggest that everyone is globally connected by the water in the human cells which travels through ongoing journeys, whereby information along the way is always received, stored and transmitted.

The first homeopathic solutions were developed by Samuel Hahnemann during the 18th Century, using dilutions of substances, water and alcohol mixed into glass bottles, as this was customary among German doctors of this time. Before this time Alchemists prepared tinctures with materials of plants, animals, and minerals, using a shaking process. This shaking became customary in homeopathy as successive dilutions were taken until the pharmacological effects of the few molecules of the material were zero. However, the information that has accumulated in this process provides powerful, life-affirming information and vibration (motion) to cells.

Luc Montagnier, who shared the Nobel Prize in Physiology or Medicine for the discovery of HIV, claims that DNA emits weak electromagnetic waves that cause structural changes in water to persist even in extremely high dilutions. Montagnier considered himself an intellectual heir to the controversial French scientist Jacques Benveniste.

Montagnier says he and his colleagues have a device that can detect energy waves, which are strongest when they come from bacterial and viral genetic material. Subsequently, Montagnier considered these findings would be used for diagnostics and for treatment. He claimed it was possible for electromagnetic waves at some frequency could eliminate the waves produced by bacterial DNA.

Chemical Models for Homeopathy

One model was formulated by Greek physicist George Anagnostatos in 1988, called the cluster theory. In this model, water molecules wrap around the dissolved substance or material like a cast or shell. When the solute is progressively eliminated through dilutions, the water molecules eventually collapse, filling the space left empty by the solute molecules. This leaves a mold made of water and this mold is a copy of the lost molecules from the substance. In effect, the water holds the memory of the substance as a stored energy signature. This phenomenon continues to multiply throughout the solution until the whole solution has the spatial and energy configuration of the lost molecules of the substance.

The second model builds onto the first model, and was observed by Dorit Arad, an Israeli doctor in 1996. He discovered that the water cast around molecules of the substance were selective and specific to the portion of the substance that had the highest pharmacological effects. This means that the water has an intelligence or *knowing* for potentiality and differences in molecular importance for life-affirming functions. This suggests that this capacity for selection and potentising is intrinsic to the consciousness of water.

The third model is different and was proposed by Lo, a Chinese researcher. In this model, the substance ions, in high dilution in the water, generates an electrical field by their movement. This in turn produces aggregate fields (water molecule configurations) that are stable and coherent in water. This can only happen when the creation (syntropy) of the fields is faster than the forces (entropy) that destroy them. Lo also noticed that the homeopathic dilutions

had a reduced absorption of ultra-violet light. He discovered that the movement (motion or current) of the water molecules (acting like tiny magnets) are responsible for memory in water.

The Quantum dimensions in the Model

Research by theoretical physicists Emilo Del Giudice and Giuliano Preparata of the University of Milan suggest that the molecular rhythms of the solute (substance ions) are impressed (entrained) on the water molecules.

In quantum physics, particles as well as bodies constantly fluctuate, because nothingness does not exist, and everything is in continuous interchange. In a physical sense, a substance that vibrates at the same frequency as another becomes a copy of it, even if it remains chemically different. That is, the diluted substance imposes its own vibration (motion), and therefore own information on the water molecules. In this way, the solute has modified the oscillations of the water.

Consequently, in homeopathic dilutions, the molecules of the solute (substance dissolved in the water) can capture the vibrations of the water and make them oscillate at their own pace due to this phenomenon of electro-magnetic interference. Eventually, the water reaches a ground-state (state of minimum energy, stability, ordered or coherent) through fluctuations that dissipate any surplus energy. This suggests that the secret to **water memory** is oscillation and coherence that enables the water to convey information.

Natural Self-organisation

The models described above suggest a high level of natural self-organisation, as a **fundamental law of nature**, and found in all biological systems; including water. For example, the Earth is a self-organising (homeostatic) entity and its totality is a result of its **universal network of energy connections**.

There is general agreement amongst scientists and writers in this area of science that an autonomous force field exists and it maintains the particles that give rise to order, and the field that organises the matter, maintains the field. In this scenario there is no *cause and effect*, or *what came first: the chicken or the egg*. The field creates and sustains the whole entity.

A similar notion can be applied to the universe, and to new technology. For example, the laser was invented in the 1960, whereby light was organised into one coherent, self-organising light. By contrast, sunlight and other light sources have different phases and frequencies. However, there is possibly infinite *laser* type energies in the fabric of matter. For example, Phi'on's structured water was made possible by using magnetism in a unique manner, and this energy has been entrained into a *sacred geometry* or array (form) of the magnet configuration. This produced a permanent negative charge in the water, albeit that a negative charge exists in pristine, flowing (natural vortex action) waters. However, water cannot sustain this charge when it is still (eg. in a tank, reservoir or in straight pipes). In many respects, **Phi'on's**

structured (MEA) water is like the *laser of water*, and it behaves differently to other waters like a laser does compared to natural light.

In this context, the models of homeopathy that would have been observed in de-structured water may exhibit different or enhanced outcomes in structured water. That is, each technology creation (eg. structure in still water) has its own rhythmical pulsations of matter that leads to specific sequences and outcomes.

Chilean neurobiologist, Humberto Maturana in collaboration with Francisco Varela developed a model of the autopoietic system (from autopoiesis or self-creation). In this model, living systems (and water can be included in this system) are continuously governed by energy networks where each component (eg. light, magnetism) participates in the transformation of others (eg. water) and the entire network produces itself (the *totality of connection*).

Observations and measurements by Phi'on point already (2018) to a wide range of connections between MEA structured water to other living systems, eg. this unique water:

- Holds a permanent negative charge that can accumulate over time to a steady state < 1.5V, ie. sustains a constant current
- Stimulates seeds and plants to reach their highest potential in reproduction, growth and nutritional integrity
- Takes on a preservative (syntropy) effect that slows down decay (entropy), ie. gains energy to a stable state
- Transforms minerals like Calcite into Aragonite, that minimises calcification, and turns *hard* water into a *soft* water
- Poses anti-pathogen properties. For example, it will eliminate E. Coli in a single pass through a MEA device

Based on the discussion above, it appears that the MEA water has the following natural properties:

- Its existence is an example of the autopoietic system
- Supports the autopoietic networks within and between cells
- The water molecule configuration and motion seem to be driving energy transformations in the water, including disentangling the energetic form of synthetic compounds (non-natural) back to their natural or elemental forms (self-regulation or organisation of information)
- It has a strong capacity to entrain life-affirming, frequencies from nature (including light, nature' s sounds, 432 Hz music, etc.)
- Defies the second Law of Thermodynamics as it tends to over-ride natural decay forces
- Provides an ideal and unique carrier capacity for homeopathic energy from natural substances

How is Earth water formed?

Most people would not have thought about the source of water on Earth. Most scientists do not have a clue. So, where did this water come from to cover 71% of the Earth surface as Ocean (as 96.5% of surface waters) and up to 9 Km deep in some places. The fundamental question is: was this water present on the Earth on day 1 and did the land develop out of the water, or did the water form from the Earth or land mass? It is very unlikely that that water arrived from outer space, or suddenly the Earth created a hydrological cycle and this capacity expanded to create rain and then provide the surface water. The origin of water on and within the Earth needs to be coupled with the ***theory of the expanding Earth***, albeit that the theory is controversial among academics and particularly geologists who largely follow the ***continental drift theories by plate tectonics***, along with a theory of a static Earth mass.

However, there seems to be general acceptance that the universe is expanding, so why isn't the Earth expanding in unison with the universe, or is the Earth an anomaly? In 1929 Edwin Hubble, working at the Carnegie Observatories in Pasadena, California, measured the redshifts of several distant galaxies. He also measured their relative distances by measuring the apparent brightness of a class of variable stars called Cepheids in each galaxy. When he plotted redshift against relative distance, he found that the redshift of distant galaxies increased as a linear function of their distance. The only explanation for this observation is that the universe was expanding.

Once scientists understood that the universe was expanding, they immediately realised that it would have been smaller in the past; and perhaps there was no *Big Bang*. At some point in the past, the entire universe would have been a single point. The expanding universe is finite in both time (as we know it) and space. The reason that the universe did not collapse, as Newton's and Einstein's equations said it might, is that it had been expanding from the moment of its creation. The universe is in a constant state of change. The expanding universe, a new idea based on modern physics, laid to rest the paradoxes that troubled astronomers from ancient times until the early 20th Century.

However, ideas about an expanding universe have been around for some time. Interestingly, Genesis 1:9-10 had an expansion *theory* in this respect (ie. ⁹*And God said, Let the water under the sky be gathered to one place, and let dry ground appear. And it was so.* ¹⁰*God called the dry ground land, and the gathered waters he called seas. And God saw that it was good*). On the other hand, the domain of natural sciences has different *belief* systems and consequently different agendas for explanation about how the universe and Earth function. However, if we take the ideas from the previous section on **natural self-organisation**, where the *energy field matter forms mass*, then it is highly probable that the Earth is expanding and the water volume within and on the Earth is expanding.

The theory is that water is generated within the Earth's crust or mantle and is often called primary or proton water and based on claims by Leonardo Da Vinci, Adolf Nodenskjold, Frank

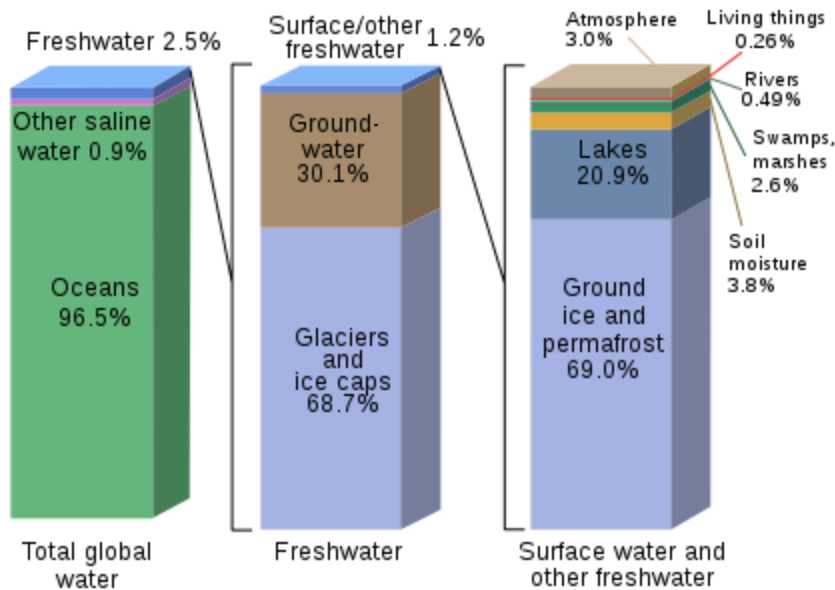
W. Clark, Svante Arrhenius, William Rubey, Stephen Riess, Michael H Salzman, Lance Endersbee and many others. This water can be accessibly deep, often more than 200m to 3km underground in a never-ending source, as is the main water supply to Beirut from a bore in the adjoining mountains. Scientists probing the Earth's interior have found a large reservoir of water equal to the volume of the Arctic Ocean beneath eastern Asia. This seismic anomaly is under the Asia plate and within the mantle. Other such primary water reservoirs exist within the Earth's crust and mantle.

If our planet did not have the ability to store oxygen in the deep reaches of its mantle there would probably be no life on its surface. This is the conclusion reached by scientists at the University of Bonn who have subjected the mineral majorite to close laboratory examination. Majorite normally occurs only at a depth of several hundred kilometres under very high pressures and temperatures. The Bonn researchers have now succeeded in demonstrating that under these conditions the mineral stores oxygen and performs an important function as an oxygen reservoir. Near the Earth's surface the structure breaks down, releasing oxygen, which then binds with hydrogen from the earth's interior to form water. Without this mechanism our "Blue Planet" might well be as dry and inhospitable as Mars is today. The findings of the Bonn-based scientists have been published in the journal "Nature".

Also, Japanese researchers say *Molten rocks deep in the Earth's interior may be surprisingly wet. From laboratory experiments, they have concluded there may be more H₂O deep underground than in all oceans, lakes, and rivers combined. The scientists first heated "mineral cocktails" to a white-hot 1600 degrees Celsius (2900 degrees Fahrenheit) and squeezed them until the pressure reached more than three million pounds per square inch (200,000 kilograms per square centimetres). Then they cooked the samples for an hour. The experiments replicated the environment and conditions deep in the Earth. Based on what they witnessed in their lab, the researchers concluded that more water probably exists deep within the Earth than is present on Earth's surface—as much as five times more. "Our results suggest that the lower mantle can potentially store considerable amounts of water," said Motohiko Murakami of the Tokyo Institute of Technology, where the experiments were conducted. "The presence of water in the crystal structure of [deep-Earth] minerals would be expected to soften the minerals and change their flow behaviour," he added. That, in turn, could affect how the innards of the planet mix and shift over time, and could indirectly affect conditions and forces near the surface, such as plate tectonics.*

Therefore, given that the Earth's oceans make up just 0.02 percent of the planet's total mass, this means the vast lower mantle could contain many times more water than floats on the planet's surface.

The water distribution on the Earth is as follows:



However, as discussed above, the potential volume of water within the Earth's mantle is missing from the calculations in the diagram above, yet its volume is potentially massively greater than that of the ocean.

Conclusion

The form and capacities or properties of water are clearly influenced by energy forms or patterns of energy. The rhythmical vibrations of water are the totality of its network of connections to a force field. This force field then maintains the states of order, ie. in a state of crystal water or the state between liquid and solid (the Fourth Phase of Water: after Pollack).

Water's environment also influences its properties and capacity to sustain order. Clearly natural flowing water can change from a structured form to a de-structured form when the conditions of flow are changed. Also, the strength of the field in water can change with time. These changes are mainly due to local factors, in the sense that that only field intensities at the point of interest affect the field at that point. On the other hand, a change in field strength somewhere else (eg. strong radiation effects) can propagate through space and reach the point of interest. These effects are due to entrainment by the field in the water. However, de-structured water is more likely to descend into disorder when synthetic compounds are added (eg. fluorination) and when the water has high levels of added pollutants held in colloidal or suspended form.

However, when water is returned to its structured state it strives to accumulate syntropy forces. This is an innate property of water, as a living system. There is no life without water because of its capacity to receive, store (memory) and transmit information. Every life thing can change (less entropy) when this information flow is at its fullest potential. For example, it is structured water that conveys the necessary information for a seed and egg to access latent forces that drive reproduction, growth and survival (resilience).

Phi'on (MEA) structured water has its own vibrational *fingerprint*. This fingerprint has quantum properties (the unique code) that set it apart from other waters. This code is a set of unique information that defines the field and then the form or structure of the water. This codes then governs the nature, range or boundaries of external influences. The code also regulates the features and functions of the water, and in a cell sets the intrinsic control system for regulation and healing of organs and systems. This control system has its fullest potential when the water has stability and cohesion in its rhythm, making the space around it vibrate and radiate information (rhythmical sequences) to the field. This feedback loop keeps the field information of its environment. Subsequently, the information field allows the body or groups of cells, to communicate its properties to others through field interactions. This is the basis of love, joy and hope (including intentions, ideas, intuition and creativity)

In a human context, scientist have discovered that the human eye contains information about our personality. That is, eye movement and structure (matrix) can be used to predict our traits, behaviour and health status. It probably does not occur to these scientist that the cell water of the eye is potentially the information store and therefore window into our spirit and soul. Consequently, drinking structured water can modify and reduce potential threats (gene expression) that emerge through poor diet and lifestyle. Our genes are never perfect and only mutate when cell water memory is degraded, and cell charge falls to a change from -50mV to a + polarity. Besides, genes live in the future and not the past. We determine the future health of our cells by *design*, and cells degrade by default.

In future the science of quantum water, there will be a greater understanding of the relationship between ourselves and water. At the core of everything, is energy. Atoms are made of wavelengths of energy, and therefore the vibration of water and ourselves will connect with the vibration of the rest of the world. In time, water will be regularly entrained with the healing vibrations (syntropy codes) to sustain life and treat disease.