TENSEGRITY # 13: QUANTUM NOISE AND FIDELITY OF LIFE

READERS SUMMARY

1. HOW DO OSCILLATIONS AND VIBRATIONS GET TURNED ON AND OFF BY LIGHT?

2. DO WE NEED NUCLEIC ACIDS TO MAKE PROTEIN CHANGES?

3. HOW DO WE MAINTAIN CELLULAR SILENCE WHEN WE SLEEP?

4. HOW DO WE ENTANGLE AND TUNNEL IN CELLS?

5. HOW DOES THE SCHUMANN WAVE COUPLE TO ALPHA WAVES IN THE HUMAN BRAIN DURING NON REM SLEEP?

The implications of Tensegrity 12 is that oscillations and vibrations in cell membranes have radically different functions based on the proteins and lipids in the cell membrane.

So you might be wondering, how does the modern world turn down or turn off quantum mechanics in cells naturally when we awaken?

It does it by interfering with the vibrations and oscillations on cell membranes during sleep that acts to re-tune the cell for proper signaling. Wakefulness creates the separation from the quantum realm. We need sleep to go back and refuel on these quantum mechanisms. Life uses resonant frequencies of both magnetic and electric fields to control the size and shape of things a cell is made of to make sure it signals properly during daylight, but that ability is created in REM sleep where special clock proteins are made to allow us to deciphers oscillations from vibrations. Electrons and protons

can do this after they are programmed by sunlight.

Quantum biology holds most of life’s mysteries in its blind away from our perception of reality.

The building blocks of proteins are formed from amino acids. They can be assembled and recycle without nucleic acid templates during the sleep stages using parts or incomplete partially recycled proteins to get the job done. There use is controlled by the ubiquitination cycle and their motions are well known in the urea cycle. This alters their oscillations

and vibrations and can change their ability. Modern biology believes that DNA and an intermediate template called messenger RNA (mRNA) is required for this process. Soon they will find out that the redox potential of the surrounding cell environment can alter small fragments of proteins altered by the ubiquitination system during sleep cycles using protons and electrons to perform the quantum tasks of autophagy during sleep.

In sleep, this occurs with breakdown protein products of ATP. Adenosine is produced by the degradation of adenosine triphosphate (ATP), the molecule that serves as the “energy currency” for the body’s various cellular functions. The amount of adenosine produced in the brain thus reflects the activity level of its neurons and glial cells. The brain’s intense activity during periods of wakefulness consumes large amounts of ATP and hence causes adenosine to accumulate. The onset of sleep is triggered not only by your body’s biological clock and its oscillations, which regulates the cyclical secretion of hormones determining the best time to go to sleep but also by the cumulative effect of hypnogenic molecules that build up in the body while you are awake.

Molecular adenosine has a number of characteristics that make it an ideal candidate to act as one of these hypnogenic substances: its concentration in the brain is higher during waking periods than during sleep and increases during extended periods of wakefulness; moreover, administering adenosine or its agonists to experimental subjects makes them sleepy.

Experiments have shown, for example, that when the levels of adenosine in the basal telencephalon are raised artificially, the neurons in this structure that project axons throughout the cortex produce less acetylcholine. When acetylcholine drops, so does the DC current in the cortex. We can see voltages drop in an EEG to prove it. As a result, cortical

activity slows, and the individual falls asleep. This is why sleep and anesthesia are both associated with the loss of the DC current during wakefulness. The synchronized brain activity characteristic of non-REM sleep can then become established. But once non-REM sleep has continued for a while, the adenosine levels begin to decline. Non REM sleep has four waves associated with it, namely alpha, beta, delta and gamma waves. The systems responsible for wakefulness can then start becoming more active, causing the individual to awaken and the cycle to begin all over again. Thus we see that the sleep/wake cycle involves a highly efficient negative feedback loop that is controlled by alterations of "the noise" on cell membranes. Non-REM sleep is not equivalent to REM sleep.

In order to capture the magic that is involved with quantum tunneling and entanglement of photons, electrons, and protons, you must enter REM sleep. This cycle of sleep is when our cell membranes are supposed to "be quiet", with respect to motion. Why do we need to alter '***the noise***' we sense on cell membranes during daytime? Why are they quiet to begin with? When we initially enter sleep, there are non REM stages of sleep all associated with different noises and motions on our SCN and cell membranes. These noises and motions are associated with different oscillations that cause different waveforms to develop in cells and tissues. Non REM waves are well characterized, as I mentioned above. Initial sleep stages have a surge in ATP cycling (proton motions), but this is not true in REM sleep. The reason is simple. Making ATP cause too much motion to develop and this blocks us from the REM cycle. For example, during REM sleep our muscles are paralyzed and we are incapable of making ATP at this time. REM sleep is always tied to health. *It also points out that ATP cannot be that important to life, if it is absent in the most critical activity that maintains health.* Ling implied this in the 1950's on his work with water. He felt ATP was important chemical in moving electrons in a cell to unfold proteins. ATP is just used during wakefulness to unfold

protein polymers to bind water molecules. When the cellular environment has higher waveform energies in it because of non-native EMF, it causes vibrations and oscillations that create interference patterns that block us from electron and proton tunneling or entangling electrons or protons. This is how poor sleep helps us develop ill health.

To understand this, we have to return to the double slit experiment we spoke about earlier in this series. This single experiment proves beyond a shadow of a doubt that quantum particles also possess wave characteristics that enable them to be in several places at once. We call this ability quantum superposition. Watch the video hyperlink you just passed. An analogous way to think of it is having many possibilities available to you simultaneously. In a plant, it has been proven that the exciton uses this mechanism of waviness to allow quantum transport of light to make sugar. It allows the photon from the sun to explore *multiple pathways simultaneously* in the plant's energy generation system. In a leaf of this plant, the photon's waviness is lost on the molecular noise of atoms causing a decoherence. Decoherence is analogous to those atoms making a simple measurement or movement of the parts of the plant's cell. Those atoms in the leaf, are like rocks on the beach being hit by waves at the ocean's shore. The rocks disturb the incoming wave and change the wave, and the way the wave looks and functions. The rock's behavior acts to change (or measure) how the '***noise***' of the wave occurs and appears to our sensory systems. Those systems are designed to measure these effects. This '*noise*' acts like a continuous monitoring system of measurement. Anytime a quantum wave is measured, or a decision is made, that wave loses its ability to be in multiple places at once. Information and energy can be transferred when this occurs. It can no longer exists in multiple possibilities. The waveform is said "to collapse" and the observable event is called reality. **The goal of a quantum cell is to keep all possibilities open until the best**

possibility is found. The key point here is to understand that if "***the quantum noise***" is intense, then decoherence happens quickly, you collapse the wave form and your options are limited. This is called the quantum Zeno effect. This effect can stop quantum processes during sleep when we get closer to daybreak. As an outgrowth of the study of the quantum Zeno effect, it has become clear that applying a series of sufficiently strong and fast pulses with an appropriate symmetry can also decouple a system from its decohering environment. This is tough to describe in words but it is using bad noise on other noisy waves to knock it back into the quantum realm. This begins to make sense of what oscillations and vibrations do for us in sleep cycles. It means when this process occurs in animals during the daytime when light and ATP are making big waves and noise, they are develop a constantly collapsing quantum wave on their cell membranes and our observed reality occurs. This is how wakefulness evolved from sleep. Sleep was the primordial condition of life based upon a lack of noise and we slowly evolved wakefulness as cell membrane chemistry allowed for it 600 million years ago.

Conversely, if the quantum wave can't be knocked down because a cell is coherent, quiet, there will be very few cellular oscillations to disturb the peace inside the cell. This allows the wave to assume many possibilities to do something it could not achieve during wakefulness, similar to how a leaf does it.
So how do we we keep decoherence at bay during sleep?

We use another "type of noise" to offset the background cell membrane noise. **I believe this is why rapid alternating eye movements occur during sleep's most critical cycles.** It is this noise that is the perfect harmonic to turn moving oscillations into standing wave vibrations. These functions of deep sleep are not supposed to be abruptly interrupted as they are by modern life's conveniences and technology. Conventional sleep medicine know the light at night is far

from optimal, but they don't know why it is so detrimental. The "why" of that involves all the complicated quantum mechanism that are at play in the brain's and mitochondrial cell membranes during the absence of light.

I consider the back ground noise from the eye muscles to be like 'white thermal noise' or a version of bad static you hear on a mistuned radio or TV station. I consider a good noise, to act like REM wave action, to appear to act like a song or TV program on a finely tuned radio or TV that you can understand clearly. They REM movements are able to knock us back into a coherent state for short bursts to entangle electrons and protons that will be recycled into our proteins at night. **In other words, we have to have two noises that act in unison during REM sleep to maintain the ability to enter the quantum realm from the thermodynamic realm.** This is how cells dip into their 'quantum gas tank' at night to become coherent and entangled. The more coherent and entangled these particles become in our body parts, the healthier we become because signaling is massively upgraded.

You might be thinking I have over reached in my ideas here on *this noise issue*. Now I want to introduce you to some idea that are already published about this science you may not know.
You might be shocked to know these two types of noise have been shown to happen in plants performing photosynthetic quantum magic. Graham Fleming showed this first and his work was confirmed by Martin Plenio's group in Germany. It turns out the cell membranes oscillate 'one brand of noise' while proteins oscillate other types of noise to offset the first noise effect. In this way, **the second noise from proteins**, *retunes the system to give it a certain fidelity*. Protons and electrons can alter this tuning mechanism.

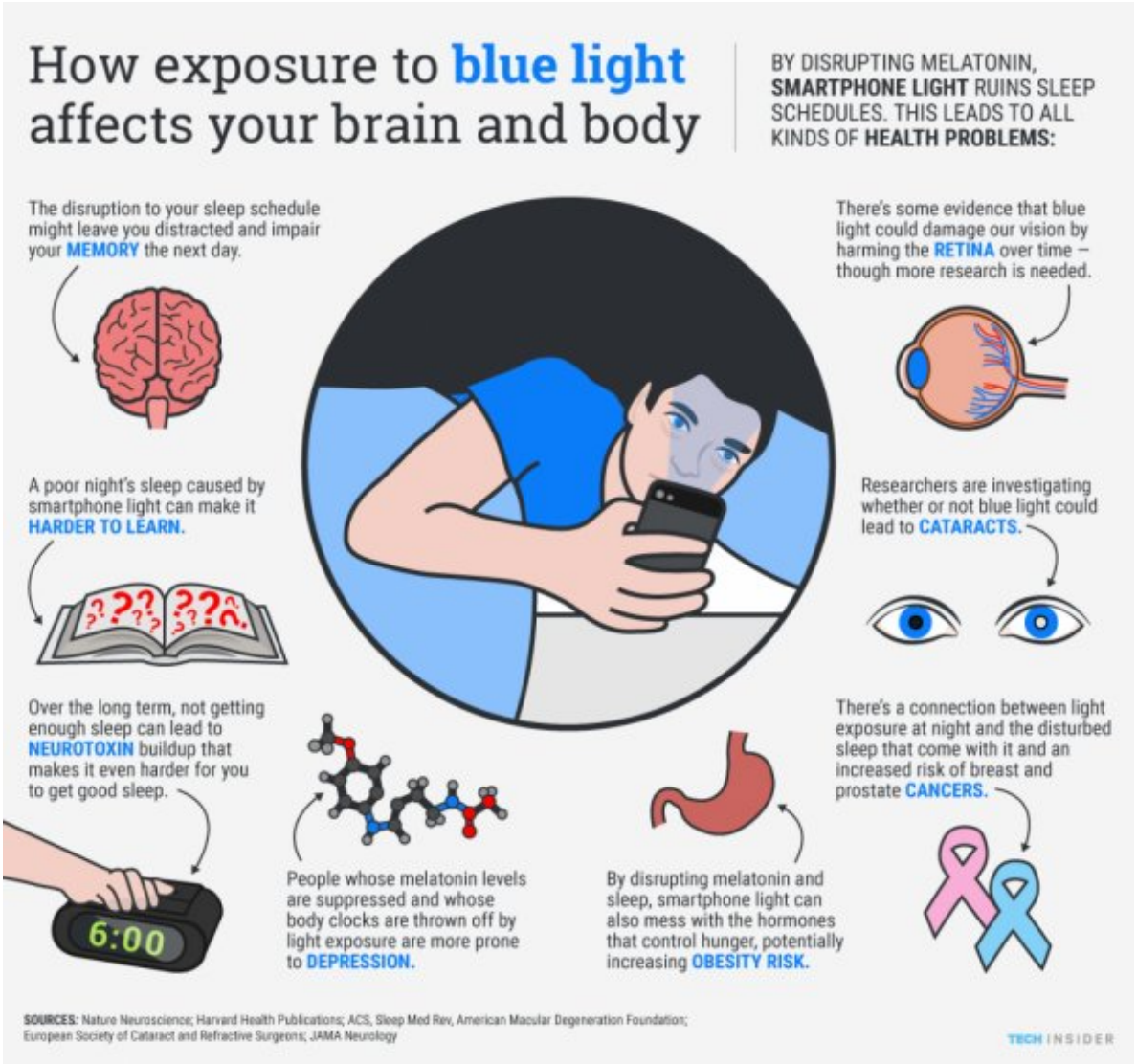
A photon, electron, and proton are all capable of tunneling and entanglement. Their interaction of these subatomic parts of the universe with the protein polymers in us, creates the

first noise. This noise can be “knocked back into tune” by the protein oscillations. This shows you why the construction of the cell membrane is critical in a quantum cell. That construction is dictated by the quantum abilities built into DHA special molecular arrangements in eukaryotic cell membranes. DHA helps chose what proteins can be in what membrane, thus controlling oscillations and vibrations.
During REM sleep stage, the deep sleep is where most recalled dreams occur. Your eyes continue to move but the rest of the body’s muscles are kept quiet because they are paralyzed. Dreams appear to be related to information transfers to our cells. The key teaching point is the “second noise” can only manifest when the cell’s are completely still. In other words, their can be no macroscopic motion of the big muscles in your body. This explains why during REM cycling, why tunneling and entanglement can happen at this time. So how do we paralyze ourselves? Patricia L. Brooks and John H. Peever, PhD, found that the neurotransmitters gamma-aminobutyric acid (GABA) and glycine caused REM sleep paralysis in rats by “switching off” the specialized cells in the brain that allow muscles to become active. This finding reversed earlier beliefs that glycine was a lone inhibitor of these motor neurons.

THE REM NEURO-DEGENERATION LINK

This “quantum noise modulation system in sleep” also points out why humans who miss REM sleep, have many alterations in physiologic function. REM sleep disorders are the most common in neurodegenerational diseases like Parkinson’s disease, Alzheimer’s disease, and ALS. I pay attention to this because my REM sleep is destroyed consistently by being on call. I consider being “on call” the biggest assault to my health since I have become a physician. For the first 25 years of my career, I had to take call *without any compensation for it*. This was a ‘free gift’ to the hospital for having the “privilege” of allowing “my patients” to grace their hospital Operating Room. This was indentured servitude

in my opinion. This current system is utterly absurd and needs to be abolished when one considers the published data on the loss of REM sleep on the brain. 80 percent of people who have a loss of REM sleep eventually develop a neurodegenerative disease. Moreover, it is the best earliest marker of people at risk for these diseases. Being on call and woken up consistently for most of your adult life is the biggest risk factor for neuro-degeneration of many disease types.



Blue Light Hazard destroys the central retinal pathways the control the SCN timing mechanism in all mitochondria of the choroid. Counterintuitive truth bomb buried in quantum biology

When the quantum noise mechanism is altered, we usually see mis-folded proteins result in cells. When proteins mis-fold, you lose the ability to re-tune the system to entangle subatomic particles within your cells. When you lose this ability, the oscillations in the cell membrane's change the voltage in the cell membrane. All neurodegenerative conditions have altered EEG and MEG data for this reason. Neurogenerative brains all have altered DC currents as well. This diminishes their ability to regenerate and recycle proteins in all systems. Today, Alzheimer's disease is the fifth leading cause of death in the USA. This change has occurred in the last 100 years on this planet. This is tied to these small scale changes in cell membrane chemistry in the brain which directly alters the tensegrity system in a cell.
Motor cells need both sources of GABA and glycine, for the paralysis to occur during REM sleep. When this scenario is not present, it allows mammals to exhibit high levels of muscle activity when their muscles should have been inactive. This suggests the two neurotransmitters must both be present together to maintain motor control during sleep, rather than working separately. That action is controlled by the cell membrane motions and oscillations. I believe proton motions are critical in this for you. This small scale alteration affects the depolarization of neurotransmitters and ion gates. When you miss this opportunity during REM sleep, the electron, photons, and protons in you, cannot be entangled to generate coherent effects that life requires to do the things it is capable of during the day. Some of those effects are found in the catalytic abilities of enzymes that use proton tunneling to allow reactions to occur at incredible speeds in biochemistry.

VIDEO HYPERLINK MUST SEE :

The discussion on 'tunneling' in this BBC documentary should be fascinating to most and shocking to biologists and doctors. Why?

It should makes you realize why biology experiments have missed this effect. A classic biologic experiment can not find this effect because it is quantum based. If you cannot measure the effect you miss it in your measurements, and “you believe” it is not present. That is why medicine and biology have no clue what the mechanisms are behind REM sleep. Classical experimentation cannot sense quantum effects, but your mitochondria is a sensor that does.
The female scientists in the video, Alexandera Olava- Castro, made this point when she said most physicists and biologists expected quantum mechanism couldn’t be functional in life, but only in a tightly controlled lab. They were and are dead wrong. I have been saying this for close to a decade, and now, I am being proven correct by modern quantum biologists. I have been consistent in showing you where protons exists in us. They are abundant in mitochondria, cell water, and in nucleic acids. You might want to now go back and read the Tensegrity series with this new picture in your mind from the video above. You might have struggled with the words and concepts in the blog series, but the documentary gives you the pictures of what those words mean. You might beginning to realize how your cells really work.

Peter Mitchell won a Nobel Prize in 1978 for something that can’t possibly work in our cells, based upon the energy required for the pumps he proposed. His chemiosmotic theory breaks the second law of thermodynamics by a five fold margin. ATP is not what biology or medicine believe it is. Gilbert Ling was the only scientists I know of screaming from the rooftops, that Mitchell’s idea was a ‘best guess’ based upon what studies that were completed in the past, and were able to show by classic experimentation. There was no quantum measurements in Mitchell’s work. Ling did the mathematics of the bioenergenics and found a huge discrepancy and he knew Mitchell’s idea could not be how life generates energy. Today,

new quantum experiments in vivo show Mitchell was dead wrong, but he had a plausible theory when no one else had any other credible one. Biology bought his story of reality back then. Today, it is time to bury it. Proton tunneling is how biology works. It is time for a new paradigm to begin. Patients and clinical medicine need the correct scale of science to help correct today's modern diseases.

The paralysis that occurs in REM sleep limits the macroscopic motions so that the "protein noises" in our cell membranes can manifest, to 'retune' the system to allow us to enter the quantum realm. This allows a quantum cell to have one leg in the quantum realm while still having one leg in the thermodynamic world during sleep. This is how life maintains metastability. It also points out why ATP is not made in REM sleep. If it were, more molecular motions would occur in protein polymers because ATP allows for electron withdrawal in them to un-condense them to bind more water molecules to form more EZ water in the cell. This creates more waves inside the water in a cell. This action would alter "the noise" and stop entanglement and tunneling. This is why during REM sleep we naturally uncouple metabolism in the mitochondria and generate heat from IR light to condense the water around mitochondria.

In her 2014 in a Nature paper, Alexandera Olava- Castro showed how this might happen in the reaction center of plants during photosynthesis. I would remind you, photosynthesis is over 4 billion years old on this planet, and predates mitochondrial oxidation, because it is used in the first two kingdoms of life, namely, bacteria and archeal kingdoms. Both existed long before eukaryotes, the kingdom you come from. Eukaryotes showed up 600 million years ago when DHA did. This was no coincidence. Biologic life tends to copy things because of fractal nature of the atoms in the periodic table are also quantized. Remember hydrogen is the smalled atom and number one on that table. Biologists and chemists tend to forget these massive details when it is convenient for them to do so, because they cannot account for these effects in any of their experiments. This is why we have the mess we do in medicine

today.

SUMMARY:

As atomic physics and chemistry began to explain the periodic table with the help of the Bohr model of the atom in the early 1900s, magnetic properties were arbitrarily assigned to the electrons and protons in atoms. Electrons appeared to exhibit two types of motion in an atom: orbital and spin. Protons have a magnetic moment and spin as well. Since they have a larger mass they tend to precess in a magnetic field. Orbital motion referred to the motion of an electron around the nucleus of the atom. Since a charged particle was moving, a magnetic field was created. Here is the irony though, protons also spin around their axis and induce another magnetic field……but people forget this one…….and your mitochondria are loaded with H^+ protons. Your blood is loaded with a proton with a different spin.

As long as the cell or tissues making up organs is living but not moving, only vibrations will be created. During REM sleep, our mitochondria only vibrate when we sleep. These vibrations in REM sleep reduces REV-ERB proteins in our circadian clock genes in many tissues to decrease wakefulness. When we awaken, our vibrations graduate to a soliton waveform. A soliton is also called an oscillation wave form (phonon) because we begin to move our muscles. A phonon is an electromagnetic wave that occurs in a piezoelectric or flexoelectric environment. When a standing vibration wave moves it becomes a soliton or an oscillating wave. This soliton acts kinetically much like a tsunami wave would in water, but the key difference is this wave form is capable of carrying timing information from the environment because of its linkage to the environment. Solitons happen to be related to the gravitational field they are created in. How a cell is moving or not moving in this gravitational field determines the signals generated in cells. This is what quantum noise is at its smallest scales. Piezoelectric and flexoelectric waves are both

electromechanical waves that create their own special brand of noise in the cells' tensegrity system. This will have massive implications in space travel and explains why astronauts get the unusual diseases they do.
These relationships are obvious in tsunami waves, but they seem to escape the common sense of biologists. This is how circadian cycles evolved in a life of the billions of years in our oceans. It was just another way for the cell membranes to help cells determine the timing of electromagnetic waves in the surrounding environment. These waves perturbed cell membranes to create a molecular noise in our cell membranes. The emergent solitons (phonons) can have dramatic effects on water over short distances and short time scales within cells to propagate information. For example, just pressing on cell membranes creates electric, mechanical, and magnetic abilities because of cell membranes innate piezoelectric and flexoelectric ability. This ability was enhanced when DHA was added to eukaryotic cells because of its ability to change light into an electric and magnetic signal. These abilities are lost when DHA is lost and not replaced.

These emergent fields can propagate more waves through surrounding tissues controlling them electrically and magnetically. This increases their sensitivity and specificity for signaling on both macro and nano scales. When this occurs, waves are created due to the mechanical deformation because their is also a reverse piezoelectric effect (PEE) called flexoelectricity (FEE). Flexoelectricity is a rather obscure effect whereby a dielectric material can become electrically polarized when bent and, conversely, can bend when polarized. FEE allows things to shrink electromechanical coupling. This is a huge benefit in a cell. How do PEE and FEE differ from one another? PEE breaks down as temperature rises or pH drops. FEE does not. This means PEE is altered macroscopically while FEE is not. Because of these variables, PEE is restricted to biomolecules and crystals with a limited set of symmetries where FEE is not limited at all. The FEE has also been

observed in liquid crystals (water), polymer films and bio-membranes. Second, coupling in FEE is between polarization and strain gradient, rather than homogenous strain, as is the case for PEE. And third, PEE is usually much larger than FEE on macroscopic scales, which – until recently – relegated FEE to being little more than a curiosity. FEE's work on nano-scales. What makes FEE most interesting to biology, is that FEE grows significantly at the strain gradients (tensegrity) seen at nano-scales, so much so, that it can become larger than PEE in collagen. Nano-scales are where quantum mechanism are able to touch our cells to give life its spark to animate. These two opposing forces make the cell electromechanical to all deformations to constantly generate energy and signaling in two directions and at large and small scales.

Modern biology has learned a lot by studying parts of a cell's fabric, but they have missed profoundly important abilities that cannot be understood without quantum mechanics knowledge. The quantum processes built into cells are consequences of their atomic design and rather than a result of the physical parts a cell is made from. The most significant of these abilities are the one transparent to our senses. This is why they have eluded man for so long. The protein polymers in animals are dielectric semiconductors. The simple movement of sound via vibrations through our lipids and proteins alters their electric and optical properties. The photoelectric ability due to DHA's presence selects for certain complimentary proteins for it to function with. These abilities manifest in the flexoelectric and piezoelectric ability of the cell and its membranes allowing it to connect to the collagen tensegrity network in the extracellular matrix. This network is piezoelectric at macroscopic levels and flexoelectric at nano-scales, and works to link the cell membrane to mitochondrial mmbranes and to the nuclear membrane. The atomic structure of this network "tunes" a cell to certain frequencies and harmonics of those waves. Any deformation of cell membranes can create and propagate an

electric and magnetic field because of its piezoelectric and or its flexoelectric ability. These fields can propagate throughout cells and tissues to unify and to amplify their ability. This is how biologic coherence and signaling are developed.

To maintain it, we need to produce a constant “wave source” of entangled subatomic particles in signaling molecules to maintain the enzymatic kinematics required for biochemistry to occur. This is the basic purpose of sleep. It is a time we re-tune the cell to improve autophagy. This program is half od the self-regulatory program built into mitochondria. Apoptosis is the other half. These electric and magnetic fields can propagate through a tissue as a *pulsed magnetoelastic wave* to tune or to set the body’s morphogenic field.

If you think this is hyperbole stop here and have a look at this short video.
Scientists experiments have now discovered the ability of oscillating pulsed electric fields (OPEF) to destroy cancer cells and MRSA in laboratory experiments. Soon they will realize the pulsed magnetoelastic waves are more important because these waves are how we decipher circadian signals from the environment.
These oscillations have a huge impact on ion channels embedded in our cell membranes from an energy standpoint. **Oscillations only happen when things are moving. Vibrations manifest when cell membranes are still and have little noise.** Electrons and protons move using different light frequencies. Electrons use UV light and protons are moved by red light. In solid state physics, magnetism and vibration can be coupled in something called a magnetoelastic wave. Magnetoeleastic waves can be used by piezoelectric and flexoelectric molecules. This is why eukaryotic membranes are quite different from bacteria and Archaea. Eukaryotes need these quantum mechanisms to work constantly in their cell membranes in order to maintain their

electro-mechanical and magnetico-mechanical coherence over cells using longer time scales that biology requires through control of its circadian cycles.

This process is called phonon-magnon coupling. You have to realize your mitochondrial magnetic force is critical in developing these relationships at night when the light is absent. When an atomic nucleus, like $\mathbf{H}^{+}$, is within a magnetic field it acts in a unique fashion. This occurs within the mitochondrial matrix. $\mathbf{H}^{+}$ are stripped of its sole electron. This electron naturally carries a photon. When this electron releases that photon, H^{+} nucleus is ionized within the matrix to form a plasma, another hydrogen proton with any spin number can absorb this electron-photon. When this occurs you can get "natural nuclear magnetic" resonance within the matrix. These released photons are in the radiofrequency range of the electromagnetic spectrum.

I'd have you remember that protons are positively charged and electrons are negatively charged. In the mitochondrial matrix, protons are stripped of most of their negatively charged electrons. This leaves the matrix with a lot of positive charges that might create a "relative magnetic monopole" of a positive charge. Monopoles are thought to be sources of massive energy and information transfers. Remember a DC current flows from a positive region to a negative one in wakefulness. MEG data has shown us the highest magnetic forces in biology are tied to tissues with a lot of mitochondria. This links the DC current generation to the actions occurring within the mitochondrial matrix. These forces are both critical and primordial to complex eukaryotic life.

Bacterial and Archaea kingdoms began to use these quantum organizing principles using protons and phonons to make sense of the environment billions of years ago in their cell membranes. 600 million years ago DHA showed up and allowed much more complexity to occur within cell membranes, because

eukaryotes could finally use protons and electrons with magnetoelastic waves to create a bidirectional electro-mechanical network inside their cell membranes to create harmonics of pulsed oscillations. Recall that the heartbeat of the Earth is called the Schumann resonance. It creates the primordial magnetoelastic wave. This wave effects neuron cell membranes, because they are tuned into this frequency and its harmonics because of the atomic structure of their cell membranes. This is largely due to the quantum abilities of DHA. There's a positive, linear relationship between DHA concentration in cell membranes and the Na^+/K^+ ratio, and the Na^+/K^+ pump accounts for 60% of our brain's energy needs. Brain function erodes as there is an excess of sodium and calcium ions in neurons, altering the brain's control of the renin-angiotensin system in our kidneys, which regulates blood pressure and the fluid composition of the CSF. Declining kidney function alters the electrical system of the heart, resulting in unusual heart rhythms and it changes the protons in the blood plasma. All these organs are electrically and chemically tied to one another by DHA, iodine, and Na^+/K^+ in a quantized fashion.

The Earth's pulse has a wave that is 7.83 Hz; it corresponds to the alpha rhythm in the brain of all animals. That is one of the base wave forms in non REM sleep. This is where DHA is used in eukaryotes. Harmonics of this wave form help direct morphogenic development and create proper healthy signaling in all tissues. This is why DHA is highly correlated with the health of most organs, when you review the literature. DHA links size and shape of organs to electromechanical and quantum abilities. Waves that interfere with this pulsed frequency, or its harmonics, leads to neolithic diseases.

Pulsed magnetoelastic waves were the first physical force coming from the Earth itself that life organized around in cellular design using pulsed waves forms electromechanically and viscoelastically. The effect is felt in how the tensegrity system works in a cell to "tune" to the native

frequencies where life evolved on Earth.

SUMMARY

Quantum biology is astounding with the threads she weaves to tell time. These electromechanical abilities in cells allowed them to link size and shape changes directly to thermodynamics that occur on micro and macro-time scales in a cell. It also happened to linked the cells thermodynamic abilities to the quantum realm to give life a chance to organize from chaos in sleep. This is why every living thing on this planet needs sleep or it cannot be considered living. Life has to sip from the quantum gas tank to acquire its spark of life. This should stop and make you consider some questions about our species. Might time be one dimension fundamentally including the past, present, and future as aspects of its structure like the planets and sun are in the solar system? Could it be that space is a second dimension qualified into three aspects of height, width, and length? Moreover, might it be that consciousness is a third fundamental and universal dimension of all subatomic particles where there are three aspects of it called on, off, and non-existent? Might the amount and degree of entanglement and coherence determine the degree of consciousness that manifests in that system of cells? For example, a normal human teen is conscious, as is an 80 yr old with Alzheimer's, but do they have the same amount of consciousness? They both maybe conscious at a very basic level, but one is not very coherent during their conscious state, are they? Might it be because those with neuro-degeneration are missing key sub atomic particles, and a loss of the ability to tunneling and entangle these missing particles? I think this is the case. We need monochromatic light to be present within neurons before we can entangle particles. My bet is, soon, science will show us that light generation and transformation of its frequencies occurs because of specific and redox sensitive protein folding changes in the sleep stages before REM sleep. I believe optogenetics and condensed matter physics of proteins are

critical in this quantum concert of noise creations and silencing.

The ability to use all the subatomic particles in both realms allowed the origins of order to begin in a cell. Life is about how a cell is built, organized, and “tuned in “to play Mother Nature’s songs. These primordial quantum forces melded the relationship between the magnetic spin of a subatomic particle with its vibration in the liquid crystalline water. This is how life began to become organized in a liquid crystal lattice. It was filled with magnetic material and opened many possibilities for cellular development and complexity to occur over the millenia.

CITES:

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