TIME#5: HOW IS TIME CREATED?

READERS SUMMARY:

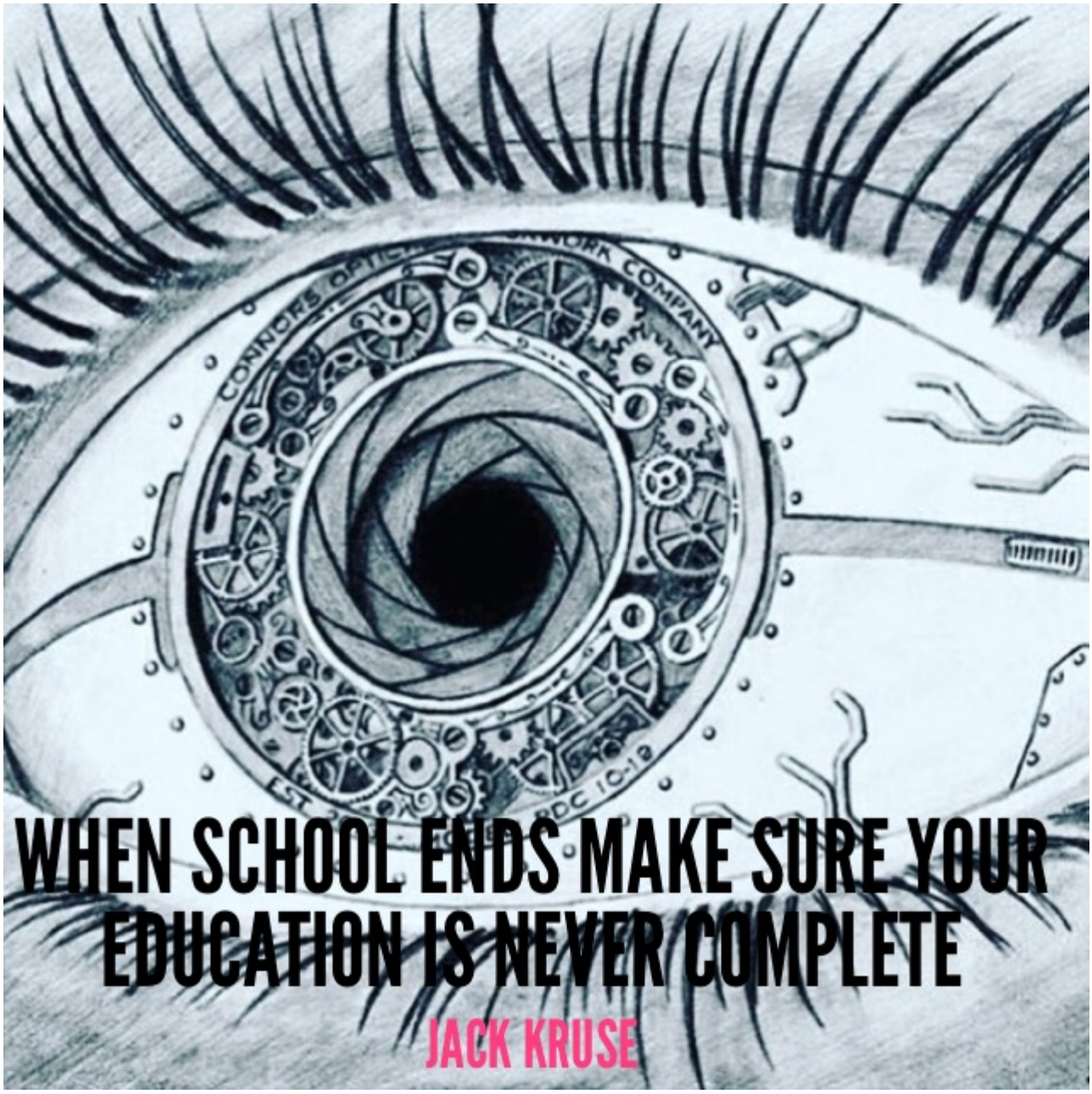
1. Einstein received the Nobel Prize for explaining the photoelectric effect. How does this effect create time in biology?

2. This effect was described initially in metals. It occurs if a metal electrode is treated with photons, which liberate electrons if their quantum energy is high enough. In simple words, photons can make ions thicker or thinner, depending on absorption or emission activity. The thickness of thinness of the surface interaction changes the geometry or things to create or remove time.

THE BLOG TAKE HOME: Light has a limit, but do we? The range of our perception is vast and allows us no limit of all there is to perceive. The driver of this process is light. The best driver is the light from our sun. All perceiving is thinking, all reasoning is intuition, all observation is an invention, and light is the power behind them all. With time we learn we are responsible for what we say, think, and observe. We all have unique viewpoints linked only by some common stimuli. Those stimuli tickle our brain to react to these waves and fill in the missing space from the signal they provide. In order for an adaptation to occur to an electromagnetic wave, the stimulus must resonate properly in the sensory receptor designed by evolution to sense this particular wave to register properly in the sensory area of the brain. That scenario creates the reality we call life. **Biology gifts us with a brain, but light gives us a mind through its wave-particle duality.**

TIME CREATION

Time perception is lost when we sleep. What else should be missing to make sleep regenerative? The stimulus of light. Humans only consciously perceive time when light is present. This is why you can sleep or have anesthesia for 12 hours and wake up and wonder where the time went. It went nowhere. You just never experienced or perceived it because your stimulus to light was interrupted in your eye, skin, gut, and lung surfaces.



Time links to mass, energy, and both of these link to DHA pi

electron cloud. Light only interacts with electrons. Bonded to DHA on one side of the molecule you will always find an electron donor and on the other side, you will find an electron acceptor.

DHA SIDEBAR: Isothiocyanates are weak electrophiles. Akin to the reactions of carbon dioxide, nucleophiles attack on carbon. Only "real bullets" have a momentum to change things made out of carbon. UV light and neutrinos have a lot of momentum by design. The photoelectric effect makes life be able to use light to create an electric current for the first time. Life became electromagnetic for the first time 600 million years ago. It became able to create matter out of these waves/particles. Today, humans have done the same in technology. TV's, radio's, camera, phones, laptops create content out of light waves. It turns out UV light is strong enough of "*pinching carbon atoms*" to innovate life. This means that these compounds when added to a lipid raft moiety in a cell membrane become excellent at delocalizing electrons and fostering nonlinear optical signaling. The more powerful the light the more the optics moves from linear to non-linear optics. To take advantage of this, compounds need large electronic dipole moments, when they are added to DHA. Isothiocyanates have this ability. The other key way they work in a lipid raft with DHA is the electron donor and acceptor part of the raft has to be far away from one another…….and with DHA this occurs because of the 22 Carbons and alternating bonds. amines methylene are donors and cyano's halogens, and nitro's are acceptors (DeMartino 1988) When they bind to DHA they also make the DHA planar which also helps the electronic effect……..DHA facilitates the transmission because of the pi electron cloud; it acts like a giant wire filled with electrons. This is why DHA is the ideal antenna of photons. People need to gear up on 3D atomic chemistry to get why these foods works to keep us well. *Illness = poor sleep = lack of regeneration = low DC electric current = poor electronic flow across the cell membranes.* When this effect

occurs the energy and information is conserved by aquaphotomics in water. Aquaphotomics refers to a new field of study, which aims at the collective characterization and quantification of pools of water molecules having the same molecular vibrations that translate into structure, function, and dynamics of organisms or aqueous systems. Aquaphotomics is a concept, where water acts as a ***molecular mirror*** for light's interaction with the matter is strikes. **END OF SIDEBAR**

No one seems to see this quantum construction, as I do yet. I think it will change because it is showing up in journals and conference's. The natural truth's are bigger than my ego. It allows me the patience to be able to stand among the naysayers with this knowledge. More importantly, the experience of how Nature is running the show in us, has me in a place that is far beyond the dark ages of my past.

I told you long ago in a previous blog that time was a function of mass. Recently, I told you DHA is the most favorable way to alter the thermodynamics of mass in an atomic lattice. Mass is a collection of atoms, that leads to the emergence of gravitational force, and gravity in turn affects light via gravitational lensing. Light has no mass but is has momentum. *Einstein's photoelectric effect and Planck's original postulate only involve the conservation of energy and make* ***no reference to momentum at all.*** This is a key point in this blog and the December 2015 webinar. Incorporation of DHA into the cell membranes of your neurons is also the fastest way to improve the physiology of your brain because it adds pi electron clouds of light to interact with. It was at this point 600 million years ago that life became electro-magnetic and began to use both energy and momentum in UV light for the first time.

In the universe, it appears light never stands still, but it can stand still within a physics experiment at absolute zero temperature. It also can be slowed down by atoms in a lattice. In the vacuum of space it has a set speed. I have sense light

can slow or stop interacting in a star and within the mitochondrial matrix and many other places in a cell to have its energy and momentum harvested and used by a cell. I believe this is tied to the development of a magnetic monopole like state in surfaces in both states when temperature is above absolute zero. In order for this to happen there has to be defects within the membrane and adjacent water molecules for the monopole to show up. It is my belief soon we will find that water is the most critical part of emergence of a natural magnetic monopole. We recently have found manufactured monopoles in graphene. This has recently been proven in graphene which also has a massive amount of pi electrons like DHA. I covered this in detail in the December 2015 webinar for members.

How can light stand still? In a star, it happens when the strong electric and/or magnetic fields both work together to contain a photon within the sun. Your mitochondria also has these same two fields present within its matrix and on its surface. **It begs the question, could the same physics be at play there as is present in the sun?** The sun releases waves and particles that carry energy and momentum. Those two particles are photons and neutrino's. The energy and momentum alone in both are capable of creating matter from other matter. All masses contain energy according mass equivalence. The key is unlocking that energy from matter. Mass is just another form of energy and all energy is fundamentally some form of light. *The sun releases neutrino's immediately from its core and surface but it retards the release of photons it creates for quite a bit of time* (100,000-1,000,000 years).

When matter interacts with light anywhere in the universe, heat is liberated. Heat is a form of light called infrared light. This makes mitochondria nano scale quantum heat machines. So is time a thermal phenomena or is this another gear we use for telling quantum time in our mitochondria? It gets more interesting, when you realize light released from a

mitochondria is infrared. This light interacts with water around the MINOS water layer of the mitochondria to actually shrink the atoms in water. Shrinking the MINOS has the effect of bringing the respiratory proteins closer together on an Angstrom basis. This increases electron tunneling speeds in mitochondria to improve energy efficiency. **Every one Angstrom of distance increase that occurs in mitochondria reduces electron tunneling by a factor of ten.** Shrinking the MINOS has the opposite effect. This is aquaphotomics in action below modern biology's perception. Biophysicists however have already found these effects in cells.

Some forms of matter interact with light more than others. Water and DHA happens to be a huge repositories for light energy in the UV and IR range. This means water is the IDEAL molecular mirror for these two frequencies of light in cells. EZ water is a chromophore for both UV AND IR light. Regular tap water is called bulk water. B*ulk water is the ideal chromophore for IR light.* After IR is absorbed the EZ water forms and then UV light massively extends the size of the EZ in a cell. *Not all matter is as sticky to light as water is. Light and water have mirror effects upon one another. This effect is used to break nature's symmetry.*

Water and DHA are two things that interact with light, but in quite different manner. EZ water absorbs optimally in the UV range at 270 nm; it also retains bulk waters ability to absorb light in the IR range. Light is capable of creating a charge separation within water into a positive and negative area. This charge is created without adding any atomic mass to our protein lattice. The EZ concerns itself with the negative charges in cell water. This water is what energizes the proteins in our cells to allow life to innovate.

DHA captures solar insolations on our cell membranes and acts like an antenna for light. This antenna for light frequencies can turn them into electrons and photons. A stream of electrons = a DC electric current. This is where the DC

electric current emerges. When light interacts with water and DHA the space/time functions inside a cell is altered. How does light alter space and time in the small spaces of a cell? The interior geometry is changed inside a cell that is illuminated. This directly affects the tensegrity cabling system of proteins built within a cell. Light can alter the geometric relationships within a cell's atomic lattice. UV light has the greatest effect on this system compared to the other frequencies of light because it contains the most power. Power determines the work function of light inside a cell. Let us consider the photoelectric power:

E = *hf*. E is energy and = WORK + $(\text{kinetic energy})_{max}$

The energy (***hf***) of the incoming photon is equal to the sum of the minimum energy needed to liberate the electron to liberate the electrons from proteins/lipids (that is the work function, W) and the kinetic energy, KE_{max} of the most energetic electron.

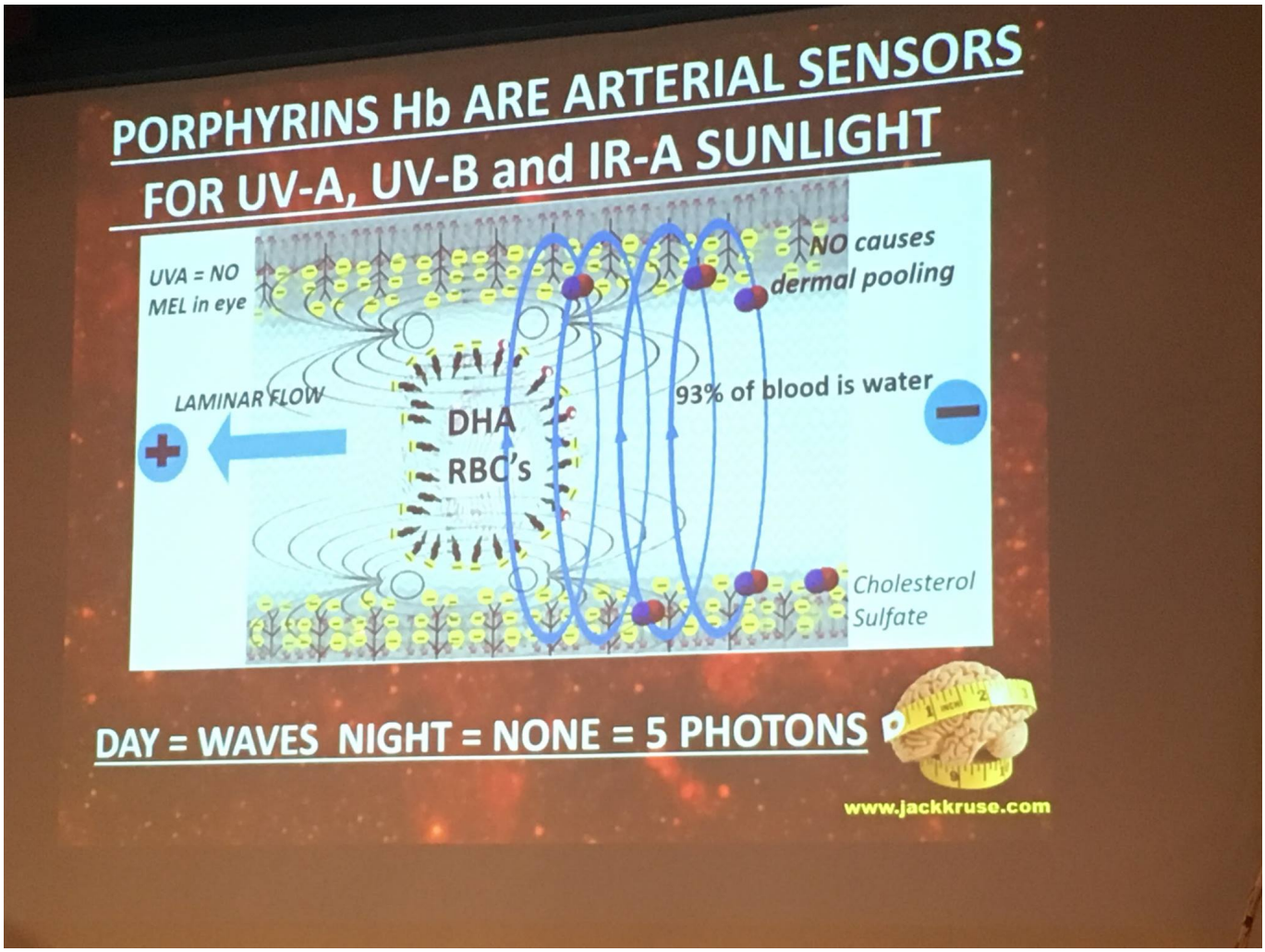
So far as our physics experiments have revealed, space can actually separated from time when we are at absolute zero because light can not interact with ions in a lattice. **Life, however, is not lived at absolute zero.** When light stands still or is absent from our senses, matter is essentially blind to time, when it is far from equilibrium matter gains the ability "to see".

Light only seeks out electrons in atoms to interact. Ions are at their ground state (not excited) at absolute zero, so motion is limited and they cannot interact with light because the electrons in atoms no longer perturb space and light stops interacting with them. **When light is slowed down by strong electric and magnetic fields, time becomes uncoupled from space too.** *Life appears to use this method to affect light when we sleep and regenerate.*

Time needs light to be moving in order for it to emerge and acquire a direction. Stop and think about this for a minute.

Now you may be seeing why during darkness, in the absence of light, we are designed to sleep. When we sleep, time appears to vanish from our perception and escape detection of our sensory organs. If you cannot accept this idea, ask anyone who has been under a general anesthetic how they perceived time? They are all shocked at how they lost time when they emerge and they are often confused. Anesthetics stop our brain's from getting electrons from CSF to keep us awake. **Time emerges from this interaction.** Time can and does change in us. Consciousness or wakefulness is what changes it. This is why time feels different at different ages. Time appears to dilate or feel longer when you're young; the time when you experience when you are older seems to speed up because you cannot slow light in your tissues as well as you could when you were younger.

Light is the only thing with a constant relationship to time. Einstein said lights' speed is constant with respect to time, and this implies that space and time must bend in relation to light. ***This is why light is the key to our clock mechanism in our eye.*** Water is imprinted by light's collision to create space/time geometry in our cells. From here time can manifest. Light can be a wave or particle in this dance. That particle in light is called an electron and the wave form is called a photon. DHA captures both parts of light (*wave or particle= energy or momentum*) in a cell membrane and can turn it into another signal. It has been reserved in all eukaryotes cell membranes and their central nervous systems for 600 million years for this reason. **Light is an electromagnetic disturbance in space that define's time presence.**



Therefore DHA levels in your tissues are fundamentally tied to how you perceive and sense time. Light is at a constant speed everywhere in the universe at 186,000 mph. Space is a vacuum where atoms and matter is sparse and there is an absence of heat. But what happens when light meets matter? Light slows down. This means space and time are relative to your position in life, because light slows depending upon what electrons in matter it interacts with. In other words, light always seems to move but space and time bend, distort, and react to light when light interacts with any matter. *When light can not move freely, all time appears to stand still.*

When light hits any matter its energy and momentum changes but its speed remains constant but time occurs because of the collisions of photons with electrons is cemented by their

reaction to this collision. That collisions appear to slow light down as it travels through any lattice allows time to emerge to any observer. This is ‘relativity’ engaged. Even time is relative according to Einstein and now you might be understanding why. It is also critical in constructing an optical lattice of atoms designed to react with extreme sensitivity to the effects of incoming light. This is why the SCN sits above the optic chiasm. The type of matter that light strikes also reveals time to the observer in their retina. This makes time relative to the amount of DHA/electrons within that observer’s SCN. This also makes time relative to all observers who see the same thing. The light others see and the electrons it hits is unique to each observer. *There is no cause and effect here because cause and effect is a property of how light interacts with matter.*

The atomic lattice in two SCN’s are never quite exactly the same. Some have more DHA and less carotenoids or vice versa. This creates many possibilities. They are randomly built because the environment each is in varies. *This is why time is a function of mass.* All matter has mass and all mass has electrons for light to collide with. And all things with mass also have gravity. Light bends under the force of gravity because of gravitational lensing. Here you can see why the gears of the “rolex in our head” uses light to work.

The key is to realize that light, however, has no mass when it is released from any source and allowed to interact with electrons in any atomic lattice. *It only bends because it also contains momentum which reacts to a gravitational field.* Einstein’s photoelectric effect and Planck’s original postulate only involve the conservation of energy and make no reference to momentum at all. You can see that from the equation above. The source of light is organized. It is usually a star and it diffuses into space. The origin of light is said to have low entropy compared to the space around the star.

So why is time's arrow moving forward, and not backward? Time's arrow follows the direction of entropy. Entropy = randomness. Physics allows for time to move both ways but there is a twist in physics. In physics, all things degenerate to randomness. We call this a bias to equilibrium. In physics, the definition of a dose is quite different from the definition in biology. In physical systems, matter does not regenerate ever. In biologic systems, it does. In biological systems, there is always balance between damage (photo, chemical) and repair systems. Entropy is the basis of eco-dynamics because as damage occurs, it is the stimulus to regeneration systems in biology.

Entropy is a measure of the direction of energy flows in cells. In biology, life organizes entropy to contain light. Since light collisions liberate heat, thermodynamic considerations become very important stimuli. The role of thermodynamics in science boils down to defining relations and identifying constraints in a system built far from equilibrium for signaling purposes. These systems, by definition, are characterized by instability, are metastable, and imbibe chaos. the damaging effects have to be captured and sensed to be overcome. Time creation had to be formed using specific light frequencies and the combination of physical forces to give the atomic lattice in us some order. This is why time emerged for biologic systems and why circadian biology controls the time piece in your head. I believe the brain first evolved in lower life forms just to tell time from light using gravity and geometry as its hour and minute hand. Later on it add second hands when mitochondria were usurped into the eukaryotic cells. Time keeping improved further when DHA was added to the mix. Biologic complexity requires very active timing. This is what separates a 2015 Corvette from a 1958 Corvette. It is control of the signaling that improves the performance of a 2015 Corvette from a 1958 model. **Biologic diversity is the product of long term interactions at a genealogic and ecological level.** This allows the evolutionary

process to become more organized and complex as collisions of light continue with matter. Time is created from the collisions between light and the particles in our atomic lattice. **In this way, time emerges from non time. Water is the molecular mirror that records the collision and because it contains a mirrored view of the collision it break symmetry. How? Is a reflection an accurate view point of anything? No, a reflection image is reversed. This is why water can break symmetry in nature.**

Rayleigh Bénard convection in cells occurs in this fashion. Rayleigh–Bénard convection is a type of natural convection, occurring in a plane horizontal layer of fluid heated from below. In tissues deeper levels heat from inside out because of the heat release from mitochondria.

The convection patterns are the most common example of self-organizing nonlinear systems. This means they occur without any input of extra energy. Mammals seem to have figured out how to use this mechanism by liberating heat from their mitochondria.

Buoyancy, and hence gravity, is responsible for the appearance of convection cells. Without gravity, Rayleigh Bénard convection cannot occur. This is not good news in microgravity or in the vacuum of space. This is why all astronauts have shown damage to their eye clock mechanism when they return to Earth. It is also why they all have defects in growth and metabolism at some level. NASA seems clueless about this because they do not understand how the eye clock works with light. It needs gravity to work properly. In space there is a paucity of it. When light hits the RPE heat is liberated. The initial movement in our eye clock's RPE is the upwelling of lesser density fluid from the heated bottom layer. This upwelling spontaneously organizes into a regular pattern of cells. Life uses all these tricks to make energy. That energy helps manufacture time in biology.

Normally in physics, energy flows from low entropy to a high entropy state, and this change implies metastability. When things are at equilibrium, time stands still. In death, time stops for the living creature. The death state is the only time humans truly reach equilibrium. Does this imply time has a thermal statistic? No it does not. **All life liberates heat after interacting with light to make Rayleigh Bénard convection in cells.** All life dies when light/heat is no longer liberated from mitochondria, so infrared energy dissipates (heat) in our mitochondria and a cadaver becomes cold in rigor mortis. The death process allows light to be returned back to the environment because a cell can no longer harness it.

Intriguing thought or maybe an amazing idea, you never considered about time creation?

The time keeper in your eye, the SCN, must yoke to another metronome inside your cells. The SCN must always run faster on a relative basis to the one inside your cells. Quantum time is a function of the quality and quantity of tunneling and entangling of electrons and protons in the cytochromes to increase the accuracy of this optical lattice clock in the eye where light hits it. This mechanism is what yokes biochemical fluxes in all living cells. Quantum time determines decision time and error rate in our actions and behaviors. These are accounted for by dopamine levels in parts of our brain. Both time and the error rate, typically increase whenever the difference that must be discriminated is reduced. This is how bad thinking and poor memory manifest too. Dopamine drops in these cases first in the eye and then in the frontal lobes. This is why low dopamine is linked to these traits. A failure of tunneling and entangling of electrons or protons in cells leads to poor decision making, abhorrence of change, altering dopamine levels in your eyes, frontal eye fields, and to your frontal lobes. This can be generalized to your midbrain if the chronic signal remains damaging with too little regeneration

possible. The end result is destruction of your substantial nigra and Parkinson's disease. This all fundamentally happens because of a lack of DHA in your RPE and/or in cell membranes in these parts of the brain. This leads to dehydration in cellular organelles, microtubules, and mitochondria. **This alters the relationship of gravity with respect to light, to alter time perception.**

Biologic complexity that we observe today is the result of the temporal and spatial constraints of our planet and a long evolutionary history made up of collisions of light and atoms accumulating in time. Hierarchies of this complexity have marked different epochs of time. Light began to affect living things 3.5 billion years ago. Cell membranes and transport systems for metabolites showed up 3 billion years ago, organ differentiation one billion years ago, the CNS 600 million years ago when DHA showed up in our seas. Photosynthesis showed up in large scale about 500 million years ago. Warm blooded animals showed up 150 million years ago, the first of our species 4-6 million years ago, and the use of tools just 100, 000 years ago. Nature is what our senses are attuned to best to recalibrate how we perceive light's collisions with our electrons in our protein and lipid laden cells.

HOW TIME CAME TO BE AND WHY LIFE EMULATES WHAT HAPPENED IN SPACE:

Time began in a great void of infinite space. Two atoms met because of a light collision and they proceed on a different path. That meeting of these two primordial things caused changes in energy and direction of the flow of light energy and momentum. The new direction created a new geometric relationship in space. **That geometric change embodies the information of the event.** When a collision occurs the information from the collision cannot be cancelled out. The new direction carries the memory of the collision. Any

collision that improves the redox potential (charge) of the physical system, increased energy assimilation from the ground state. Life and cells, do the exact same thing with energy, as occurs in space. The difference is we have gravity on Earth so we use the Rayleigh Bénard convection cells to our energy advantage. Proteins and lipids in cells retains the memories of the collisions with light frequencies to build systems that overlap with one another to not allow light energy to escape. The assimilation of light from our surfaces to collect the sun's energy gives cells the "energy currency" to make use of the Rayleigh Bénard convection in cells because mitochondria liberate heat (IR) release. Our surfaces absorb the more powerful part of the solar spectrum under the force of gravity while we release the least powerful part of the visible spectrum to form the energy saving Rayleigh Bénard convection mechanism.

The irony is, this is precisely how a star retains its light, energy, and directs the flow of its plasma's. The collisions of light with electrons were the things that became copied by the molecules like the ATP_{ase}, before nucleic acids were innovated by evolution. These were conserved in cells because they massively improved the redox state (charge) under Earth's gravitational field. Life got more energy efficient on Earth than it was in space.

LIGHT MAKES OUR CLOCKS TICK

The collisions of light on electrons in proteins began to click out the "clock of events" for life to begin. This brings up the next question: *How does time emerge from non time?* That answer I gave to you long ago; ***gravity is the key part of this physical system, because of how it alters space and time geometry in space and in cells***; it bends specific light frequencies in a relative fashion to others frequencies allows time to manifest from light and collisions with matter inside our cells. That degree of light bending with certain

frequencies of light contains the information, energy, and momentum of the geometry and/or direction of atoms in the lattice of cells that embodies and imprints the information of the collision.

Scientists have contented themselves with short-term gains in narrowly-focused areas rather than seeking fundamental truths that may explain broad areas of nature. Their quest for details seems to have supplanted man's quest for simple, unifying truths in biology. Our culture has become obedient to these meme's. It now bows to the regality of prevailing scientific dogma they have given us. In so doing, it has produced mounds of data, but precious little, that fundamentally advances our understanding of how nature operates. A conclusion to a question is the spot where we got tired of thinking as scientists and clinicians. Never tire, when the question brings you to a new truth. Nature presents us with a series of great opportunities brilliantly disguised as impossible situations. *The question of what time is one of those questions for man today, because our modern creations are now stealing time from us all.* Its been one of the questions that I have wanted to solve my entire life.

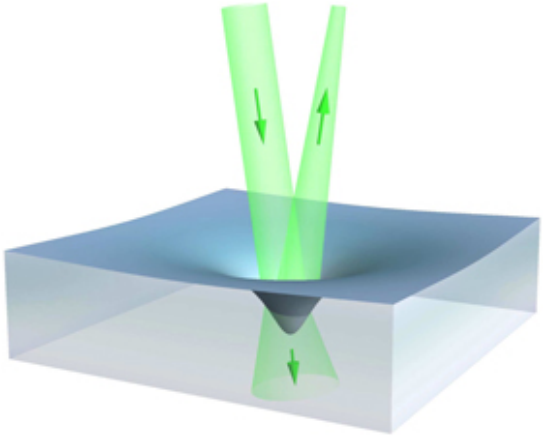


Figure 1. Principal idea of the experiment. Light incident from the top impinges on the surface of a liquid, part of the

light is reflected and the remaining fraction is transmitted. The length of the green arrows indicates the Abraham momentum of light, equation (2). The net momentum difference of equation (4) is negative, causing an inward pressure on the surface that, in mechanical equilibrium, is balanced by the surface tension of the liquid. The figure shows the resulting shape of the deformed surface with depth exaggerated by a factor of 105. The actual depth lies in the order of 10 nm for a spot of about 1 mm diameter. The angle between incident and reflected light is also exaggerated: in the experiment it is ${{3}^{{\rm o}}}$. The figure suggests that the reflected light is focused by the deformed surface acting as a spherical mirror

Time emerges where electrons in atoms collide against light. This is why the photoelectric effect is so critical to life. Life always comes back to light, water, and magnetism. If

electrons are missing inside our cells, the collision are not sensed as well as they could be and energy and momentum in light are not harvested properly in our protein lipid lattice work. When this occurs too much energy and momentum are directed deeper into tissues, and time perception does not manifest properly and it cannot be accounted for by cells. *This is the core issue that causes diseases like psoriasis.* This is why the basal levels deeper in skin show increased growth rates. **This situation implies that the light frequencies we allow the electrons in our cells to sense is the most critical variable in time generation**.

Photonics over Electronics is an ancient meme that modern man's narrative for a living has ignored at our peril.

CITES:

1.http://www.theatlantic.com/health/archive/2014/08/this-is-your-brain-on-fish/375638/