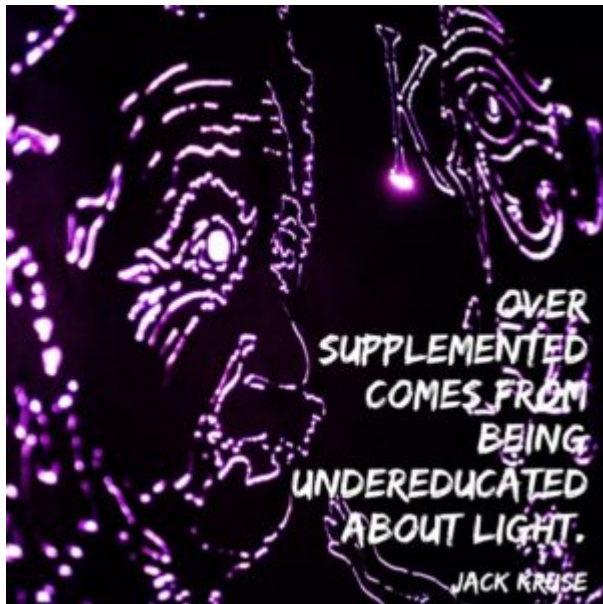


# TIME #18: DIVORCING EINSTEIN USING TIME'S POINTED ARROW

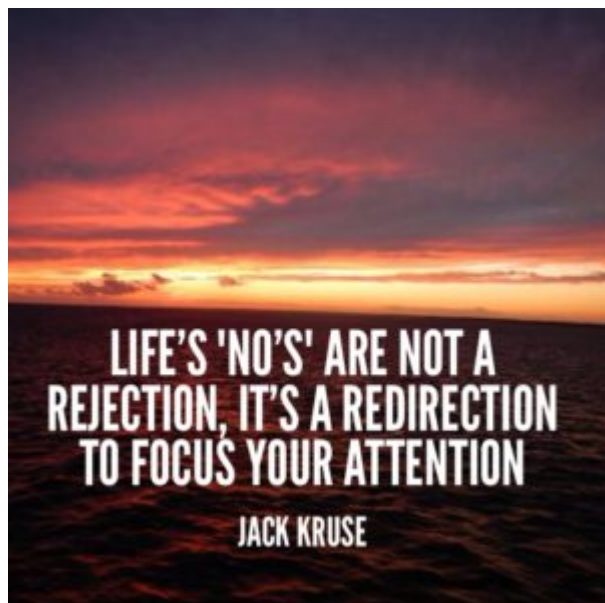
**THE TAKE HOME:** My words, the text in my books, my blog posts, my book really hasn't changed..... but your ideas of what I am saying changes as you begin to understand my words.



Most of you know I hold Einstein in the highest regards with respect to my knowledge and wisdom. If it was not for his brilliance in 1905, I don't think my life's arrow would be pointed in the direction it is. Many of you might conclude that these feelings might set me up for confirmation bias or dogmatic beliefs regarding his work. Today's blog is where I show you how the results of the last ten years of reading science are at odds with Einstein theories. The concept of time divorced me from some big parts of Einstein's ideas.

**When you believe "time" is just psychologic and not physical, as he did, you wind up believing the universe is built using gravity as the key force.** When you realize time might be created in a different way using another force entirely and has other "flavors," you begin to see how the universe might be built exclusively using the electromagnetic force to create time.

I got this idea by reading about the physics of how a cell is organized by Mae Wan Ho. She introduced me to Henri Bergson's ideas of space/time. He was a philosopher who thought deeply about time. He made a huge impact on several other physicists that went on to win Noble Prizes using his ideas about dissipative systems. It turns out all cells in life, are a dissipative system of light. Cells are a playground for photons. He believed living things had highly differentiated space-time structures built into their design. His ideas were at odds with Einstein's ideas of time relativity of a curved space. When I read Bergson's work, one thing I kept coming back to Einstein was never able to unify the forces using his equations. This bothered Einstein to his death. And today, physics has accepted his gravity-based cosmic design, even though quantum mechanics and gravity are not compatible. This one fact has always caused me to doubt the fundamental beliefs of the Standard Model of physics. This led me to the belief there was a deep "natural reason" Einstein could not unify the forces. I thought, maybe it was not that Einstein was not smart enough to complete the task, instead, maybe it was because gravity emerged from the other forces as geometry changed? For the first time in my life, *I wondered if there was some reason they were not unified, by nature's design.* I used relativity and mass equivalence to get me a long way in life over the last ten years, but there is one aspect of this journey that Einstein failed to answer the bell for me. Einstein failed to deal with ***time and its creation properly.*** In fact, Einstein was not the first to fail on this path. He had a lot of famous company.



Descartes, Newton, and Einstein all failed to harness the concept of time into their ideas. So how did they handle it?

**They solved the paradox of time by eliminating it from their equations.** Einstein made the famous quote that, time was the illusion of the mind. Is it really? According to Sir Albert, contrary to biologic evidence, time like space is measured reversibly. A third grader can show Einstein life breaks this rule. When we drop an egg can we somehow reverse the broken egg on the floor to the egg's previous form before the fall?

Of course not. Biology has a pointed arrow. Newtonian physics and quantum mechanics both embrace time reversibility idea as well. I believe both theories are dead wrong about time. The implications are if we are wrong about time, might we be wrong about energy conservation? Could we be wrong about thermodynamics too? ***Time is created by the combination of forces and their interaction with light to give time an arrow.***

The critical difference between the "past" and "future" times only exists if heat is present. Heat is a red frequency of light and it makes atoms and molecules move in certain ways.

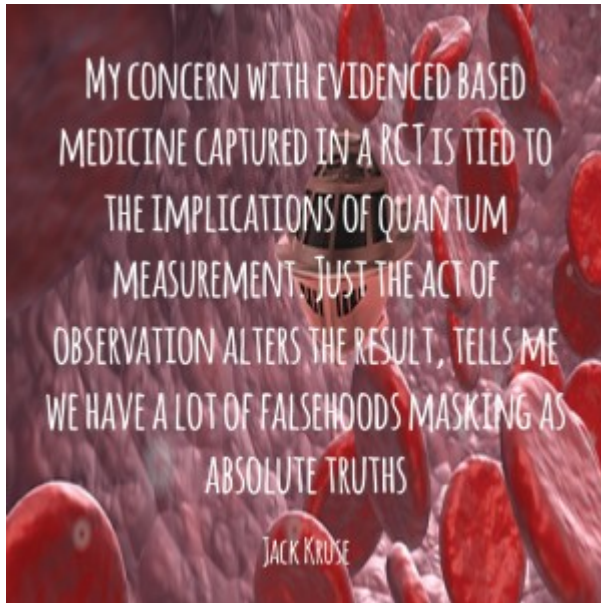
Red light makes things with a mass move. The directions of these motions are critical to understanding probability and to understanding time. Quantum mechanics is the science of

probability. In the 21<sup>st</sup> century, statistical mechanics of heat movement has now been extended to electromagnetic and quantum phenomena by QED. This is called thermodynamics. Today, because of Boltzmann, we know both space and time must vibrate or move, but we still do not know how to describe this process well with words of mathematics. Einstein tried to do this and came up with a geometric solution of the idea of curved space/time. The Standard Model of physics has embraced this idea as gospel 100%. Heat, as we all know from observations, **always** moves from hot things to cold things. This should make you ask yourself, why does heat always seem to go from hot to cold and not vice versa? Is there a universal law that says this is axiomatic? It turns out there is no law that tells us this. So this raises the question why does it always appear this way in reality?

***Does hot contain some information in it that directs motion?  
I think it does.***

Many of you might not realize the significance of this idea at first glance of this blog. Most of science today is built on the belief that experiments have to be reproducible in time to be "evidence-based". In all western schools of science, it is taught that if an experiment is not reproducible it is false. It turns out, this idea is true for a machine, computer, or a math problem but it certainly false for ecologic and biologic systems built are far from equilibrium. Our own observations tell us the time matters in life. A dropped piano from a height cannot go back to what it was before we dropped it, even though the laws of physics say it is possible. All living things obey the laws of biologic evolution that at any one time, they are quite different then they were an instant before. ***The difference may be small, but that difference always exists. In others words, information is always being shared.*** This is the basis of epigenetic modifications to nucleic acids. This is what gives life its essence. In biology and ecology, reproducible experiments really do not

exist, contrary to our stance on randomized control trials (RCT's). RCT's require reproducibility for science today. The irony is for the classical science of Descartes, Newton, Einstein, time does not exist in their theories. *So why is it that we require reproducibility in modern biologic RCT's?*



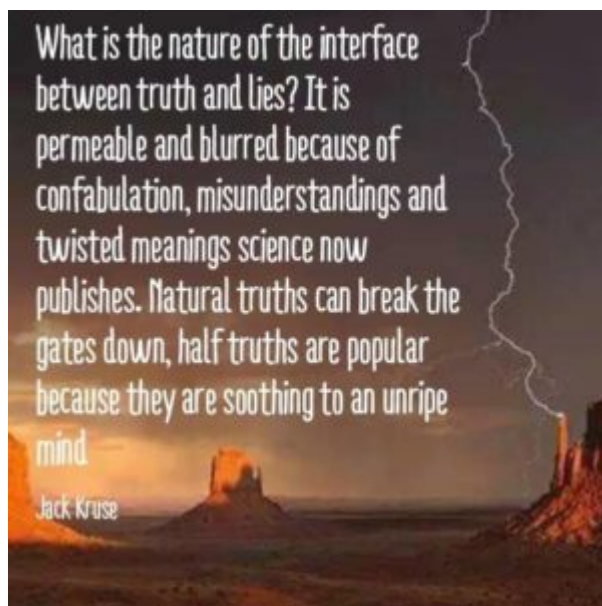
Science has to invent concepts to describe nature because they do not yet fully understand it. "The stability of science (like a game) is wholly subservient to its participant's voluntary willingness to acquiesce to certain fixed boundary conditions of the construction and operation of the said game." Yes, modern science is a shell game, in my opinion.

"Otherwise, the game is no longer worth playing. Once the participants fully comprehend and/or transcend the game's truly limited and arbitrary nature, they can no longer effectively suspend disbelief and the game is over. This makes science and the society that support it a game as well. Dogma provides the cultural rule-book that people mutually agree to play by. Dogma is a function of truth. Functions in the science of math are called derivatives." Derivations are slippery slopes used by paradigms to control masses of people's beliefs.

Modern science actually invented the concept of time. The arrow of time is a mathematical model. Math cannot explain

life, it can only describe it. The arrow of time is an irreversible vector (fallen eggs don't become whole again) with only one dimension and direction. The arrow of time is set forth in the Second Law of thermodynamics. Life follows energy flow, storage, and randomness. Life needs "order" to organize. Order only comes from information at some level.

This order is built into the physical design of cells. It is here where I went back and look at the cellular anatomy and cellular energy systems. Once I did, I found that the mitochondria were the seat of energy systems and the rest of the cell was in charge of the anatomy. Cell design is based on physical design principles. Then I tripped into information theory. Energy cannot move unless something is known. The knowledge implies information processing must be present. The mitochondrial design is based on control, storage, and creation of energy/information flow using quantum mechanics. The laws of microscopic physics (QED) are time reversible, but these physical laws do not match up to our experience as living creatures. This tells us that time might be buried in matter or with another force that interacts with it.



This was problematic for me 10 years ago. I thought Sir Albert was as good as science data gets. It turns out that belief was wrong. Perspective is how we see things, and most

of us are not even remotely aware of how these perceptions form our worldview. This incongruence around the concept of time is what forced me to ponder if Einstein was why physics went off the rails. Henri Bergson is forgotten these days, but his ability to effect an open mind is not.

### **HOW THE DIVORCE OCCURRED**

It was at this point in my journey I had to divorce Einstein's ideas of what time fundamentally was. We attract what we are prepared to receive. People in medicine and ancestral health care more about beliefs than reality or truth because they have created their own versions of reality. That is what the practice of medicine and paleo have become. Everyone needs to become reminded and acutely aware of the biologic cost of bad thinking.

I disagree with medicine, paleo, and ancestral health because the organization of the cell allows life to disengage from the first two laws.....*because of their statistical nature*. Calories never matter to life when you understand the physics behind how a cell is built. The key is realizing energy and information or a helix. One cannot exist without the other.

The living organism has freed itself from the immediate constraints of energy conservation which is the basis of the First Law of thermodynamics because it uses the information to do it. It also frees itself from the Second Law of thermodynamics, by dancing on its statistical nature by using the probabilities based on coupled cycles. In a living thing, there is always energy available within "its" system, which is mobilized at close to maximum efficiency and overall space-time modes via a syncytium of water. I wondered was the same thing true about information? I make no apologies to anyone, for the way I think about life now; you need to sink to the quantum scale to get the gist of why I am adamant that calories in are a bad idea based upon how life is built. The life cycle is a highly differentiated space-time structure, the predominant modes of activity are themselves cycles



spanning an entire gamut of space-times from the local and fast or slow to the global and slow or fast, all of which are coupled together. *Coupled cycles are key to living on the "thermodynamic ledge" of both laws.*



These cycles are most familiar to us in the form of biological rhythms extending over 20 orders of magnitude of time, from electrical activities of neurons and other cells to circadian and circa-annual rhythms and beyond. To fully understand circadian coupling you need to read Bergson. This complex, entangled space-time structure is powerfully reminiscent of Bergson's "duration" of organic processes. Then read Lord Kelvin who penned the second law.....what did he say about life? Many physicists have marveled at how organisms **seem able to defy the Second Law of Thermodynamics**, starting from Lord Kelvin, co-inventor of the Second Law; he actually excluded organisms from its dominion when he said, "The animal body does not act as a thermodynamic engine; consciousness teaches every individual that they are, to some extent, subject to the direction of his will. It appears therefore that animated creatures have the power of immediately applying to certain moving particles of matter within their bodies, forces by which the motions of these particles are directed to produce



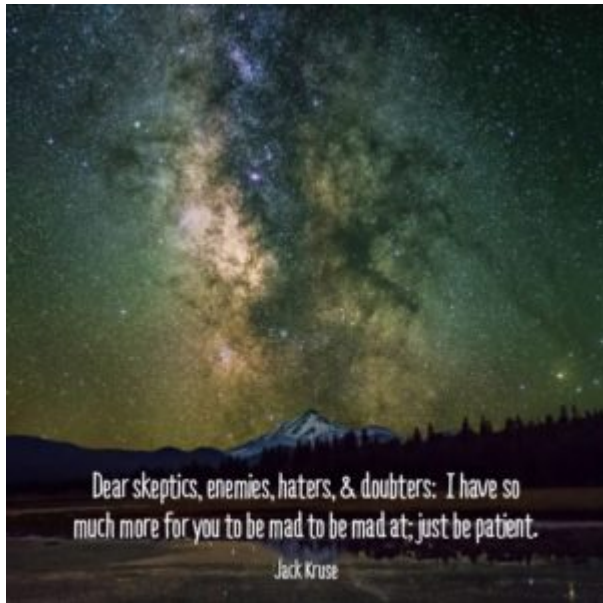
derived mechanical effects.” Was he right? Nope.

What impressed Lord Kelvin is how organisms seem to have energy at will, whenever and wherever required, and in a perfectly coordinated way. Another equally puzzling feature is that, contrary to the Second Law, which says all systems should decay into equilibrium and disorder, organisms develop and evolve towards the ever increasing organization. This is what biology and most Ph.D. researchers continue to miss in a big way. Of course, there is no contradiction, as the Second Law applies to isolated systems (**of which life is not an example**), whereas organisms are open systems. But how do organisms manage to maintain themselves far away from thermodynamic equilibrium and to produce increasing organization? They are perched on the thermodynamic ledge and they can access quantum tunneling and entanglement to do the things life can and that Lord Kelvin described and most biologists remain clueless about. I have referenced ‘What is Life’ book by Schrödinger (1944) many times on my website. What most do not realize, he was severely reprimanded, by Linus Pauling (who I recently wrote about because he correctly identified *proton tunneling in enzymes and vitamin C*) and others, for using the term ‘negative entropy,’ for it really does not correspond to any rigorous thermodynamic entity. But Erwin S. got the key points of what Linus P did not intuitively get, ***that the cell is built to take full advantage of quantum physics. (specifically quantum optics)***

The last rabbit hole I fell into was a letter Maxwell wrote to a friend when he was writing the equations for electromagnetism. He realized something deep about energy. He called it a demon. He said, in the letter, the demon had to know something about the system to operate. That idea caught me.

Cells evolved to be playgrounds for solar photons under the power of a 50 microTesla field. That is why the cell is loaded with EZ water that is a magnetic dipole. The magnetic

field uses phonons created within our cells to tune parts of our cells, prepping them for the incoming photon collisions. Photons only collide with electrons.



This is because the idea that open systems can “self-organize” under a constant energy flow became more concrete in the discovery of “dissipative structures”. This rabbit hole opened me up to Ilya Prigogine’s work in 1967. This is when Henri Bergson brilliance was illuminated for me and when the shine left Einstein’s ideas in my mind. ***All living things are built of things that are dissipative structures.***

An example is the Rayleigh/Bénard convection cells that arise in a pan of water heated uniformly from below. At a critical temperature difference between the top and the bottom, a phase transition occurs: bulk flow begins as the lighter, warm water rises from the bottom and the denser, cool water sinks. Biology does not realize this occurs in water naturally when there is a small temperature gradient. Temperature gradients favor protons motions in cells. This explained by wearing contacts could age our eyes faster, when you understand that the macula of the retina has no blood vessels. The distance between the macula most sensitive photoreceptors to the circulatory system is bridged by water. Water uses the red part of the spectrum to deliver the sharpest part of vision to

the brain distally. It is also where Cold Thermogenesis protocol was born in my mind. Heated water shrinks and cold water expands and when you consider 99% of all molecules in a cell is water you begin to see why biologist are lost. Our mitochondria float in this water that should be condensed by the heat/IR light that mitochondria release when they fat burn. **You must understand Prigogine physics to get why life dances on the first two thermodynamic laws and this nullifies calories in and out paradigm completely.**

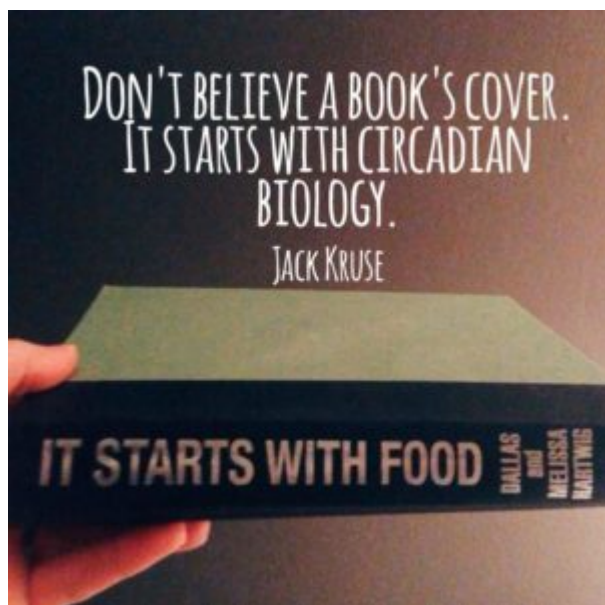
The whole pan of water, mentioned above, has been experimentally shown to eventually settle down to a regular honeycomb array of flow cells. Size and shape, all of a sudden, became a huge factor in my mind. It turns out Dr. Jody Nunnari showed the exact same thing in mitochondrial sizes and shapes in her electron micrographs. Before this science came to light, I had no idea why it was critical to time or to mitochondrial energy creation. Before this phase transition, we're all taught that all the molecules move randomly with respect to one another. However, at a critical rate of energy supply, the system self-organizes into global dynamic order in which all the astronomical numbers of molecules are moving in formation as though choreographed to do so. Energy from the sun is the conductor of life. This is what life does; so what else acts like this to explain this physics? In 1977, Haken described how a laser really works. It turns out, it is exactly how life operates in a cell.



Lasers are a more illuminating physical metaphor for the living system in cells. In a laser, energy is constantly pumped into a cavity containing atoms capable of emitting light. At low levels of pumping, the atoms emit randomly as in an ordinary lamp in your house. So low energy levels from our mitochondria simulate "disease like" states in cells. This is when we lose autophagy but ECT is still decent. This is what % heteroplasmy means to a "*mitochondriac*". As the pumping rate is increased for light, so is the systems energy level. Our body and its cells solar panels are pumping stations for a solar light. When this occurs, a threshold is reached in the laser when all the atoms oscillate together in phase, and send out a "*giant light track*" that is a million times as long as that emitted by individual atoms. The first laser was made using a simple off the shelf GE bulb and a small crystal of ruby. The room turned red and within a month that red laser could cut through steel all from a GE light bulb off the shelf. *So what could a cell filled with EZ, do with sunlight really?*

In life, when this occurs in a cell, the disease disappears, as energy levels rise and cells make a coherent ELF-UV source of light they retain. This is why all healthy cells release ELF-UV light that is consistent with the amount of ROS/RNS a mitochondrion make and they use it for optical signaling.

Cells that release far too much ELF-UV make diseases. This is how a laser is powered up and how your brain and cells are powered up by supplying a constant source of energy on demand. Both of these examples illustrate how energy input or energy pumping and dynamic order/information are intimately linked because of a coupled cycle. Negative and positive feedback controls all biologic systems. Circadian signaling is the most sensitive coupled cycle that controls autophagy and apoptosis.



This also points out to me, why circadian biology is huge in the physical design of cells. So how I see the first and second laws from medicine/paleo/etc is HUGELY different because they have a biologic lens on their beliefs, while I use the most fundamental scale of science to see how life does what it does. This is the massively important point of differentiation between us and shows you why the scale of science leads to 180 degree opposite viewpoints. Leadership always starts with thinking for yourself when your data is higher quality than what you were taught.

**As I always say, the mark of an educated mind is to take something you don't believe and examine it for yourself and then decide what is correct.** That is what I did ten years ago for myself. It was here, I erased all my medical education. I realized I had to become a quantized thermodynamic engineer to understand how cells work.

I know that biology has an epistemologic foundation in evolutionary biology. I also realized that all evolutionary biology is quantized by sun light. I did not realize that ten years ago. I need to prove that to the public now, not to medicine, the paleosphere, or ancestral health. Their viewpoint will never change because they are printing money selling half truths. They also are hamstrung, in my opinion,

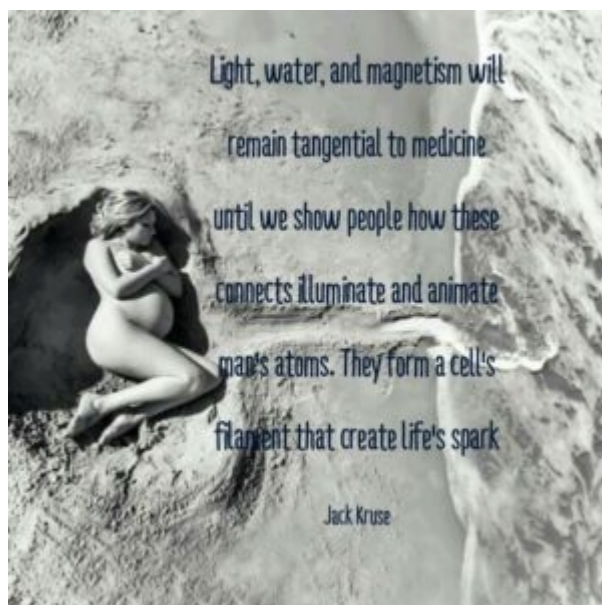
because how they see biology via the wrong lens. I really do not care who buys this viewpoint or not, because I know it works for all living things. I can tell you that there is enough published data to prove it already clinically. The problem is, those that need to read this data, will never get to it because of how we educate clinicians.

### **LET THERE BE LIGHT: THIS IS WHERE I BECAME ENLIGHTENED**

This is where Alexander Gurwitch's experiments change my point of view about Einstein and biology. In 1923, he did a simple experiment which showed that an onion cut on its root and rotated to 90 degrees could effect the growth of another onion by stimulating cell division. I was floored. He deduced by his experiments that light was emitted from the cut onion.

The light release was able to affect the other onion. How did he know the light was the force carrier to unlock time in the other onion? He put glass and quartz between the onions.

When he put glass between them he blocked the effect of growth and change. This work is covered in Roeland van Wijk's masterpiece book, *Light in Shaping Life*.



**Growth and change are synonyms for time.** It seems like growth needs things with mass to move life through morphogenesis because of these quirky ideas. The cell cycle is how biology

created time from light and from its own atomic lattice. Glass blocks UVA and UVB light. Quartz does not. He called this light mutagenic radiation. Today, we call it extreme low frequency UV bio-photons. For 100 years Russian scientists have studied this phenomena. All living things use this specific frequency of light to signal how the cell cycle is controlled. Not one thing alive, has been found to not emit this type of light. Light is the foundation of Einstein's work. He seems to have been unaware of what Gurwitch really found. (Roeland Van Wijk's book summarizes the Russian work since 1923)

Life emits ELF-UV light for a a specific reason. It is to create a timing mechanism to organize itself. Solar light organizes atoms in a cell and uses water as its conductor. Since life is built far from equilibrium and the universe's atoms are all contained in a similar system, the order can only manifest if there is a timing mechanism in place, or so we believe today. Light and the interaction of atoms was the key first piece in building the atomic clock in us called the SCN.

### **WHY DOES LIFE USE UV LIGHT TO BUILD ITS CLOCK?**

Time and gravity emerge from the collisions of atoms brought together or apart by light. Since blue and violet light bends the most under the force of gravity, it makes perfect sense why life uses it. **The bending of this light can become the reference point for which the arrow of time gets its direction.** Light collides with atoms in our retina to generate signals for our SCN to decipher seasons and light wave forms. A collision is a complex process in which particles exchange energy by resonance and continue in different directions. A collision can be imagined as a sequence of states related to one another by a resonant frequency. That frequency can then be used to select atoms to build things that also work with that frequency or its harmonics. The sun's collisions with Earth are what create



the Schumann resonant frequency of 7.83 Hz. That same frequency is made by thalamic neurons in every human brain. The atoms used in life all happen to be aligned around this resonant energy transfer idea. This is why most biologic proteins are limited to 25 or so atoms to build their atomic lattice. Why is this important? The atomic lattice in life has to be organized and constructed to release ELF-UV light to signal other living things. If this light emission is altered, signaling is lost. If too much UV light is emitted, time speeds up and life appears to die sooner. Our retina is blind to UV light emission, but biologist visualize the loss of light because when this occurs telomeres shorten in our chromosomes. If an ELF-UV light is contained within the system (cell), the system can control its growth rate to the ecosystem it is found within. This lowers the ubiquitin marking in a cells hydrated proteins. The ecosystem has a source of moving light and open systems of these recycling atoms at its disposal. As particles collide with light, and lights frequency is tightly controlled by cells, the collision created can give rise to binary and then higher order relations in time.

Light in the UV range was selected by nature for our cells to signal because it bends. Water inside cells (EZ) absorbs at 270 nm, but it absorbs best in the deep infrared range. 270nm is also in the UV range. This means that UV/IR light is the key to both regeneration and signaling in healthy cells.

Video hyperlink

That ^^^ is a must watch video.

Water is the most common biomolecule in living systems. Water works with DHA in all cell membranes and inside cells. Not all water in cells is created equal. This is how the cell membrane is built to decipher incoming light's signals. The atomic lattice of the cell will determine how time is created for the organism. Time is a function of the force carrier in

the molecular lattice clock in our eye and in front of every eukaryotic gene. **This is no longer a theory, it is a biologic reality of chronobiology.** Light photons are the force carrier for the electromagnetic force according to modern physics.

Why did life pick the UV range photons? It picked the lowest frequency, and most powerful part of the solar spectrum of light to innovate matter in cells called hydrated proteins.

Light sculpts life's proteins and protons to move charges to and fro. The physics of earth determined our evolutionary direction and the arrow of time. Purple light bends the most under the force of gravity, and this form of light allows life to exist on a collection of atoms which act as programmable quantum dots.

Life cannot exist where matter does not coalesce under the sun's power in some way. Even life at the bottom of the ocean senses the sunlight. How? The magnetic flux of the planet is fed by the solar wind to power the magnetosphere to create the dynamo inside of Earth. That dynamo melts the mantle and creates magma in the ocean floor to make black and white smokers that release IR heat and chemicals for life at the sea bottom to use. Life always finds a way to capture the power of the sun. If this offends your common sense, good. That is nature's goal. This implied that the atoms that life could use to animate itself also had to be in the lower energy levels of the periodic table of elements.

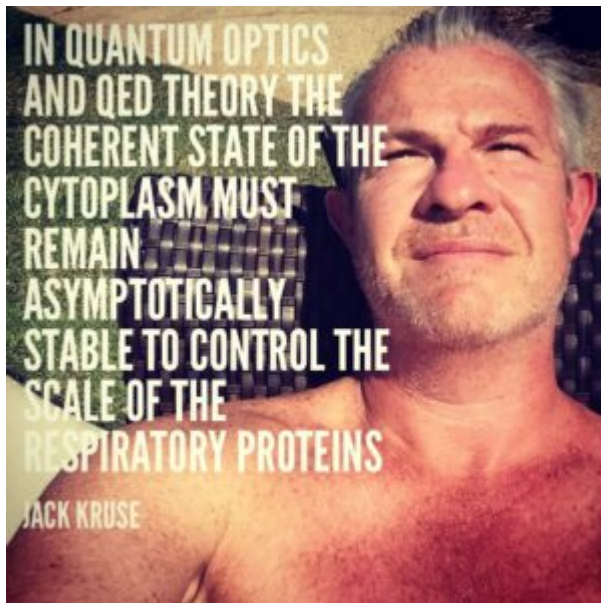
This is why the first 30 elements of the periodic table of elements form 99% of biologically evolved molecules. It should also be intuitive now why the periodic table of elements is also quantized to light. All atoms have a spectral color or signal. That color corresponds to the frequency of light it is capable of emitting. Hydrogen is the most common element in the universe and it is the most common element in biology on Earth. It happens to also have a spectral color in the blue and purple range. This marries to the UV bio-photons life uses to signal and it marries perfect

to where water absorbs electromagnetic radiations at 270 nm.

Roy Glauber of Harvard University realized that with the invention of the laser and the detectors capable of sensing a single photon, a more complete quantum theory of light was needed. One single photon can control many atoms. His theory, published in 1963, explained that photons are not entirely independent objects and that detecting a photon from a light beam affects the probability of detecting another photon. His theory marked the birth of the field of quantum optics, which led to a wide range of advances, such as a type of optics-based cryptography that has already been used for some bank transactions. Glauber shared the 2005 Nobel Prize in physics for his work. My bet is that Glauber's work will revolutionize neuroscience and medicine one day when we remove our heads from our asses in biology. Light and atoms are the fundamental building blocks life uses to organize.

### **Light and atomic interactions build biologic time.**

Society, like atoms, exist in an open system or field. Society like biology, is designed to be far from equilibrium so it can harmonize with nature. Technology is uncoupling that relationship of how energy flows from an ecosystem to humans. How can any life form exist with all its complexity and richness? When you see your family at Christmas and on the fourth of July at a gathering you recognize them immediately. What is shocking is that modern science has proven that not one of the atoms on their face in December remains in place in July, but that level of change is not perceived or observed. Today, we can tag atoms with quantum dots, and show that every protein in the body turns over. **What is a quantum dot? It is a really small piece of matter that can change light's color into any other color.**



Light alters the small piece of matter by altering its size. Size sets the color and color equals a frequency shift. In a quantum dot, there are both negatively charged and positively charged particles that are missing electrons. The electromagnetic force controls these charged particle with unbelievable quantum precision. The attraction between the electron and hole creates a quantum state with a very strong light-matter interaction and a quick release of light. This is why cells release ELF-UV.

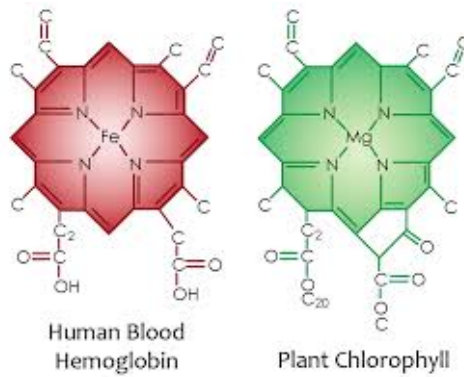
Quantum dots have shown us some organs in the gut, like the liver, turn over several times in that 6 months. The liver is an organ created to mimic the sun's behavior. This is why it has the most mitochondria of any gut organ. Living creatures retain their form and function in spite of this remarkable diversity found in atomic recycling. Modern doctrine in biology says that the chemical make up of tissues is directly correlated to physiologic function. Biology today, fails to provide an explanation how a structural permanence persists while this massive change is ongoing

### **SUMMARY:**

Why do we think all discoveries must manifest by rational

thinking? The divergent mind sees new things in concepts no one has thought yet. I learned this from Einstein, before I divorce his ideas of time. Never throw the baby out with the bath water. Today, I used my own ideas to divorce them from his to see something in nature he might have missed. **Light, bends most in the UV range.** That is an ideal very accurate way to build a clock, a circadian clock. That clock can be used to control the second coupled system in biology, called the cell cycle. The third coupled cycle is the metabolic cycle where foods come into the equations. Light is the most powerful drug in evolution and in biology. food cannot come close to its power because it cannot be used to create time ordering. Food manifests by the light it receives in its atomic lattice. It can be altered under the power of man and its choices. Animals have no control over this, but man ruins it constantly because of his invented light.

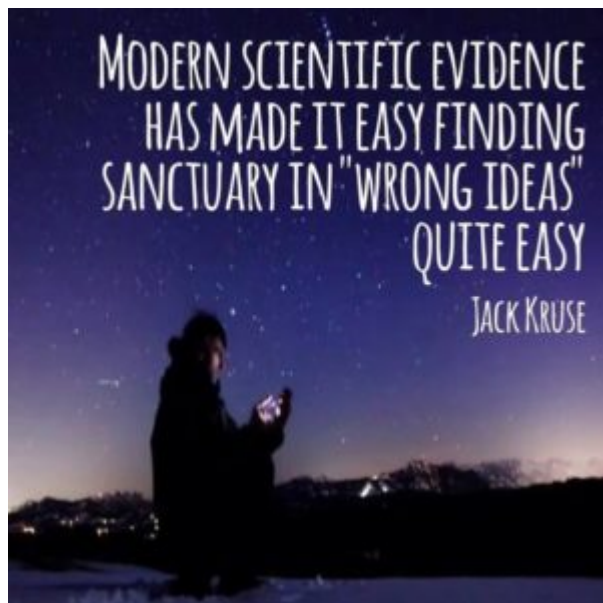
This power was the crack that allowed us to break down the timing mechanism that life uses to order ourselves to the sun's light through our atmosphere where nitrogen and oxygen dominate. That collision in the atmosphere is where the first creation of timing began. Light and nitrogen collisions are the basis of ubiquitin rates. Ubiquitin is ubiquitous for a reason. Sunlight has been ubiquitous on Earth for all of its history. This is why life is built around sunlight. Plants have 4 nitrogens around magnesium in chlorophyll to create energy from sunlight. Animals have 4 nitrogens around the iron to bring oxygen to our tissues. There is a symmetry in life and it is built around the asymmetry of space and time. Space, by its structure, is reversible. Time, by its structure, is irreversible by design.



Here you can see the atomic lattice of nitrogen around different metals. Nitrogen electrons are excited by sunlight and this energy is used by the metal inside to create electric currents from sunlight frequencies.

This idea of time is consistent with Godel's theorem. That theorem states, it is impossible to give detailed, comprehensive and comprehensible descriptions of nature. Most natural systems are irreducible, which places profound restrictions on the inherent reductionism of modern ideas.

This is why I now reject most of evidence based medicine. It requires reproduction of data, when simple observations of nature show you that everything on this planet is about  $N = 1$  collisions of atoms and light. These things can be altered constantly by man's introduction of manufactured light, therefore, what Weston A. Price found in outdoor hunter gatherer's cannot be compared to any metabolic ward study in medicine. to say other, shows your ignorance of physical laws around light.



These situations are never the same no matter if we perceive it or not. The proof in the pudding is the collision result we call time. Time, or the collisions of atoms are a function of the atoms in our biologic lattice bound together by the light affecting them. The higher frequency of light we allow our atomic lattice to face the quicker time elapses and sooner life ends. Life was meant to be based upon the lower end of the frequency range because the interaction of the sun's light with Earth, created a frequency of 7.83 Hz. That frequency determines why the blue light was chosen as the optimal signaling frequency of life and why blue things are rare in nature. The light emitted by living things must remain in the ELF-UV range for life to live well. When other light frequencies are released from a cell.....a cell is ill and the time it experiences to speed up and life ends sooner than it should.

Why do we think all discoveries must manifest by rational thinking? The divergent mind sees new things in concepts no one has connected to the whole, yet. This is what makes innovation special.

The progress of science depends on a finely tuned balance between open-mindedness and skepticism. Be too open minded, and you'll accept wrong claims. *Be too skeptical, and you'll*



*reject genuine new discoveries. Proper skepticism must be careful not to throw the baby out with the bathwater.* It is similar to the loss of feedback control in a far from equilibrium system. This is where modern biology is today, stuck in a genetic paradigm of understanding when the environment and light exposure is the key driver of optimal health because of how a mitochondria operates.

Light is the most powerful drug for longevity and optimal health because it controls circadian biology which controls how electrons and protons are handled in a mitochondria.

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