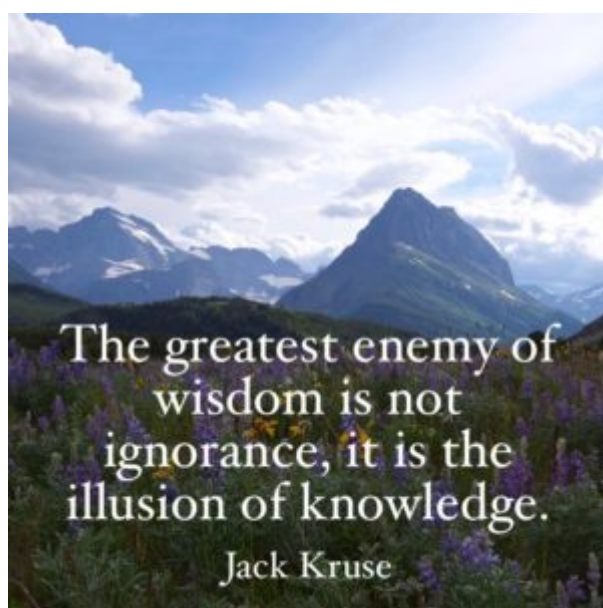


TIME #23: DNA CODES FOR A QUANTUM EVOLUTION

THE BLOG TAKE HOME: Light does not have to obey relativity in the vacuum of space. It's speed is constant everywhere it can run free. Topologic insulators are trappers and transformers of sun light on Earth. This is why life manifests on this planet. When light becomes trapped in your tissues, for the first time light speed becomes relative to tissue density and this alters the optics within proteins. How much do you know about linear optics? How about non-linear optics of cells?

DNA structure functions as an overlapping code to the DNA sequence. Rapid progress in understanding the role of DNA structure in gene regulation, DNA damage recognition and genome stability has been made in the literature now. This has cast major doubt on how natural selection can change species or build complexity based upon new data. So why does just 3% of DNA code for proteins? What does the other 97% do?

Is "junk DNA" a control manual for how light can affect proteins to allow life to manifest in some way science is missing?



NEO-DARWINIAN FAILURE:

Human 'junk' gene sequences can promote translation of proteins made by the DNA code. These translations are then modified in the endoplasmic reticulum which is directly linked to the mitochondrial energy sources. As energy levels drop it affects how protein side chains are added, subtracted, and altered. The neo-Darwinian paradigm cannot EXPLAIN these realities that destroy the cornerstones of Darwins version of evolution which has at its pillars of support: gradualism, materialism, and reductionism. The paradigm of neo-darwinianism cannot explain speciation in living, the rapidity at which it can occur, nor can it explain the complexity in the eukaryotic tree, but "junk DNA" contains an owner's manual for how it can happen. How many more studies need to be published about the importance of non-coding RNA before we stop calling it "junk"? Once again, this largely-ignored area has been found to have regulatory functions for proteins. Why would this arrangement have been the preferred choice of evolution? That is the question to examine in today's blog.

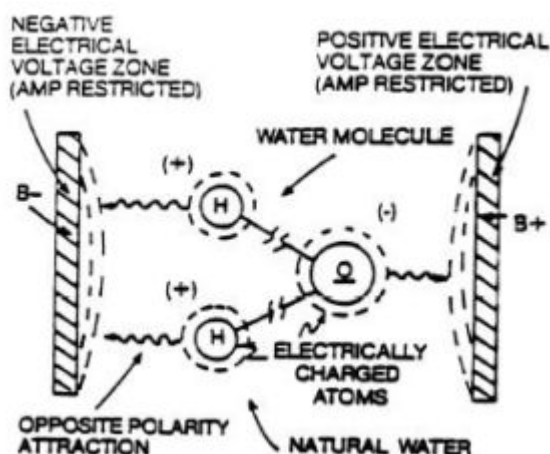
The three dimensional structure of both proteins and DNA plays a crucial role that control speciation and complexity using electric fields and polarization of light. What determines these specific interactions is remains to be discovered in the literature but this blog talks about the likely mechanism. It is clear proteins have the innate ability to recognize the chemical signature of DNA linear sequence ("base readout") as well as the intrinsic DNA structure by "shape recognition".

These recognition mechanisms do not exist in isolation but vary depending upon a vast amount of environmental variables.

These variables are monitored by unique crystalline physical phenomena that are determined by atomic arrangements and a constantly changing electromagnetic environment. This changes tissues optics and this can lead to rapid speciation and massive increases in complexity quickly. These rapid changes are also direct assaults on the gradualism that is built around "natural selection theory". These changes explain a quantum evolution where conditions of the existence are the

most important factor in the the evolution of life. It is clear when one looks closely at protein structure that depending on the individual interaction partners, the results always are non linear and can be combined to various extents leading to massive diversity. It is now clear that the driving force for the interaction between protein and DNA remain the unique thermodynamics of each individual DNA-protein pair and how sunlight drives that process.

The design process of life begins with the DNA code. Biology today is a detailed, disorganized collection of disparate facts. It is like a hoarder's basement, or a rat's nest. There is no connecting design of what is buried in DNA's code. You can scoop up a bag full of facts and try to make sense of it, but that would be an exercise in futility. *True knowledge is fractal and non linear.* The design can be complex, with microscopic details, but the overall design is coherent and beautiful. **To make large collections of proteins coherent you need to link them together electrically.** This idea implies that cells have *some electric tuning ability built into their protein structure.* Today's blog is about some of these details.



DNA only codes for proteins. Protein structure is the three-dimensional arrangement of atoms in a molecule. Proteins are polymers of specifically polypeptides formed from sequences of amino acids that the linear DNA code provides. The code of

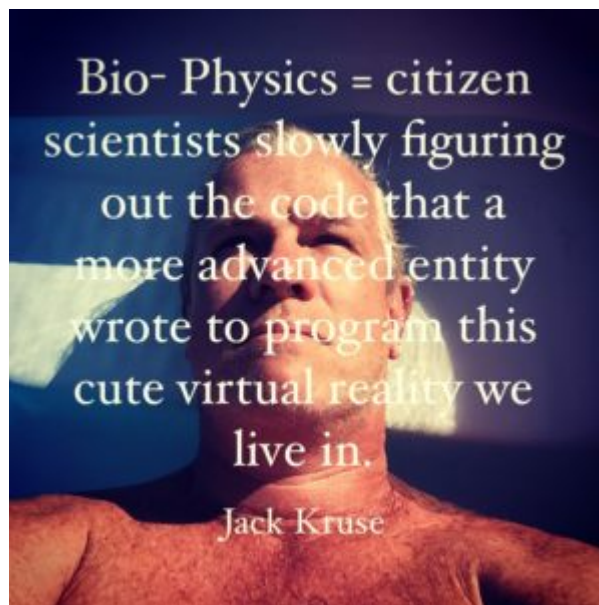
DNA, however, has many other electronic codes contained within it. Watson and Crick did not understand this in 1953 and many in biology still are stuck on their old ideas. Modern epigenetics and transposons have shown us that Watson and Crick's ideas about DNA are outdated. This implies that the DNA code and proteins it makes, holds the clues to a "*quantum evolution*."

Proteins have 4 levels of structure to them:

1. The *primary structure* is held together by covalent bonds such as peptide bonds, which are made during the process of protein biosynthesis and is 100% tied to the "linear code" of the amino acids.
2. Secondary structure refers to highly regular local sub-structures on the actual polypeptide backbone chain. Two main types of secondary structure, the α -helix and the β -strand or β -sheets. These secondary structures are defined by patterns of hydrogen bonds between the main-chain peptide groups. They have a regular geometry. Again, the DNA code provides this structure within its linear code. These first two geometries is all that is conserved in protein structure and they are related to the basic thermodynamics that have been present on Earth for 4 billion years and this is why they are highly conserved. These two structural geomtric features link to the primoridal conditions of how light, water, and magnetism interacted on the ancient Earth to cause a quantum evolution. Early in the Earth life, the sun was 25% less powerful than it is today because it was a younger star. This affected its spectral density of frequencies. As such, the DNA could not control the teritiary and quanternary proteins stuctures because sunlight is what powered changes to living things by changing the electronic structure on proteins. This is how light became the cosmic wand of natural selection. The change in the conditions of existence is what

caused this change.

3. *Tertiary structure* refers to the three-dimensional structure of monomeric and multimeric protein molecules. The α -helices and β -pleated-sheets are folded into a compact globular structure.
4. *Quaternary structure* is the three-dimensional structure of a multi-subunit protein and how the subunits fit together. In this context, the quaternary structure is stabilized by the same non-covalent interactions and disulfide bonds as the tertiary structure.



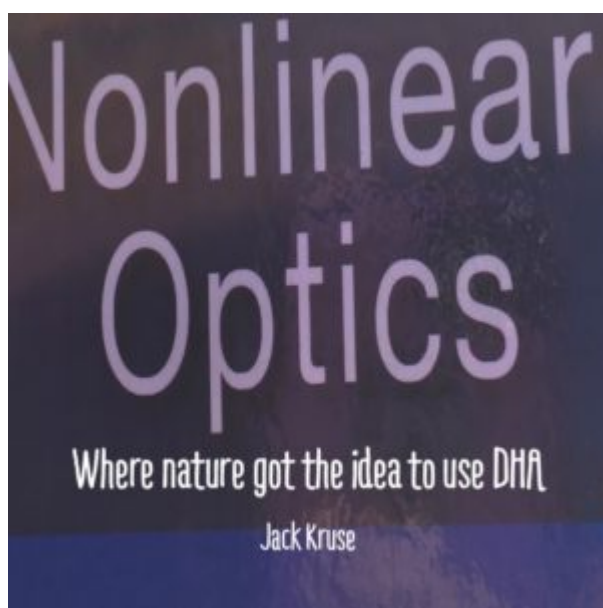
We need to understand something critical about light. Photons obey the principle of superposition and consequently a beam of light that travels in a medium without exchanging energy with any other beam that maybe traveling in the same medium at the same time. This implies that there is “no cross talk” between light frequencies, and hence, no interaction or mixing, as a beam of photons cannot control another beam of photons.

However, there is a way to change these physical features in light. How? You have to use non linear aspects of light to do this and not all parts of the visible spectrum is capable of acting in non linear fashion. Optical non linearity makes it possible to have such an interaction that can lead to energy exchange between light beams propagating in tissues

simultaneously if the **MEDIA is optically suitable**. This is the key biology is missing.

WHAT CONSTITUTES OPTICAL SUITABILITY?

This is the reason why DNA only codes for “suitable media” we call proteins. Those proteins that make up with tissues only work with the specific frequencies of sunlight that fall to Earth (260-700nm). The key to this puzzle is realizing and understand that with bright light, ordinary optics gains the ability to act and become a non-linear fiber optic communication device for cells. *This implies that in the right spectral density, at the right time, everything can become extraordinary using light.* This is why most religions origins tend to begin with a story about how light is somehow special. Ironically, modern physics also begins its story with fable about light. This means that the biblical saying, **“let there be light”** might be consistent in some way with scientific theory of the Big Bang. Why do I say this? Once there is light, there had to be optics. And where optics exists, Einstein came along and said, optics must be quantized, and then photonics was born. Photonics is the branch of physics that deals with **non linear aspects of light**.



This raises a key question, ‘what is the response of a

material (proteins) when it is placed in an optical electromagnetic field?' Essentially this is what the tissues of living things do under the power of sunlight. To answer this question we need to consider the effect of an electric field on an atom. The electric field action only can occur on the positive and negative charges of atoms to distort the electron charge distribution in the atom. The primary measure of this distortion is called the electric dipole moment. The Earth also has a dipole moment because of our magnetic field as well. The sun and Earth's photo-magnetic past was not fixed, but varied, and this dynamic physical reality is built into the protein electronics of the tertiary and quaternary structure of proteins side chains. Geologic and astrophysics have documented that the dipole moment of Earth's magnetic field has decreased by nearly 9% over the past 150 years and by about 30% over the past 2,000 years according to archeomagnetic measurements. This means the energy it contains has always been variable. The sun's spectral density has always been assumed to be constant, but today we know that old belief is also not true.

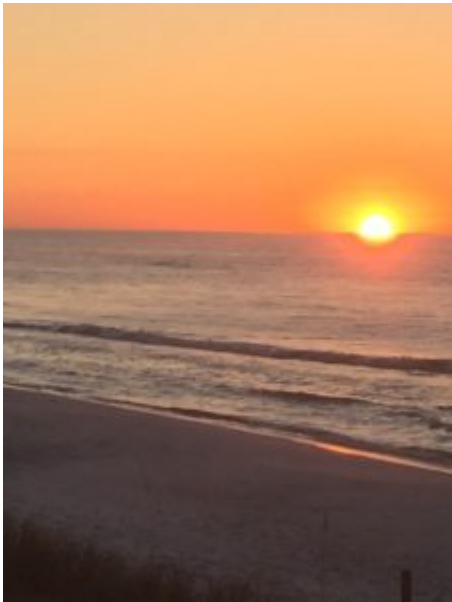
Since its birth 4.5 billion years ago, the Sun's luminosity has very gently increased by about 30%. This may surprise some of you. The Sun is known as a yellow dwarf star. The official designation is as a G V star. Stars in this classification have a surface temperature between 5,300 and 6,000 K, and fuse hydrogen into helium to generate their light. They generally last for 10 billion years. But there's more to this question, because G V Stars can experience several different stages of life. Some are newly forming, others are in their middle ages, and others are nearing the end of their lives. Our Sun is middle aged, in a time known as the main sequence. It has already lived for 4.5 billion years, and will likely last another 7 billion years or so.

The Sun also belongs to the Population I group of stars, which contain relatively large amounts of heavier elements. This

also makes our sun unique, and the light it produces very dynamic. The first ever stars, made from pure hydrogen and helium are called Population III stars. These exploded as supernovae, producing fusing the lighter elements into heavier and heavier elements. Our Sun, then, contains the metals from previous generations of stars that went supernova to create a very unique type of light.

I tell you this story about our sun because it explains the inevitable evolution which came about on Earth because, as the billions of years roll by, our Sun is burning up its hydrogen in its core. The current in vogue belief of this process is tied to the fusion model of the sun. I have a sense that model is incorrect and an electric solar model is more accurate. The electric model also predicts a varying luminosity as time evolves so the details why I feel this way are not important for this blog. As the hydrogen burns it leaves helium "ashes" behind that are more dense than hydrogen, so the hydrogen/helium mix in the Sun's core is slowly becoming more dense, thus raising the pressure. This causes the nuclear reactions to run a little hotter. As a result, the Sun brightens as its lifespan evolves with time.

This lifespan trend of a varying luminosity has to be mirrored by electric field changes on living things on Earth surface. The key fossil of this Rosetta stone of sunlight's varying luminosity is buried in the protein side chains in living things which have allowed life to adapt with these environmental changes.



This brightening process of our star moved along very slowly at first when the sun was young, when there is still ample hydrogen remaining to be burnt at the center of the sun. But eventually, the core will become so severely depleted of hydrogen fuel that its energy production starts to fall regardless of the increasing density. When this happens, the density of the core begins to increase even more, because without a heat source to help it resist gravity, the only possible way the core can respond is by contracting until its internal pressure is high enough to hold up the weight of the entire star. Bizarrely to many scientists, this emptying of the central fuel tank makes the star burn brighter, not more dimly, because the intense pressure at the surface of the core causes the hydrogen there to burn even faster. So as a star in the G V category ages, it gets brighter. Bright light is a requirement for non linear optics to occur. In the beginning, the amount of bright intense light was not present. The fossil of this solar fact of life was left in the biology of bacteria and archea, the oldest known living things left on Earth. UV light is their kryptonite even today. Back at their birth, *there was not as much UV light and this also explains why bacteria and archea do not have the machinery to use the non linear aspects of light. It means they could never become complex because they had to rely on linear*

optical programs that use less luminous light to exist.

It appears these variations are built into proteins life uses on Earth. Just about everything on Earth uses 20 specific amino acids that likely were selected because they work best electronically with boundary energies of our solar and magnetic spectrum on Earth.

These interactions begin to explain why DNA only codes for proteins that operate in these specific ranges of electronic energies. Proteins are larger models of a school of electrons and protons that generate electric fields. In this way, we can think of proteins like we view a school of fish swimming coherently. They all work together under the control of sunlight. **Proteins have side chains that recapitulate the positive and negative charge distributions we see in atoms which also act to distort the electron charge distribution in the proteins.** These two variables are highly conserved and magnetically stored by the DNA code in both primary and secondary protein structure. *Proteins are modular electronic antennas that work best with our varying solar density and our magnetic flux by allowing their many charged side groups to change their electric field by rearranging their atoms using light in novel ways in tissues by polarizing them.*

Perhaps the biggest misconception in physics and biology is that polarization just involves the charging of an object.

Polarization is not a charging phenomena, it is a changing of size and shape of things by moving electron clouds in those things. When an object becomes polarized by light, there is simply a redistribution of the centers of positive and negative charges within the atoms of protein that makes us up. This changes how light can optically and magnetically work its "magic" in tissues. This occurs by the movement of electrons across the surface of the protein (as is the case in conductors) or through the distortion of electron clouds (as is the case in insulators/DHA). Polarization effectively

alters the geometric center of positive and negative charges.

The charges become separated from each other. The distances between the charges is the key to understanding how life make time in the respiratory proteins. These small changes cause the size and shape of proteins to alter. Shape and size changes directly link to the inherent thermodynamic abilities coded for in proteins. **This is how the quantum world of light meets the thermodynamic ledge of DNA.**

Polarization is an important parameter in areas of science dealing with transverse wave propagation (light), such as optics, seismology, radio and microwaves. Especially impacted are technologies such as lasers (TIME 21), wireless (DNA) and optical fiber telecommunications and radar. This is why all nnEMF can effect polarization in living tissues because it effects the flow of electrons in proteins and lipids.

My time 21 and 22 blogs were previews into this science. This hyperlink shows you some interesting effects of laser light as it traverses tissue. A laser's light just travels along a path and gradually expands in size, doesn't it? I found out this was not so. If a laser is powerful enough, the beam gets more intense, generating optical rings that allow energy to flow through the inside of the ring and loop back to the outside. My recent webinars all tackled how cells have the ability to use these non linear aspects of light. The key to understanding why only 3% of DNA codes for protein is to understand how the 97% of the so-called junk in DNA controls the protein codes to make precise the first two bends of protein stucture. What controls the last two structural variations is what protein make what type of laser light emitted from semiconductive protein or insulator lipids.

The small changes in polarization by light can alter a proteins optics by varying the size and shape in proteins.

The less moving parts life needs to assemble, the more reliable control we have on a weight to power ratio. It appears life originally only needed the first two protein

structures to innovate. More complex life uses the last two protein structures and non linear aspect of light to innovate more solutions to a varying light environment. This is why the DNA code only codifies the first two geometries of proteins, but is built to have the last two subject to the effect of polarization. The first two controllers in proteins "set the floor" of action on the surface of Earth. This 'floor' represents the linear aspects of light. The last two controller antenna's determine just how complex life can become. The first two structural codes of protein cannot enable the non linear aspects of light to manifest in life.

To employ those non linear effects, light has to meet a MINIMUM power, luminosity, and intensity. **UV light has the brightest intensity of any frequency of light that comes to Earth surface.**

In the beginning of Earth's history ***we know solar light on Earth was 25-30% less bright when the sun was younger*** (Cite 2). This means that UV light was not as prominent then, as it is today. Simple life could live on this version of life but complex eukaryotic life could not. This is why the biologic record shows bacteria and archea where the origins of life and remain largely unchanged to present. As the sun aged and matured it powered up, by increasing its spectral density in the UV range. As a result, the Earth began to become irradiated by a new spectral density of sunlight. My bet is this occurred very soon before the Cambrian explosion. The aging sun increased the quantum yield on Earth because of the life span of G V stars. I believe this is when photosynthesis really took off 650 million years ago to make massive amounts of oxygen and DHA in the seas to set the table for eukaryotes to explode at the Cambrian explosion. Bacteria and archea growth is stunted by UV frequencies of light, even today. The change in spectral density of sunlight was the environmental stimulus that create a niche in the ocean for photosynthetic algae to make oxygen and DHA in the ecosystem soon thereafter to set the table for the Cambrian explosion 585 million years

ago.

By codifying these aspects of light into the antenna electronics in protein side chains, it allowed cells to perform physiologic work on the smallest stages, with as little as energy expenditure as possible. As the sun increased in power, it slowed growth in the first two kingdoms of life, but it fueled the growth of complex life in the third kingdom of life. Our ancestors are members of that kingdom. This is why tertiary and quaternary protein modifications are critical in eukaryotic life. This arrangement allows optimized size to power ratios to scale to how tissues solved life's thermodynamic challenge by using the spectral density of sunlight as its guide. This explains why eukaryotic cells are larger and more complex and can adapt much more rapidly than biology currently believes. How? What is the mechanism?

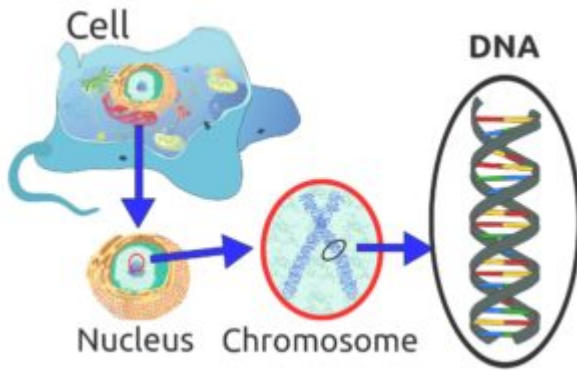
ANTENNA FUNCTIONS

The dipole moment is the first moment of charge distribution changes that occurs in molecules. An isolated atom doesn't have a permanent dipole moment, which implies that its center of negative charge coincides with the center of the nuclear charge. This is likely why the DNA codes for proteins and does not use atoms. When we apply an electric field (sun or magnetic field flux) it brings about a shift in the center of the negative charges to the nucleus to change the shape of the electron clouds. Light only interacts with electrons so this change in the pi-electron clouds changes how light can affect living things.

In linear optics, the dipole moment that is induced is proportional to the electric charge on protein side chains.

This is why DNA does not code for atoms but codes for proteins exclusively. **Mother Nature decided early on in her design that coding for collections of atoms, in protein form, would be best to build a polarized antenna system that could be used for a precise wireless communication system to respond**

to this dipole moment capable under sunlight's power.



The choice was made because there are *more possible charges* are present in a protein than in individual atoms. ***As such, DNA only codes for proteins and the first two structural components of protein structure are contained in the linear DNA code and they respond to the LINEAR aspects of light. This is why bacteria and archea have many of the same genes more complex life has.***

DIPOLES AND POLARIZATION LINK TO SUNLIGHT AND MAGNETIC FIELDS

Water has a normal magnetic dipole moment of 1.85 Debye. Polypeptide chains in the α -helical configuration (collagen) normally have enormous dipole moments. They are upwards of 500 Debye because the individual moments of the peptide bonds are all aligned properly because of the electric polarity in organisms. The heads of animals are negative in charge and their tail/foot region is positively charged. This polarity is very important for the use of light in non linear ways, optically and magnetically. The Earth has its own dipole moment because of its star's spectral density and its innate magnetic field; this dipole moment of the planet directly effects the optical ordering of water and proteins dipole moments within cells. This is why all cells have hydrated proteins to operate. Most solution biochemistry is studied without this relationship being intact, hence why solution biochemists remain ignorant of how light and amgnetic flux

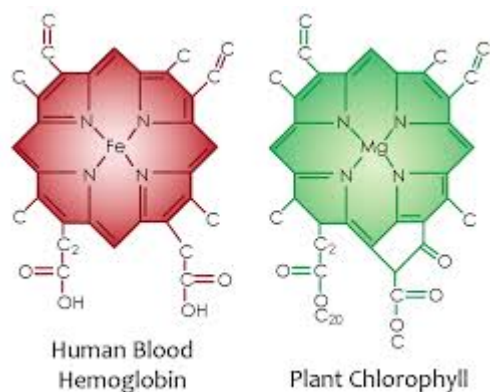
can seriously effect solid state biochemistry as the environment varies. ***These are the main drivers of a quantum evolution.***

What many do not appreciate is how light and the magnetic dipole of the Earth scales to the cellular level. When we lose electrons from our proteins, for any reason, we lose magnetic moments on protein side chains and this alters their electric fields. Any change to the electric field of proteins alters the non linear optics that are possible in tissues. This is why population geneticists have estimated that the Earth has hosted 30 billion species over 4.5 billion years but we only have data on 250,000 species in the fossil record. *This means Mother Nature is the biggest mass murderer in history.* This implies only 1/120,000 species have survived the changes on Earth to be discovered by humans. When we lose magnetic moments in our proteins, their ability to act as semiconductors that can liberate laser light of varying abilities that can affect protein structure and change physiologic function and alter morphology quickly. In my opinion, a quantum evolution is what drives this massive speciation and complexity. (Time 21). This explains what neo-Darwinianism cannot. Why?

The ability to liberate light from biologic semiconductors can effect the local electric field transiently around proteins to change its optics. Those optical changes require no genetic changes. This is why some insects have the same genes as humans. This perspective is alien to Darwin's evolution. It also explains the major holes still present in evolutionary theory. These ideas do not invalidate evolution, it just shows you how it happened is not as Darwin envisioned. Evolution is definitiely a part of life's blueprint.

When cells work with laser light, their optical response of the proteins can be expressed mathematically by equations that shows a serious expansion of the polarization power in the electric field of tissues. **This generates various "electronic**

susceptibilities" that correspond to linear (primary and secondary structure) and non linear optical polarizations of the proteins. *The tertiary and quaternary protein structures link directly to the generation of non linear aspects of solar light and magnetic flux's physical attributes to alter its current form and function.*



The peak brightness of the modern solar spectrum is in the green when plotted in wavelength units. This is why chlorophyll was selected for by photosynthetic algae and plants before eukaryotes showed up on Earth. Our sun peaks in the near-infrared when plotted in frequency units. Many people do not realize this, but it explains why eukaryotes use hemoglobin and not chlorophyll and why cytochrome C oxidase and the ATPase are optimized toward this frequency. Therefore the oft-quoted notion that evolution led to an optimized eye whose sensitivity peaks where there is most available sunlight is misleading and erroneous when you really inspect the data on sunlight. It is likely that we are viewing the world (with our eye camera) with a souvenir of the human evolutionary voyage because of a long history of a varying solar spectrum and magnetic field.

This raises the question what is the order of the magnitude of the shift of charge distribution in proteins? *The order is set in the spectral density of sunlight and water.* There is mathematics that show these relationships in optical science, but they are not important here for this blog. What is important is that electric field powers protein side chain

displacements and acts as antenna's for the Earth and sun's energy flow. This orders the electronics and set the polarization in tissues. It also links the electric field of the sun and magnetic field to when dielectric collapse occurs in hydrated proteins.

When water is heated, water under goes a **blue shift** atomically. This would occur at daytime when blue makes up $1/7^{\text{th}}$ of sunlight. All proteins are hydrated. That shift changes the electronics around protein side chains to affect polarization in tissues. Each tissue will have its own electronic signature born by its side chain's electronic fingerprint in certain light. This light effect is very similar to Chernakov effect we see in the water of nuclear reactors. When water is cooled water undergoes a **red shift** and this changes the electronics around proteins in different ways. Almost 40 % of light that falls to Earth is in red frequencies. This occurs at sunrises, sunsets, and at night time. Cytochrome c oxidase and the ATPase are finely tuned to these light frequencies in our mitochondria.

The key for you to realize is that the underlying protein does not change at all, but its electronic fields around its side chains do change their charge distribution between night and day. That is what Mother Nature pays deep attention to to innovate life from light, water, proteins, and magnetism.

When that charge distribution changes, photonics dictates what non linear effects of light can occur or cannot occur.

The quotient of this interaction is fully capable of changing the phenotype of the organism without any underlying genetic changes being necessary. **This is why DNA does not code for tertiary or quaternary structure. The junk DNA offers that controlling arm with its connection to mitochondria and the endoplasmic reticulum via the outer mitochondrial membrane. This is Mother Nature's life antenna.**

The environment is designed to alter that light antenna to

give tissues information of energy status of the environment to optimize tissue optics in cells. That is where speciation and complexity come from in a quantum evolution. This gives water a built in doppler effect with respect to temperature to determine the flow and direction of light within tissues and cells.

SUMMARY:

Beautiful mosaics in life are made of proteins that designed to be altered, broken or torn to create time allowing life to manifest.

Society, like atoms are open. but humans are modular built of proteins with quantum electronic antenna's. Those proteins were designed to operate far from equilibrium under a varying solar luminosity and magnetic flux so life could harmonize with nature as it changes. **Technology is now uncoupling that electronic relationship of humans to its ecosystem.** It never starts with exemplars. In fact, it is exactly the opposite. Facts are all relative to the lens you see them through and that is the biggest point where I differ with modern biology. Where you see food and exercise as a solution, I see electrons and photons as the ultimate Rx because nature uses them in protein substructure. I am no longer interested in the biologic science that focuses in on the wrong characteristics of life to make sense of their theories any longer. All it does is waste time, and mankind is on borrowed time already.

Kaizen is the art of continuous improvement and this is the major tool your proteins use to fine tune your cells on their evolutionary journey. **Never waste your time trying to explain who you are to those committed to misunderstanding you.**

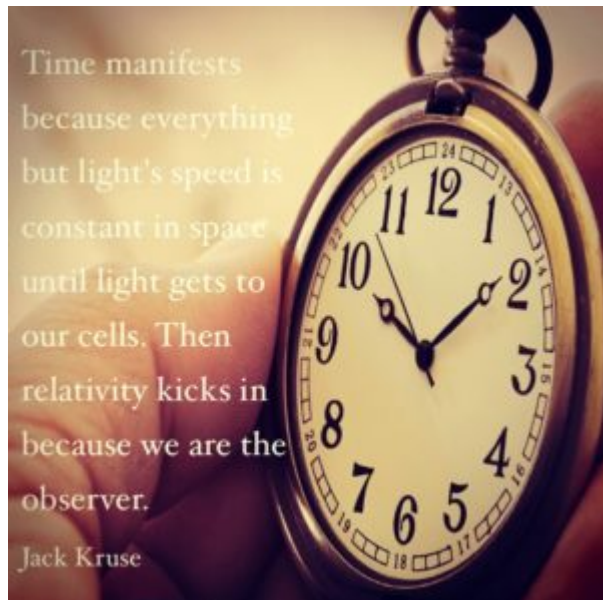
I think these concepts, today, are far beyond medicine and ancestral health's current understanding. I think with time, I will be found correct. I might have some details wrong, but the big points will be on target. Any food first paradigm sees

the world in way that will never let them grasp these concepts; therefore they will mock them because they do not understand them. People can only confront past theories with the knowledge they believe to be true now, while quantum biology asks how does light specifically interact with organic matter to allow life to respire.

You must expand your grip of this science or risk falling from the cliff. The paleo solution is a neolithic conclusion, I believe, where some got tired of thinking about our origins and how we work in nature. The fact that an opinion (food) is widely held to be true by a majority, is no evidence that the theory is true. In fact, whatever that theory is, a widely spread belief is more likely to be foolish than sensible. I see Darwin theory of evolution and dietary dogma from this perspective today. Because of a "myopic perspective", these groups have just looked back a short time in evolutionary history, instead of all the way to the most fundamental beginning. A "*mitochondriac*" looks back to 4.5 billion years to see why a quantum evolution would have stolen a bacteria to force it to change its optical biology using light as a controlling lever. Light can change atoms in ways that of biology remains ignorant of.



When the focus in healthcare has an “evidence bias”, no one remembers what the research questions were, nor do they recall if the research questions were the right ones to ask. This is why we are lost in medicine today.



Light does not have to obey relativity in space. It's speed is constant everywhere it can run free. ***Topologic insulators are trappers and transformers of light from the sun.*** When light becomes trapped in your tissues, for the first time light speed becomes relative to tissue density and this alters the optics within proteins. Therefore, trapped sunlight makes our surfaces relative, and that relativity changes the space/time of our cells and tissues. Sunlight shifts blood into the skin by changing polarization in tissues that allow for dermal pooling due to molecular resonance changes in eNOS and NO. More than 50% of your blood volume can change your skin surface when specific solar spectral density is present. This can lower your blood pressure and it raise your sulfated vitamin D₃. It changes the anatomical structure of the skin by changing the optics of surfaces. It becomes a sensory stimulus for the interoceptive system to induce biochemical substrates via photosynthesis in plants and changes in the ATPase using red light and water in animals. Sunlight increases sulfated Vitamin D₃, histamine, and sulfhydryl groups, while lowering

(photolysis) adrenalin, steroids, testosterone, estrogen, thyroid hormone, DNA and RNA.

Sunlight induces biochemical reactions via photolysis and it induces coordinated endocrine adaptation effects in the eye and the skin surfaces. It affects the sympathetic and parasympathetic systems. It is the stimulus for the circadian timing mechanism of the body clock via the central retinal pathways. All these effects are built into the electronics of your proteins under solar power and magnetic flux.

Simplicity is ultimately a matter of focus and vision when you are trying to understand how diet, evolution and the laws of nature work in unison. The eye sees more than the mind can comprehend, and we go through life self-blinded to much that lies before us. Simplicity is a great virtue but it requires hard work to achieve it and education to appreciate it. And to make matters worse: complexity sells better in today's world. *Every modern convenience comes with a severe health sacrifice with time.* We need to become entangled with nature and her rules for health.



Simple can be harder than complex: You have to work hard to get your thinking clean to make it simple. Life, itself is

simple, but no one has every said it is designed to be easy. Once you embrace nature's simplicity you begin to sense its worth. In the end, once you get there, you find you have tremendous leverage over disease and health. Life obstacles that were once considered mountains, become mole hills and speed bumps. That is the magic of evolutionary design. ***Genes don't have free will. Something must have forced them to misbehave: the altered spectral density of light with a varying magnetic field are those variables that have sculpted them.*** We need to attack disease by adding power to our strength and not our weaknesses. This is the hard lesson that I have learned from how a non linear system operates and is built by nature.

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