The World is as We are, not as we Perceive it to Be.

By Vinyasi

We would like to believe that science has all the answers, and that religious conviction has no role to play in the practical affairs of technology. Yet, such is not the case.

We take our so-called Laws of Nature for granted on the belief that our trusted authority figures, such as: scientists and engineers, know what they're doing without our knowledge yet with our implicit consent.

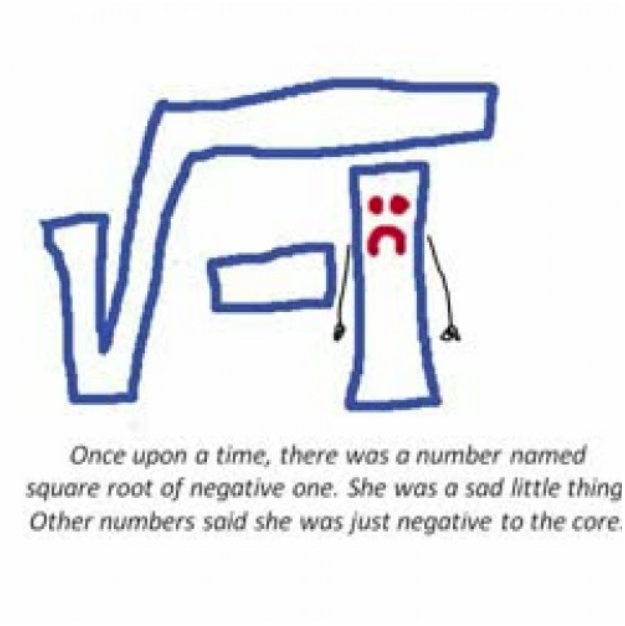
Let's take a simple example of faith-based accounting...

I owe you one apple. I ate yours, so now you want me to pay you back with another apple of my own. When I pay you back, it can only be a real apple, not an imaginary one. And its sign value is positive indicating that I am giving you an edible apple in payment of my negative debt to you. I cannot give you a negative apple since that would merely increase my debt by one more apple bringing my total debt to two apples instead of one.

No one can eat a negative apple. That's why it's considered a debt – something which is not useful to anyone unless the creditor charges interest and late fees and hires bounty hunters should I elect to "skip town" and not pay my debt. If and when I'm "found", the creditor wins back more than a mere apple. He wins the satisfaction of a nearly 100% guarantee of my payment of debt plus interest charges.

So, again...
I can only pay my debt with a positive apple. And only a positive apple is edible; a negative apple is not.

Thus, is born in us, an imaginary number! And we haven't even taken the square root of a negative number, yet!



It is our faith in our imagination which fills in the gaps for whatever we cannot see, touch, taste, smell or hear.

Such is the case with electricity. Yet, we are sold a false premise that only what we can sense with our five senses is scientifically validatable. Tell that to the guy who owes someone else an apple...

Electrical energy, by itself apart from the wave which gives it embodiment, is non-validatable. It cannot be sensed, nor measured with any instrumentation. Only the wave portion of electrical energy can be measured and sensed and only whenever a wave is alive, or animated, with electrical formless energy.

Traditionally, over a century ago, we used to call this definition of electrical energy: the ether (aether is its spelling variant). Under this line of faith-based reasoning, our circuits serve as waveguides for what would otherwise be formless energy – which would otherwise be useless to us without a form to give it functionality. Without form, electrical energy cannot have function, for the latter is an outgrowth of the form-er (pun intended).

This situation puts the burden of knowledge squarely on our own shoulders and removes it from our authority figures, for they cannot convince us of that which – ultimately – requires faith to persist in believing.

Despite any electrical engineer's confidence in the uselessness of reactive power, we can produce infinite quantities of it by merely tickling the dielectric of a capacitor, adjacent to an iron-cored coil of wire, with just the right flavor of electricity: not too stimulating and not to boring – in other words, a situation of resonance in which all of the factors of a circuit's dynamics are in harmony improving efficiency of performance.

This tickle may also bring about the disappearance of overall reactive power should the tickle administered to the dielectric of a capacitor |*in the example cited above*| be sufficiently lame (ergo, out of resonance). And this loss of electrical energy does not include thermodynamic radiation spent by a circuit, outwardly, towards its environment. This is a loss *in addition to* thermodynamic radiation.

This simple premise is the guts of free electrical energy should we ever become adroit enough to harness it. For as it stands, reactive power is useless to our motors and such. Yet, it is not useless to resistors who see no harm in removing reactive power from a circuit, or any power – reactive, or otherwise – for that matter, just as fast it is able to.

We know this by scoping these three components in a circuit: the resistor, a capacitor and an inductor (coil of wire). Each of these three components reacts in its own unique way.

The capacitor puts current, as measured in amperage, ahead of voltage by a “power” factor of as much as one-quarter wavelength.

The inductor puts voltage ahead of current by a “power” factor of as much as one-quarter wavelength.

The resistor doesn't mess around with the phase relationship between current and voltage. If anything, it reunites them within itself and thus can efficiently emit reactive power in a dissipative manner while the other two components mentioned above must be catered to, ie: babied (molly-coddled), before they will ever make use of reactive power.

It this reactive power which is the boon of free energy within the context of a capacitor's dielectric adjacent to a magnetizably cored, coil of wire.

Oops...
That doesn't sound very free to me. The caveat to reactive power's usefulness – in its raw state – is with regard to motors and capacitors, but not for resistors which don't care, 'cuz they'll throw it away regardless.

The easiest indication of reactive power being non-reactive inside of resistors are the oscilloscope tracings of a resistor indicates alignment of both the current and the voltage component waveforms of Alternating Current into a zero phase difference between these two components of a measurable wave. Motors and capacitors are not so lucky. Some persuasion, on the part of the circuit, would have to convince the current and voltage portion of a reactive wave to self-align.

Whoa...
That was already accomplished over a hundred years ago when they were laying the first trans-Atlantic telegraph cable.

The electric wave (measured in volts) got ahead of the magnetic wave (measured in amps) due to the magnetic portion sent overseas deteriorated long before the electric portion coming out the other end of the cable. Without both, in phase, and similar in amplitude, exiting the opposite end of the trans-Atlantic cable, no telegraph signal could be received.

This was solved in a simple manner. Oliver Heaviside reasoned that if a coaxial cable could be fashioned out of an insulated copper core wound with iron ribbon or iron wire, and the telegraph signal sent down both the copper core as well as the iron sheathing surrounding it, then the magnetic wave component of the electromagnetic telegraph signal could get a boost sufficient to render both waves strong enough to make it across the Atlantic ocean and in phase with each other (in time) to give a clear signal to exit the other end.

It worked!

So, here is an example of inductive reactance messing up a very long telegraph cable if not redesigned to alleviate against losses inherent in the inductive nature of copper wire.

Surely, we can make use of all reactive power if Oliver Heaviside figured it out in a simple way!

But this was an example of inductive reactance with the caveat that energy entering into the coil, or length of wire, puts out a total level of energy equal to whatever entered into it when all its variations are taken into account: reactance, thermodynamic losses, plus the energy entering the coil or length of wire.

Not so, with capacitive reactance. Because, here, we're dealing – not with space, alone, but – with counter-spatial variations as well.

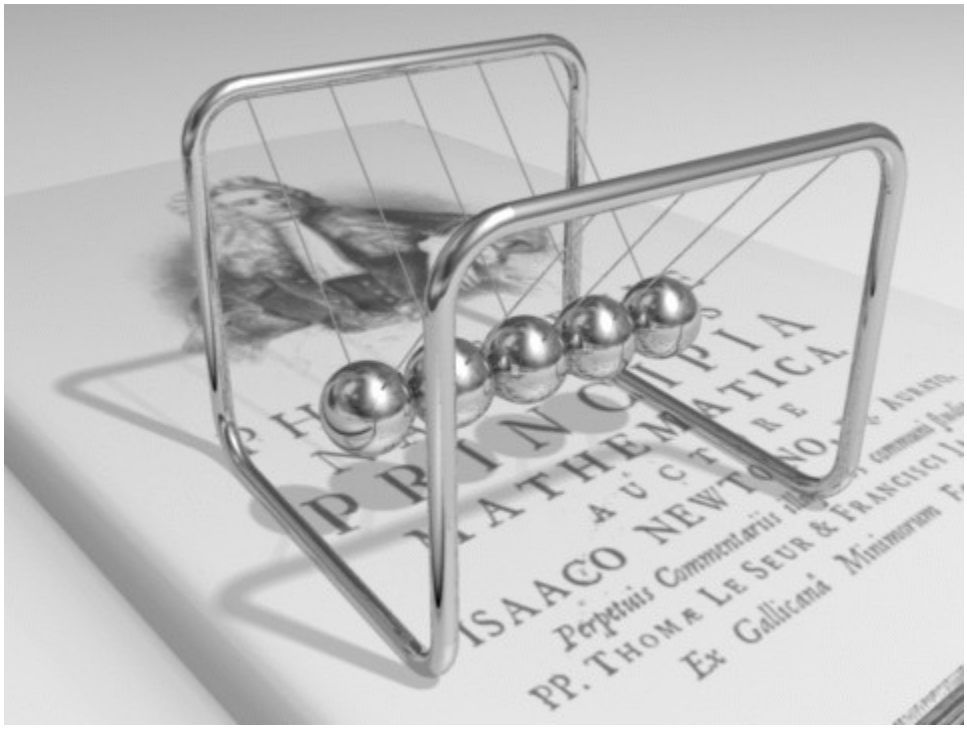
The counter-space of a piece, or coil, of wire is directly related to its counter-existence in space. Yet, a capacitor's spatial dielectric is inversely related to its counter-spatial dimension to make this study of electrodynamics a tad more dicey. In other words,...

When energy enters into a coil, it travels at a speed whose limit is the speed of light.

Unfortunately, light speed does not account for all wave phenomena since a light beam is patterned after ripple waves, known as: transverse waves. These are waves at the boundary between empty space, or a compressed medium such as bedrock, and non-empty space such as our atmosphere. Also, the ripples on the surface of a pond are ripple waves.

In the alternative, an example of a field of compression is the depth of the ocean wherein tsunami waves can travel before converting into ripple waves at the beach front where they are known to do their damage. But deep in the ocean's depths, not even the fish are disturbed by a passing tsunami. They don't even know what passed them by. “Longitudinal waves” is the technical term for a tsunami.

This translation between these two wave types are exemplified by a toy called: Newton's Cradle.



This device exhibits transverse waves at either end involving each ball rising and falling while longitudinal waves are the shock waves passing through the compressed medium of the stationary balls in the middle of this toy.

Getting back to the discussion...

This toy is merely an analogy, 'cuz it gets spookier as we proceed into the field of electrodynamics.

In the domain of a coil of wire, or a straight piece of long wire (especially long), the inductive

relationships between spatial waves and counter-spatial waves are directly proportional to one another.

Yet, in the domain of the dielectric of a capacitor, capacitive relationships between spatial waves and counter-spatial waves are inversely proportional to one another.

In other words, if we should reduce the thickness of a capacitor's dielectric by a factor of an integer, its capacitance increases by the square since this is equivalent to the alternative in which we keep the thickness the same yet increase its area (which is a two-dimensional expansion of width times breadth).

Ripple waves can't travel through the insulation of a capacitor's dielectric. Yet, longitudinal waves can and do, but not in space. It is in counter-space that longitudinal waves of electrodynamics travel. And as the spatial distance is reduced between the counter-opposing plates of a capacitor straddling either side of its dielectric, the capacitance of its dielectric is increased by a geometric factor.

What is capacitance measuring? Effectively speaking, it is measuring the distance in counter-space which longitudinal waves must travel across the dielectric of a capacitor to get from one conductive plate on one side of the capacitor's dielectric to the other conductive plate on the opposing side. As we reduce the spatial distance between the two conductive plates of a capacitor, we are also increasing the counter-spatial distance (which the longitudinal waves must travel in their medium) to get from one side of a capacitor to the other. Once they reach the opposing side, they convert into spatially oriented, ripple waves (the transverse waves we are familiar with lighting our homes and running our motors). These ripple waves do our electrical work for us at a great cost to themselves since they are entirely subject to thermodynamic losses during their conversion into the performance of work.

Since we reduced the thickness of a capacitor's dielectric to improve its capacitance – its storage (retention) of energy – we effectively increased the time lag between its conversion from a spatial ripple wave of current at one side of a capacitor into a counter-spatial longitudinal wave in the capacitor's dielectric and back again into a spatial ripple wave at the opposite side of a capacitor since we gave it an extra length of counter-spatial distance to travel. This improved the capacitor's retention of energy at the cost of its responsiveness. Namely, it won't discharge its storage of energy very fast. It can't, 'cuz its too bloated with retentive (capacitive) value.

But if we had made a capacitor whose dielectric was very thick in space, then its dimension in counter-space would be very thin. So thin, that a longitudinal wave traveling through this reduced dielectric medium of counter-space would experience an *apparent* acceleration of distance traveled – *had it traveled in space* – which is equivalent to a measurable increase in the capacitor's reactance and a surpassing of the speed of (rippling) light waves (traveling in their respective medium of space).

Eric Dollard's experiments in wireless transmission of power was a mere few thousand feet through the ground. Tesla performed this same experiment by bouncing longitudinal waves off the moon's surface (*apparently traveling through the empty medium of space* and behaving the same as if space had been compressed similar to bedrock). The difference in time-lapse (ergo, the apparent time for our overly simplified, and inaccurate, notion of longitudinal waves traveling through space) was that in Eric's experiment, the speed of light was surpassed by a mere 57% while in Tesla's case, the speed of light was surpassed by a factor of 50 – in other words, 5,000%!

Scientific fact can only take us so far and no further. Our observations of our world leave a lot to be desired. A lot of anomalies cannot be explained, yet we can infer what may be happening with a statistical level of accuracy. At some point, we forget that some of our so-called scientific truths are mere statistics when we begin to take them for granted. And yet, in all of this, we consider this to be “progress” to our scientific artistry.

Such is the case with the ether and longitudinal waves. We infer their existence, and their behavior, yet no one has ever seen any of this.

No one has ever seen the square root of negative one, either. Yet, it was the fertile mind of a mathematician – just a few centuries ago – who imagined their existence since it so readily explains a lot of mathematical anomalies which can't be explained otherwise with real numbers alone. Every seasoned professional electrical engineer uses the square root of negative one in their line of work and never thinks twice against their use. There's nothing real about them, yet our engineering of electricity depends on a faith that we're not overreaching ourselves into the realm of fantasy when we use them. They are collectively accepted as fact despite their non-factual existence.

Like that, is my explanation for counter-space. Like that, I take my explanation on faith as being the only rational way to explain what can only be inferred. Inferences are purely speculative opinion; they're not factually based on any observations, but are *speculatively derived from observations*, and then passed around repeatedly, before becoming collectively held as facts.

These so-called *facts* are extensions of our observations resulting from our reasoning mind fantasizing conceptual bridges spanning the gaps in our awareness of electrical reality.