# Ethical Technology Initiative July 2018
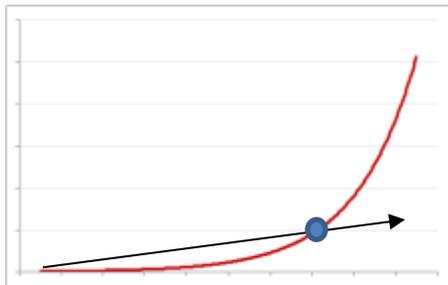
*Report prepared by Andrew Linnell, July 20, 2018*

## With notes of lectures by Gopi Krishna Vijaya

## Technology and Its Effects on the Human Being

### Sat July 11, 2018

**3:30 PM**  **Gary Lamb, Introduction**



Many technologists are predicting the red line, exponential growth in computing, AI, robotics, and other technologies. But will the actual line be the black arrow? Is the red line inevitable? Is our interpretation optimistic or pessimistic of this future?

Gary asked, are people who are EMF sensitive the proverbial canaries in the coal mine for our digital age?

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We need to confront the future with right speaking and right listening. ETI intends to objectify so that we can understand rather than allowing a religious faith that tech is all-knowing, all-powerful, and omnipresent. This sinks right down into our social structures: into our economy, our political system, and our cultural. The motivation of the tech companies is profit.

ETI seeks counters to keep humanity healthy. It seeks a humane technology. It asks, how will this affect the human being? It comes down to asking the question, what is the human being? This question is asked in a time when the worldview is dominated by materialism, when a leading scientist can entitle a book, *The Age of Spiritual Machines*.

**4:15 – 5:15**  **Group Exercise/Discussion: Answer in a couple words, "what are two qualities or virtues of human beings that you think cannot be replaced by artificial intelligence and technology."**

**5:15 – 6:00**  **Clay Modeling with Kristin. 1) Sphere, 2) Tetrahedron**

**6:00 – 7:00**  **Dinner**

**7:00 – 9:00**  **Gopi Krishna Vijaya, Lecture: The Worlds of Computation and of Thinking (public)**

Gopi began by referencing the above diagram and asking, "will computing overtake human thinking?" Will it happen? This is a question of belief. It seems that we have but two options to the belief:

(1) Yield, or (2) Avoid. In order to come to (3) Use 'it', we need to understand 'it', we need to be able to answer, what have we made? With that knowledge we can properly use and resist 'it'.


**Understanding Computing**

Gopi then took us 'into' the computing machine. Fundamental to computing, especially to its software, is the concept of algorithm. The term itself derives from the 9th Century mathematician Muḥammad ibn Mūsā al'Khwārizmī whose Latinized name is 'Al-Goritmi' or 'algoritm'. [A partial formalization of what would become the modern notion of algorithm began with attempts to solve the Entscheidungs problem (the "decision problem") posed by David Hilbert in 1928. Subsequent formalizations were framed as attempts to define "effective calculability" or "effective method"; those formalizations included the Gödel–Herbrand–Kleene recursive functions of 1930, 1934 and 1935, Alonzo Church's lambda calculus of 1936, Emil Post's Formulation 1 of 1936, and Alan Turing's Turing machines of 1936–7 and 1939. – Wikipedia].

Gopi also mentioned the Malthusian growth model that also followed an exponential curve. He asked, is this really what will happen? [Carl Sagan titled the second chapter of his final book *The Persian Chessboard* and wrote that when referring to bacteria, "Exponentials can't go on forever, because they will gobble up everything."]

Gopi drew a sketch of what happens in a computer as follows:



Network of binary operations
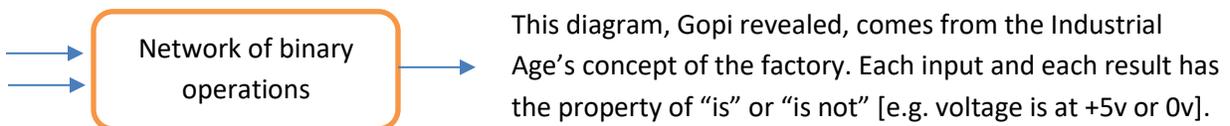
This diagram, Gopi revealed, comes from the Industrial Age's concept of the factory. Each input and each result has the property of "is" or "is not" [e.g. voltage is at +5v or 0v].

What is often missed here is the limitations imposed by the setup, by the operations, by the data, by the concept itself. For example, with "is" and "is not", one cannot express "becoming".

The inputs to a computer (and to a factory) need to be "reduced" to numbers. But human concepts transcend numbers. Thus, those concepts cannot be present or expressed by computing. What is an input? In a factory, it is an expression of will. Likewise, inputs require will when dealing with a computer but here it is willed thinking whose focus is on the mineral realm alone (plus the will to reduce to data and to enter it as input).

Algorithms are derived from a repeatable series of willed steps in order to make future efforts easier. As an algorithm is learned through repetition, the thinking can cease while the operation continues. The thought thus 'dries out' and the process becomes calculable. The algorithm arose from a desire to overcome weariness. A satisfaction arises when such an algorithm proves itself valuable towards enhancing one's comfort. Again, these operations occur in the mineral realm.

**What effect does this have on the human being and society?**

Humans have, over historical times, identified inner organs and activities with their outer inventions. Not surprisingly, Ray Kurzweil (and many others) might compare the functioning of a human brain to a quantum computer. Human feelings are called "the yet undiscovered bio-chemistry of the brain".

Tim Cook, CEO of Apple, and other executives have discussed how they use "Avoid" for their children. Those in the know do differently with their own children than their companies would have the general public do with their children. Several reports and interviews discuss the addicting quality of smartphone apps. What's missing? Gopi mentioned that in our assessments, we go from the mineral to human thinking directly, bypassing the "leaf" (plant realm).

It was discovered that devices could be built that simulate Boolean Algebra (Logic). These "gates" look like the diagram above and different ones perform different Boolean operations. These are networked together to make "the factory". This logic is adaptable only to the mineral realm as we understand it. It is a logic inferior to what the Greeks had thousands of years ago.

We mistake the image for reality like a narcissist looking in a mirror.

**Can a Machine Learn?**

Algorithms define how the program can adapt (e.g. to different users, to different data sets). These algorithms use "**weights**" to allow for the adaptations. Then, with "brute force" (running through thousands or millions of data sets), the algorithm can be fine-tuned. We mistake this tuning with machine learning. [Note: for computing to work, not only must things be reduced to numbers, but also to weights, and to measures (as in facial recognition).] Internet of Things (IoT) will lead to more use of "repeated thought" – the general population likely will be 'yielding' by default. This puts us on a very slippery slope to achieve real understanding.

[Andrew's assessment: Age Tendency is to Yield in Youth and to Avoid in Advanced Age].

Questions (10 were asked but my pen stopped working – I should have been recording on my laptop!)

## Sunday July 12, 2018
**8:45 AM          Gary Lamb leading, Review of Day 1**

Human Being has two streams within: (1) past associated with one's etheric and (2) future with astral. We can see an evolution of consciousness when examining the past and looking into the future. Computing is indicative of this evolution of consciousness. Important esoteric changes occurred in 1879 when Michael assumed leadership of the current Era. Those born before versus those after differ in regards to evolution of consciousness and what beings became active within the human after 1879.

**9:00 AM          Gopi Krishna Vijaya, Comparing Clay Modeling to Computing**
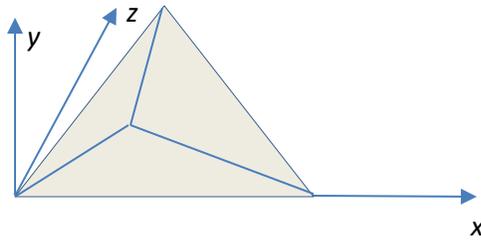
We reviewed our clay modeling experience when reshaping our sphere into a tetrahedron. The forces acting upon the clay (our hands) molded it from outside using a feeling for (geometrical) harmony. Only a human being has this capability – not a computer.

Gopi demonstrated a program in Mathlab for building a tetrahedron. It required considerable prior understanding of a tetrahedron and extensive math because the program needed the vertices (the outer points in Euclidean space, i.e. the *x*, *y*, and *z* coordinates). We had to calculate these points!

With the clay, we began with the clay sphere and applied pressure with our hands as a (rough) plane to arrive at a form wherein points were revealed. With Mathlab, we began with points, built lines, to reveal the planes. The plane, or the tetrahedron's facets, are revealed by the "is" or "is not" calculation for each pixel in the display. Once established, the program in Mathlab can rotate the image in the virtual 3D space displayed on the 2D screen. With Virtual Reality (VR), one could offer an experience more like the clay. Suppose one is wearing special gloves that give sensory feel to modeling the virtual blob of clay. Such a VR experience, while still an imitation, has the potential of offering an experience of molding from the outside as with the clay.

**EM Demo**

Gopi showed us how the existing electro-magnetic model (EM spectrum) used by science cannot answer all demonstrations.  We can prove with a simple experiment that the existing model is inadequate. He used a simple D battery with a coil of uninsulated copper wire wound so that it had the shape of a coil with a spiral at one end. Underneath the batter, Gopi placed 3 round magnets. The wide end of the coil reached nearly to the table top with a couple coils circumventing the stack of magnets. This copper coil spiraled up so that the other end touched the positive-tip of the battery. We watched amazed as the coil could rotate on its own.

This was called a homo-polar generator. What happened in the copper wire that it would rotate? Normal EM requires two poles for current to flow.

Gopi introduced us to how experiments can either reveal or conceal (or both) concepts. He asked us to throw-away our normal atomistic concept to entertain a field-concept in which each atom can be thought of as the intersection of threads in a cloth. Now expand this concept from 2D to 3D. With this, then when we look at an image from an electron-scanning microscope, we can see it like an image of an egg carton (in 2D). Carrying this patterning further, molecules can be seen as "knots" of these strings.

We have learned to have clear thinking from the resistance of the mineral kingdom. It offers to us strength in our thinking just as mineral weights offer strength training in the gym. Moving forward beyond a focus on the mineral kingdom will require even more of this strength to penetrate the realm of the living.

**9:45 AM**        **Gathering of Questions and Break**

**11:00 AM**        **Gopi Krishna Vijaya, General Q&A (16 of 25 participants offered a question)**

[Questions not recorded] We need to distinguish between real stationary and real motion. We need to ask, does a computer algorithm understand motion? Does its programmer? Even if they did, can motion be programmed? Displayed? What we currently experience is not motion, of course, but a series of frames in which motion is imitated just as it is in a movie or a sequence of images on cards that flash by the eyes. Multiple images per second can give one the impression of real movement but in actuality, one is experiencing changing coloration of pixels.

In the past, some people fainted or had other physiological impact from exposure to movies. But the next generation adapted! [Will this generation adapt to current tech?].

Movement is defined as spatial distance per unit of time. Direction may also be included. How do we understand time? Might our sense of time itself already be distorted by our materialistic education? How psychological is time? For example, one might sit down to do 15 minutes of email and find 45 minutes have blown by.

Stephen Usher did a study on subliminal effects. One can insert images that flash within a sequence of images, say between the frames of a movie, that do not register with one's awake consciousness, but are seen nonetheless by one's sub-consciousness. It has been shown that this causes desire for what the image portrayed. Experiments showed that ratings of an event are clearly swayed by such subliminal messaging. The point here is that built into our explanations of atomic and sub-atomic physics are many scaffolds that act like subliminal messages that make up the whole concept. Take the concept of atoms acting like billiard balls. Although it has long been proved to NOT be the case, this picture remains in our concepts of how the atom behaves. We continue the concept when we change scale from atomic to sub-atomic physics.

The clock pulses of a computer are often thought of as a square wave, rising and falling immediately. But actually, electrical systems cannot change so dramatically so quickly. The clock pulse has a rise that peaks and then settles down until the clock pulse ends.

We should not despise mineral thinking. In the larger picture of the Evolution of Consciousness, we are endowed with strength in thinking through this training. Such concentration is the mental equivalence to a gym workout with weights. Even a disability can be seen as a training for later (lifetime perhaps) strength. This does not excuse humanity from trying to help the disabled to lead a life where their disability is minimized allowing for 'normal' functioning in life. Virtual reality, as we know it today, offers no 'mental workout'. Gopi referenced Steve Talbott's book, *Devices of the Soul*, for its coverage of disabilities and what is being avoided. Gopi spoke of the use during wartime of a blind man who could sense the moral and emotional disposition of the troops so as to address them with news from the different fronts. He was cognizant of the emotional impact certain news could have based on its delivery, speaking the truth with compassion.

**Technology and Child Development**

Documented degradations include memory, feelings (more intensity needed to reach former heights), sense of movement and sense of static, sense of word (their power and meaning become eroded). Screen time affects the undeveloped etheric body of the child.

In today's social environment, groups of parents will need to get together and agree on limitations. Otherwise, children will become exposed at another child's home leading to desires and later issues with his or her parents.

How does one counter these effects?

Knowledge of the technology, thoroughly understood, already provides the answer. Self-realization of your remedy, is best (not a set of rules). Then we need to help others, especially children.

Cinema affects imagination. Typing affects the sense of word. Children avoid and yield at the same time without understanding the technology of text messaging and fantasy worlds. They avoid looking others in the eye. They yield to the demands of the game or app.

We who would be Ethical Technicians also need a true image of the Human Being to know how to act with counterbalances. "Know Thyself" is a counterbalance. Adults and children have different counterbalances. Tech companies have a responsibility to know how their product works on the human being and to suggest the counterbalances themselves!

Children's play is so unlike computer games. Children change the rules as the game progresses. Parents need to play a role to offer games, to invent games, to teach their children to be creative.

Exercises we can do.

- Knowledge of Higher Worlds
- Six Basic
- Growth and Decay

As we avoid and yield in VR and apps, we can escape the confrontations with people that happen every day. [If we can't confront people, how will we ever be able to confront Ahriman?] VR leads to a detachment of our sense organs from our body. We live within only those senses that are active. We derive a kind of satisfaction from being alone in VR where we are comfortable. We come to prefer VR to real life.

How is the economy developed for the Industrial Age related to Computing? In many ways, computing first needs were military and financial accounting. One can say that computing has been essential for the modern economy. The illnesses and issues would be numerous if all that accounting was still being handled by people. But where are we going with Blockchain technology? [see www.mileswmathis.com] This could be done right in making the intentions visible, but are the foundations for a Threefolding sufficiently present? Money as an expression of will. Exchange visible or invisible?

Future: Sense for the created, the creating, and the yet to be created.

**12 Noon          Lunch**

**1:15 PM          Gopi Krishna Vijaya, Technology, Substances, and Physics (public)**

Within computing parts, silicon is omnipresent. As silicon, the substance is dark, opaque, but as silicon dioxide it is like glass, transparent, able to pass light. We should ask, where in the human being is silicon found? It is found on our surfaces, especially our hair. Can we see how we bring substances from our body into our world and spread it around us?

**Forces** (ionic, magnetic, etc.)

How do substances interact? Let's look at the Periodic Table as an indicator of forces.

A great reference book for this is Rudolf Hauschka's *Nature of Substance*.

Periodic Table
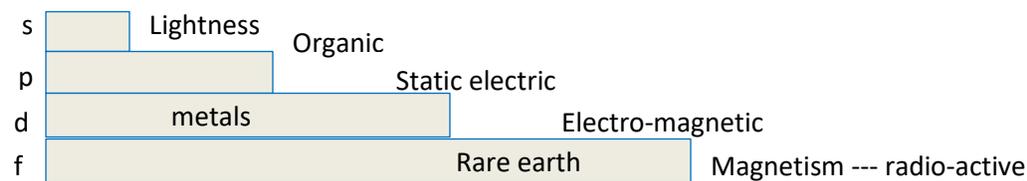


Rare-earth elements are difficult to extract. It only can be done with ionization. In the "f" row, matter becomes "exhausted". Curie discovered Radium but her fingers became disintegrated due to the radio-active effects. In the early 1900s, there was an explosion of hopes that these radio-active elements could be used in healing. It took 20-30 years to fully understand the dangers.

Something similar is likely with computing today. Something like the disintegration of a part of the human being could be going on. Only when parts of society reveal their illness will we understand, unless we can penetrate to understand sooner. We need to understand the nature of things, not only as a substance, as a mineral. We need to understand the Force inherent in things.

Visible light is considered as a span of the EMR (electro-magnetic radiation) spectrum. We saw a demonstration of a single pole with movement. This may refute the existing model of light and EMR. Do wavelengths have qualities? Michael Faraday studied this. Over the past 150 years, there has been no explanation; as science has adhered to its EMR theory.

Towards the Infrared side, we get heat. Towards the ultraviolet we get chemical activity. But not only these! From infrared on towards radio waves, there is a disturbance in the magnetic field. A microwave oven works upon magnetic radiation that heats its object from within. As wavelength increases past microwave, the effect on matter encountered moves from within to without. This continues from the microwave frequencies into radio waves. Likewise, on the other side of the spectrum, there is an electrical disturbance that happens within matter encountered through the ultraviolet frequencies but changes to without that matter for faster frequencies beyond ultraviolet, namely x-ray and gamma-ray.

Air becomes a conductor of electricity in the presence of x-ray or gamma-ray. Ultraviolet is prickly like electricity. It is associated with inside electrical conduction.

When a magnet rotates, its magnetic field does not! This seeming anomaly let Einstein to come up with his Special Relativity theory. Does an electro-magnetic wave interact with matter as does light? It does not. One can conclude that light, that is sunlight, is different in character from EM waves. Even man-made light is different from sunlight. [Experiments concerning light using lasers will lead to wrong conclusions about light. We need to distinguish between artificial light and sunlight just as we should distinguish between artificial intelligence and human intelligence.] We must know the source of the light whose interaction we study.

We can now study the physics of Sub-Nature (electricity and magnetism) within the human being. It is the blood, with its iron, that is susceptible to magnetic fields while it is the nerves that carry electricity. Here are the life and death poles within the human being. The nerves have to do with the head organization while the blood represents the metabolic/limb system. The nucleus of an atom is where its magnetism exists. It maintains a balance of Magnetism and 'Electricism'. Vary one and the other is affected. Work by Ionel Dinu (http://www.wbabin.net/science/dinu.pdf) and Sorin Cezar Cosofret (http://www.elkadot.com/en/grav/Theory_Gravitation_Content.htm) are recommended for further study.

Gopi compared silver and copper as electrical conductors to iron as magnetic conductor. When sunlight is split by a solar panel to make electricity, the magnetic 'residue' travels on. Gopi experienced this in the shadows of solar panels. He discussed a theory of cancer that it occurs when the nerves attempt to make a 'life' organ into a sense organ when it should not be so. He pointed to an article in the recent Guardian newspaper about research linking EMR and cancer.

With the advent of 5G for cell phones and IoT, the frequency range shifts from radio frequency to microwave. That is, the effect now needs to be analyzed differently. Whereas radio frequencies affect without, microwave affects within. It is a change in the nature of the waves. Much more research needs to be done to determine safe limits. We also need research into how we can withstand 5G as it will be deployed widely. Gopi mentioned Building Biology Institute as an example of research into safe EMF structures. He also mentioned Simplicity Parenting where technology addiction treatments are studied. If the life of a human being will be affected, so will plant life and animal life. Should we develop protective clothing with silver (nanoparticles)? Will we need protective shielding for magnetic radiation?

Radiation has been used as a healing agent. Like homeopathic remedies that start with a poison and potentize it, such treatments used radiation as a poison but to stimulate the body's immune system.

Lastly, Gopi mentioned some physicists who have not been well recognized but have done significant work here. He pointed to Dewey Larson (1930-1990) and his Reciprocity System. E. Pfeiffer was also mentioned.

**2:30 PM          Break**

**3:00 PM          Review and Future Work**

This session gave each participant a chance to say what they thought of the conference. There was high praise for Gopi whose lectures were given without notes or PowerPoint slides and could be followed by all. The content was full of gems and important insights.

**4:30 PM          Closing**