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Chapter 17 - The quest for Akashic physics and engineering

Perhaps everything that ever happens, including our thoughts and memories, is stored in permanent "Akashic records," a cosmic memory field hidden in yet unknown aspects of reality.

In "*Esoteric Buddhism*" [Sinnett 1883], Alfred Percy Sinnett noted that early Buddhism "held to a permanency of records in the Akasha, and the potential capacity of man to read the same when he has evoluted to the stage of true individual enlightenment."

The Akasha, a Sanskrit word for ether or space, was popularized in the West by Theosophy writers [Abraham 2017] including Helena Blavatsky and Rudolf Steiner. Blavatsky thought of the Akasha as "indestructible tablets of the astral light" recording both the past and future of human thought and action. In modern terminology, we can think of the Akasha as a cosmic memory field that stores permanent records of everything that ever happens in the universe.

In "*Demystifying the Akasha*" [Abraham 2010], Ralph Abraham and Sisir Roy quote the polymath genius Ervin László [László 2009]:

> "A universal information and memory field could exist in nature, associated with the fundamental element of physical reality physicists call the unified field... Honoring an ancient insight, this is the aspect or dimension of the unified field that I have called the Akashic Field."

Sisir Roy, the author of "*Statistical Geometry and Applications to Microphysics and Cosmology*" [Roy 1998], is a physicist interested in the geometry of quantum spacetime near the Planck scale.

Ralph Abraham is a top mathematician and maverick scientist who, besides the acclaimed textbook "*Foundation of Mechanics*" [Abraham 1987] on advanced mathematical physics, wrote about esoteric aspects of mind and physical reality with Terence McKenna and Rupert Sheldrake [Sheldrake 2001].

In his preface to László's "*The Connectivity Hypothesis*" [László 2003], Abraham says: "When a great grand unified theory will appear it will very likely conform to the prophetic vision of Ervin László." After "*The Connectivity Hypothesis*," László wrote a simplified but thoughtful account of his ideas in "*Science and the Akashic Field*" [László 2007], and then several related books. The last book in László's Akashic series is "*The Self-Actualizing Cosmos*" [László 2014].

"*Demystifying the Akasha*" is a short and compact book that covers a huge territory including Western and Eastern philosophies and religions, the foundations of quantum physics, recent advances in quantum gravity research, and the digital physics of discrete spacetimes.

Fully understanding everything requires specialized knowledge of all those fields, but the book is readable and has something for everyone. The references, a careful selection of the best related writings, fill the gaps in the book.

"We have repurposed a mathematical model for the quantum vacuum, originally due to Requardt and Roy, as a model for consciousness," note the authors. "*Demystifying the Akasha*" includes the full text of a 2001 article by Roy and Manfred Requardt [Requardt 2001], which is a precursor of the book.

Contemporary quantum physics shows that the vacuum, the simplest configuration of spacetime, has a complex dynamic structure. "The quantum vacuum is a seething froth sparkling with elementary particles emerging from nowhere in pairs, and after a very short time, vanishing again as they came," explain Abraham and Roy. A fundamental information field associated with the quantum vacuum is, according to László, "the deepest and most fundamental level of physical reality in the universe."

In a recent book titled "*Understanding Space, Time and Causality*" [Sreekantan 2019], which provides an insightful summary of the intersections of contemporary physics and traditional Indian thinking, Roy and physicist B. V. Sreekantan note that the contemporary scientific conception of the quantum vacuum, described by quantum field theories in terms of underlying space and time, can't be directly compared to the traditional conception of the Akasha, which is beyond space and time.

However, Sreekantan and Roy emphasize that Abraham and Roy have defined a "subtle" substrate underneath space and time, "from which one gets physical space-time or quantum vacuum, and hence the comparison appears to be a meaningful one." In the

Abraham-Roy (AR) model, outlined below with more detail, the notions of space and time are built up from pre-geometric networks "that give rise to a space-time continuum with well-defined structure. Here, each entity is interconnected may be due to the existence of 'non-locality' - one of the fundamental tenets of quantum theory."

Worth noting, mainstream physics is warming up to the idea that [space and time might emerge from the non-local entanglement structure of a fundamental field beyond space and time].

Abraham and Roy build a model for the fundamental field based on a "pre-geometry" of dynamical cellular networks - huge graphs with internal dynamics similar to [cellular automata] - that exist beyond spacetime, and from which the geometry of spacetime is derived.

Abraham and Roy don't intend to propose a "final" unified Theory of Everything (there is no "final" in science). Rather, they intend to show a template mathematical model of reality, compatible with current scientific knowledge, which includes an Akashic information and memory field able to explain paranormal phenomena. They say:

> "Our intention is to contribute a theory, more precisely a mathematical model, in which all paranormal phenomena may be understood, including quantum entanglement and the measurement problem."

I had always realized that Akashic field theories are related to my own ideas on technological resurrection, but further reflections and research led me to realize that they are essentially equivalent.

Following [Fedorov and the Russian Cosmists], I have often argued that future scientists equipped with "magic" spacetime technologies will be able to resurrect the dead by "copying them to the future." For such a thing to be possible, it's necessary that the information needed to resurrect the dead - life events, memories, thoughts, and feelings - exists somewhere out there in a somehow retrievable form. In other words, there must be an Akashic memory field. Conversely, if the Akashic field exists, future scientists could resurrect the dead by solving the engineering problem of how to read the Akashic records.

Therefore, following László, I will honor the ancient Akashic insights and use the term "Akashic physics" for the yet unknown physical theories upon which future resurrection technologies could be based. It seems very plausible that, as Abraham and Roy argue,

future Akashic physics will be able to explain all sorts of “paranormal” phenomena. I will use the term “Akashic engineering” for new technologies able to leverage and exploit Akashic physics.

In passing, I think the term “paranormal” is misleading because, if something happens, then it is normal. However, “paranormal” is frequently used and easily understandable: It includes telepathy, remote viewing, precognition, reincarnation and related phenomena, which can be physically explained if the mind can somehow extract information from the cosmic Akashic records.

There is a roadblock in the quest for Akashic physics and engineering. Apparently, information is irreversibly erased from the universe all the time. In some mainstream formulations and interpretations of quantum physics, [information is fundamentally and irretrievably erased by the collapse of the wavefunction]. Even in classical (non-quantum) physics information is erased in practice (hidden and scrambled beyond recognition) by chaotic dissipation. Viable theories of Akashic physics should include explanations of how the apparently lost information is safely stored.

For example, in [Everett's “Many-Worlds Interpretation” of quantum physics (MWI)] the collapse of the wavefunction is local to the single branch of the multiverse that our senses perceive, and the apparently lost information is still available in the multiverse at large. Therefore, information is preserved in Everett's multiverse, which is a possible stage for Akashic physics.

In “*The Fabric of Reality*” [Deutsch 1997] David Deutsch shows that other times are just special cases of other universes. Therefore, the apparently lost information - including the life events, memories, thoughts, and feelings of everyone who ever lived - is out there in the Akashic multiverse, and future scientists could search for - and find - ways to retrieve it.

In the passage quoted above, Sinnett was (probably) thinking of spiritual rather than technological means to read the Akashic records, but Robert Pirsig's words come to mind [Pirsig 1974]:

> “The Buddha, the Godhead, resides quite as comfortably in the circuits of a digital computer or the gears of a cycle transmission as he does at the top of the mountain, or in the petals of a flower.”

The scientific literature is full of ideas that could be useful in the quest for Akashic physics and engineering. Which ideas will break through? I think it's much too early to tell.

Of course the ideas of László, Abraham and Roy are attacked by militant atheists because they sound like religion. Most professional scientists take special care to hide the more "mystical" implications of their work behind layers of aseptic and innocuous scientific jargon to protect themselves from the academic thought police.

Mathematics, cyberculture, and the resacralization of the world

Ralph Abraham was a frequent contributor to *Mondo 2000*, the legendary cyberculture magazine edited by R.U. Sirius in the 1980-90s and [recently revived as an online magazine].

I hope the new online magazine will be as epoch-making as the original printed *Mondo*. In the meantime, we can find some old *Mondo* issues collected in the Mondo 2000 History Project and other archives [Prisco 2017b]. This section dedicated to Ralph includes excerpts from my first contribution to the revived *Mondo* [Prisco 2017c], with minor edits.

In my student days I spent many hours reading Ralph's "*Foundations of Mechanics*" [Abraham 1987], instead of my boring college textbooks, to try and understand some of the magic of differential geometry and its applications to Einstein's cosmology. I understood maybe ten percent, but that ten percent was useful.

Another highly recommended book is Abraham's "*Dynamics: The Geometry of Behavior*" [Abraham 1992], a treatise on advanced mathematics and physics that, using diagrams and cartoons in place of mathematical formulas, builds a visual understanding of advanced mechanics and chaos theory.

I think developing a visual understanding of complex mathematics and physics is important, and I am persuaded that the lack of intuitive visual models is a major roadblock in the quest to understand modern physics, especially quantum physics.

Ralph seems to consider his life as a square university professor as a boring prelude to his real and very unsquare life as a cyberculture icon and explorer of the wildest fringes of mathematics, physics, history, society, life, the universe, and everything.

“There was a period of six or seven years that included psychedelics, traveling in Europe, sleeping in the street, traveling to India and living in a cave, and so on - these were all parts of what I call my ‘walkabout’” said Ralph in a 1991 interview published in *Mondo* 3. “It was between my first, more prosaic period of mathematical work and all that has followed in the past fifteen years.”

“*Demystifying the Akasha*” includes a detailed story of Ralph’s time in India and his adventures in Eastern spirituality, study of consciousness, and appreciation of the wholeness of reality.

“We need to understand whole systems, and whole systems can’t be understood by reduction - though the terrific gains in understanding made by the reductionist scientist will have a role to play in understanding whole systems,” explained Ralph in *Mondo*. “The technology for modeling whole systems is on the frontier of science at the moment. It’s the crucial frontier for solving our crisis.”

Understanding whole systems is the goal of [dynamical systems theory, aka chaos theory], of which Ralph is best known as one of the pioneers. In “*The Chaos Avant-Garde*” [Abraham 2001], Ralph gives a personal view of the early days of chaos theory, which he considers as one of the most important transformations of all times, not only in science but also in culture [Sheldrake 2001].

“And due perhaps to the occurrence of my name in an extraordinarily popular book by a journalist [Gleick 1987], I have been consulted by many scientists involved in the paradigm shift from order to chaos when it first appeared in their own fields,” he says.

The emergence of the internet was, according to Ralph, a momentous phenomenon with a major cultural impact and full of promises. But sadly the promises of cyberspace remain unrealized. I totally agree.

“By 1990 I had essentially given up on the fate of the biosphere and noosphere,” Ralph told me. “We had all done our best, nothing seemed to work.”

> “Then, in 1994, I became aware of the innovation of the World Wide Web. This seemed to give us new hope, as the connectivity of the noosphere was getting this major bump. I poured all my creative energy into cyberspace. My optimism lasted a decade or so, until it seemed the forces of evil were once again pulling ahead. Now it seems we need another miracle.”

I think the prospect of Akashic physics and engineering could re-enchant the world and re-connect us to the sacred. This could be, I think, the miracle Ralph is looking for.

“I believe that the most important activity to save the world, or at least to move toward hope in that direction, is to recreate for some larger portion of humanity the lost thread of our connection to the sacred,” says Ralph in [Sheldrake 2001]. “This is the program that I call ‘the resacralization of the world.’”

The AR model: Digital physics with Akashic memory, beyond/before space and time

After reading “*Demystifying the Akasha*,” I was intrigued and contacted the authors to better understand their ideas. I was previously unaware of Roy's work, but I knew of Abraham as the author of "*Foundations of Mechanics*" [Abraham 1987], and the co-author of a series of "trialogues" with Rupert Sheldrake and Terence McKenna [Sheldrake 2001]. I remember being surprised when I realized that it’s one and the same Abraham.

“*Demystifying the Akasha*” outlines a possible theoretical foundation for Akashic Physics with a cosmic memory field that stores permanent records of everything that ever happens in the universe.

The “pre-geometry” model of Abraham and Roy (AR model) is based on a dynamical cellular network dubbed QX - a graph with a huge number of nodes and internal dynamics similar to [cellular automata] - beyond space and time, from which the geometry of spacetime is derived.

The graph “contains all times” and fluctuates in an internal time-like dimension, not to be confused with ordinary time. Ordinary space and time emerge from the dynamical cellular network. This is difficult to visualize, because we can only imagine evolution in time and can’t intuitively conceive of something that changes beyond time. However, the concept can be studied mathematically.

Stephen Wolfram has similar ideas. “One needs something in a sense 'underneath' space: something from which space as we know it can emerge,” he says [Wolfram 2015].

> “And one needs an underlying data structure that's as flexible as possible. I thought about this for years, and looked at all sorts of computational and mathematical formalisms. But what I eventually realized was that basically

> everything I'd looked at could actually be represented in the same way: as a network. A network - or graph - just consists of a bunch of nodes, joined by connections. And all that's intrinsically defined in the graph is the pattern of these connections."

While the AR model is but a simplified toy model designed for preliminary investigations in this direction, it permits to derive early but intriguing results. Abraham and Roy propose to obtain macroscopic spacetime from the dynamical cellular network QX through a process of condensation:

> "Thus, spacetime is squeezed from the dynamical cellular network, QX, as toothpaste from a tube... The microscopic system, QX, sparkles with activity on the scale of Planck space and time, while macroscopic spacetime unrolls essentially continuously. The past and present become known, while the future remains yet a mystery."

Abraham and Roy developed the AR model not only as a pre-geometry model, but also and especially as a model of the interactions of consciousness and the material world. Mind and matter are derived from condensation processes acting on separate (but interacting) sub-networks of QX. In this essentially monistic (as opposed to dualistic) process, mind and matter interact within QX, beyond spacetime:

> "In sum, then, the mind/body connections are completed in a circuit outside ordinary consensual reality in a submicroscopic atomic realm beyond our senses, but revealed by the progress of modern physics... This provides a background for psi phenomena such as telepathy and clairvoyance, but also leaves a window of opportunity for free will. Like a zipper closing, the past is zipped (or firmed) up, while the microscopic future is subject to interaction with the macroscopic body and mind, until the zipper closure arrives, and condensation (or collapse) occurs."

This very short outline doesn't do justice to the book. Fortunately, [the full text of "*Demystifying the Akasha*" is available online], and I encourage you to study the book.

In August 2016 I hosted an online [India Awakens] mini conference with Abraham, Roy and other participants [Prisco 2016]. Abraham and Roy noted that "*Demystifying the Akasha*" is very much a work in progress and envisaged further iterations, for example new electronic versions of the book.

When I talk about Akashic engineering I usually say something like "of course, we are talking of very speculative, far future technologies," but Abraham and Roy are more daring. Abraham noted that science advances not only with incremental little steps, but also with sudden quantum leaps and catastrophic (in the mathematical sense, see [Abraham 1992]) jumps, and a sudden scientific revolution could bring about Akashic physics and engineering much sooner than I hope.

Abraham emphasized that such momentous and catastrophic scientific advances are unlikely to happen in the conservative environment of academic research. In fact, revolutionary developments like chaos theory, cellular automata, and fractal geometry, were initially developed largely outside of the mainstream academic circuits.

Roy noted that India, which is becoming a hotbed of futuristic science and technology, could provide a more open and culturally supportive environment than the conservative US and Europe for the development of the new science. Could Akashic engineering be developed rapidly, perhaps in India, with the participation of mavericks and citizen scientists worldwide?

Abraham sent a paper [Abraham 2017] and a video [Prisco 2017a] for the India Awakens 2017 video proceedings. The conclusion of the paper is:

> "Whether located in the astral plane, between the mental and the etheric, or surrounding them all, the atomic model of the akasha developed in our book, *Demystifying the Akasha*, supports the idea of the akashic record, including the future as well as the past in a mammoth mathematical system."

As noted above, in the late 19th and early 20th century the Theosophists introduced Akashic thinking in the West [Abraham 2017], popularizing the idea of a cosmic memory field that stores permanent records of everything that ever happened in the universe, including you and me. Theosophy used to have a less than pristine reputation (and has an even worse reputation today), but Nikola Tesla, one of the smartest persons of the time, appreciated it.

It's worth noting that the speculative intuitions of contemporary frontier physics are starting to mirror those of the Theosophists and Nikola Tesla.

Nikola Tesla on Akashic engineering and the future of humanity

The maverick genius Nikola Tesla was a cosmist, a pre-transhumanist thinker, and an early proponent of a synthesis of Eastern mysticism and Western can-do engineering spirit.

Tesla envisioned transhumanist technologies that would permit a complete triumph over the physical world, and boldly dared to imagine Akashic engineering.

In 1900 Tesla wrote an article titled “The Problem of Increasing Human Energy” [Tesla 1900], which clearly establishes him as a Cosmist, pre-transhumanist thinker. “Inherent in the structure matter, as seen in the growth of crystals, is a life-forming principle,” notes Marc Seifer in “*Wizard: The Life and Times of Nikola Tesla*” [Seifer 1998], referring to Tesla's article.

> “This organized matrix of energy, as Tesla comprehended it, when it reaches a certain stage of complexity, becomes biological life. Now, the next step in the evolution of the planet was to construct machines so that they could think for themselves… Life-forms need not be made out of flesh and blood.”

In “*The Akashic Experience*” [László 2009] Ervin László noted that Tesla “spoke of an 'original medium' that fills space and compared it to Akasha, the light-carrying ether. In his 1907 paper 'Man's greatest achievement,’ Tesla wrote that this original medium, a kind of force field, becomes matter when Prana, or cosmic energy, acts on it, and when the action ceases, matter vanishes and returns to Akasha.”

I found this interesting and searched for the sources. The Tesla Memorial Society has a story [Grotz 1997] on Tesla's article, which was written on May 13, 1907, and probably inspired by Tesla's association with [Swami Vivekananda].

“Man's greatest achievement” was published on July 13, 1930, in *The Milwaukee Sentinel*. The full text is in the public domain, but difficult to find. Since it could disappear from the internet anytime, I have taken the liberty of reproducing it below.

An inspiring quote often attributed to Tesla is:

> “The day science begins to study non-physical phenomena, it will make more progress in one decade than in all the previous centuries of its existence.”

The idea of science studying non-physical phenomena seems odd, but I think what Tesla meant (if he ever said these words - the quote is unsourced) is phenomena beyond the framework of known physical science.

I guess Tesla had in mind subtle Akashic interactions underneath ordinary reality, as well as paranormal phenomena, psi powers, mind over matter and all that. Abraham and Roy give a readable explanation of current research on paranormal phenomena, which could one day provide insights into yet unknown Akashic physics.

The Abraham-Roy model is beyond physics as we know it today, but it's a scientific theory. When physical reality turns out to be more complex than our current models, which happens all the time in science, we can extend our models to encompass previously unseen aspects of reality. In this sense, Tesla's non-physical phenomena are physical, and in principle accessible to engineering.

Man's Greatest Achievement, by Nikola Tesla

This article, written by Nikola Tesla in 1907, was published on July 13, 1930, in *The Milwaukee Sentinel*.

> "When a child is born its sense-organs are brought in contact with the outer world. The waves of sound, heat, and light beat upon its feeble body, its sensitive nerve-fibres quiver, the muscles contract and relax in obedience: a gasp, a breath, and in this act a marvelous little engine, of inconceivable delicacy and complexity of construction, unlike any on earth, is hitched to the wheel-work of the Universe.
>
> The little engine labors and grows, performs more and more involved operations, becomes sensitive to ever subtler influences and now there manifests itself in the fully developed being - Man - a desire mysterious, inscrutable and irresistible: to imitate nature, to create, to work himself the wonders he perceives.
>
> Inspired in this task he searches, discovers and invents, designs and constructs, and enriches with monuments of beauty, grandeur and awe, the star of his birth.
>
> He descends into the bowels of the globe to bring forth its hidden treasures and to unlock its immense imprisoned energies for its use.
>
> He invades the dark depths of the ocean and the azure regions of the sky.

He peers into the innermost nooks and recesses of molecular structure and lays bare to his gaze worlds infinitely remote. He subdues and puts to his service the fierce, devastating spark of Prometheus, the titanic forces of the waterfall, the wind and the tide.

He tames the thundering bolt of Jove and annihilates time and space. He makes the great Sun itself his obedient toiling slave.

Such is the power and might that the heavens reverberate and the whole earth trembles by the mere sound of his voice.

What has the future in store for this strange being, born of a breath, of perishable tissue, yet immortal, with his powers fearful and divine? What magic will be wrought by him in the end? What is to be his greatest deed, his crowning achievement?

Long ago he recognized that all perceptible matter comes from a primary substance, of a tenuity beyond conception and filling all space - the Akasha or luminiferous ether - which is acted upon by the life-giving Prana or creative force, calling into existence, in never ending cycles, all things and phenomena.

The primary substance, thrown into infinitesimal whirls of prodigious velocity, becomes gross matter; the force subsiding, the motion ceases and matter disappears, reverting to the primary substance.

Can Man control this grandest, most awe-inspiring of all processes in nature? Can he harness her inexhaustible energies to perform all their functions at his bidding, more still - can he so refine his means of control as to put them in operation simply by the force of his will?

If he could do this he would have powers almost unlimited and supernatural. At his command, with but a slight effort on his part, old worlds would disappear and new ones of his planning would spring into being.

He could fix, solidify and preserve the ethereal shapes of his imagining, the fleeting visions of his dreams. He could express all the creations of his mind, on any scale, in forms concrete and imperishable.

> He could alter the size of this planet, control its seasons, guide it along any path he might choose through the depths of the Universe.
>
> He could make planets collide and produce his suns and stars, his heat and light. He could originate and develop life in all its infinite forms.
>
> To create and annihilate material substance, cause it to aggregate in forms according to his desire, would be the supreme manifestation of the power of Man's mind, his most complete triumph over the physical world, his crowning achievement which would place him beside his Creator and fulfill his ultimate destiny."

Tesla's bold suggestion that Man could learn how to control the physics of Akashic interactions - "this grandest, most awe-inspiring of all processes in nature" - is the first modern formulation of the concept of Akashic engineering.

Tesla went beyond typical Western and Eastern modes of thought, the technological control of simple physical processes on the one hand, and the contemplation of a more subtle complex reality on the other hand, and proposed a powerful synthesis of the two.

A widespread appreciation of the prospect of future Akashic science and technology could, I think, trigger the "resacralization of the world" envisioned by Ralph Abraham.

Notes

[cellular automata] See "The Life of Joe Glider."

[dynamical systems theory, aka chaos theory] See "There's plenty of room at the bottom," "Eligo, ergo sum, ergo Deus est."

[Everett's "Many-Worlds Interpretation" of quantum physics (MWI)] See "Exotic space, mysterious time, magic quantum."

[Fedorov and the Russian Cosmists] See "Knocking on Heaven's door."

[India Awakens] See "The lights of Eastern spirituality."

[information is fundamentally and irretrievably erased by the collapse of the wavefunction] The collapse of the wavefunction (von Neumann's Process 1) is

nonunitary, irreversible, and doesn't conserve information. See "Exotic space, mysterious time, magic quantum."

[recently revived as an online magazine] The *Mondo 2000* website: http://www.mondo2000.com/

[space and time might emerge from the non-local entanglement structure of a fundamental field beyond space and time] See "In the beginning was the field."

[Swami Vivekananda] See "The lights of Eastern spirituality."

[the full text of "*Demystifying the Akasha*" is available online]: https://www.researchgate.net/publication/281765423_DEMYSTIFYING_THE_AKASHA_Consciousness_and_the_Quantum_Vacuum

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