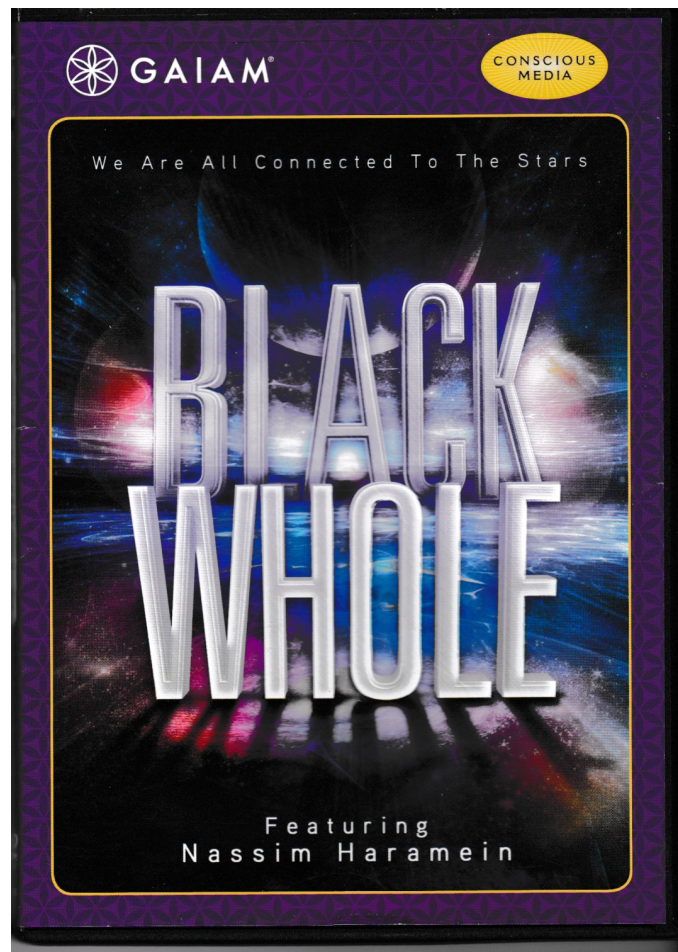


Black Whole DVD⁺

An Introduction to the Unified Physics of Nassim Hamein

Text of DVD Script plus additional material



Original Audio & Images by Nassim Hamein

Transcribed & Edited by Randy Langel

Randy.Langel@gmail.com

April 2020

Table of Contents

Foreword	4
Introduction	5
The Bus Ride	7
Who's This Guy?	10
What Connects All Things	11
Division of the Vacuum	14
You are the Event Horizon	16
Atom = Mini Black Hole	17
Schwarzschild Proton	20
Geometry of the Vacuum	23
64 Tetrahedron	28
The Double Torus	32
The Black Whole	34
The Pyramid at Giza	37
Chinese Symbols	41
Hebrew Tradition	43
Conclusion	46
Appendix A: Equations Section of Black Whole DVD	47
Is the Proton a Black Hole?.....	47
The Strong Force	49
The Scaling Law	50
Measuring Schwarzschild Proton Characteristics	51
Anomalous Magnetic Moment.....	53
Appendix B: Index of Resonance Academy Delegate Course Topics	55
Appendix C: 1-Page Summary of Vector Equilibrium (VE)	62
Appendix D: 1-Page Summary of Planck Spherical Units (PSU)	63
Appendix E: 1-Page Summary of Planck Spherical Units (PSU) – Technical	64
Appendix F: 1-Page Summary of Planck Units – Technical	65
Appendix G: 1-Page Summary, Nassim Talks about Reality	66
Appendix H: Recent Comments from Nassim on his Theory	67
Holographic Mass.....	67
Biology	68
Quantum Mechanics	69

The Universe	70
Consciousness	71
Miscellaneous	71
<i>Endnotes</i>	72

Foreword

This document is the result of my transcribing the audio of Nassim Hamein's DVD, "The Black Whole" to text. It is presented here in a book format with the following aspects:

- The text starting in the left most margin is from the narrator. It is done in a larger font and has been left unedited.
- The indented and justified text areas contain Nassim's own words for the most part. I have edited the video's transcribed audio text to eliminate phrases and exclamations that may not be appropriate when appearing in print. I have also condensed some audio/text to make it more readable.
- Where I have significantly altered the text from the original DVD audio I have included an endnote to indicate the video position number where the segment I'm editing starts. I did this in case someone wants to hear Nassim's original words rather than my text summation. It also allows people to quickly go to the appropriate part of the DVD to validate if my new text maintains the context of Nassim's ideas.
- Chapter titles in the table of contents correspond to the "Scenes" option on the DVD.
- The term "Resonance Academy Delegate Course" is used in footnotes to give a location where more information about the concept being discussed can be found.
- 1-Pagers are included in the footnotes (links) and a few are highlighted in the appendices. 1-Pagers are documents that summarize a topic on one page. They are meant to give a high-level overview of a subject without requiring the reader to invest a lot of time on their part. Citations are included where additional information can be found.

Randy Langel randy.langel@gmail.com

Introduction

What unifies everything and everyone, everywhere? This question has baffled physicists and scholars for centuries. Nobel Prize winner Albert Einstein came up with the most respected physics equations but his dream of finding the unified solution eluded even him. Where should one look for the answer to this universal puzzle; to the past, the future, the ends of the cosmos or beyond - or inward? Is the answer inside a particle, a proton? Does our consciousness affect the nature of reality? Maybe clues have been left for us throughout the centuries encrypted in sacred icons and symbols? Who among us can unravel the mysteries?

Einstein was a technical assistant at the Patent Office when in his spare time he cranked out some of the most remarkable theories. Theories that remain the crux of classical physics today. Einstein once said any intelligent fool can make things bigger and more complex it takes a touch of genius and a lot of courage to move in the opposite direction.

You expect a physics mastermind to be holed up in a big stone building with Ivy crawling up the walls not on the ski slopes of British Columbia, or swimming with the dolphins off the Big Island of Hawaii, scuba diving and exploring the Bimini wall near the Bahamas or scaling the rest of the physical world – literally and mathematically.

Nassim Hamein was born in Geneva Switzerland in 1962. Like many other savants, this imaginative child frustrated teachers to the point he was ostracized. Few around him knew of the equations, mathematical quandaries and probabilities that consumed his mind. As a young adult Hamein spent months living alone in a van in California tackling these nagging concepts until he met believers who supported his efforts.

Hamein struggled for the next 25 years working alone and with world-renowned physicist Elizabeth Rauscher, testing and finally potentially solving Einstein's dream. This lifetime of decoding started in 1972 when a teacher sparked Hamein's faithful inner journey.

This all started when I was about 10 years old and attended my first geometry class. It was an exciting time because the teacher went to the blackboard and made a little dot and said today we're going to learn about dimensions. When he said dimensions, I got all excited because I thought he was going to talk about all these worlds I live-in in my mind and other things I'm experiencing. My initial excitement turned to disappointment after he put a little dot on the blackboard and said 'this dot is dimension zero and it doesn't exist.' I now thought I was doomed to fail this class because I could see a dot from all the way in the back of the room so if I could see it how is it that it didn't exist. He then proceeded to put a bunch of dots together to make a line. He declared this to be dimension one and said that it didn't exist either. Why? Because it didn't have volume. He then put four lines together to make a plane and called it dimension two. Commenting that this was the dimension our comic strip books live in, he then added that this too did not exist for the same reason that it contained no volume. It was flat. The teacher then did something remarkable. He took six of these non-existing planes, put them together into a cube, and proclaimed this to be the first dimension to actually exist, calling it dimension three and the one we humans occupy. Hearing this I thought, how is this possible? How can you assemble non-existing planes into something that now exists? This didn't work for me. I thought if the dot doesn't exist and the line doesn't exist and the plane doesn't exist - you don't have existence. Eventually I discovered that many other people had the same problem when they were young and were taught these axioms, one of them being the famous geometrist Buckminster Fuller.

These fundamental geometric ideas form the basis of much of our math and physics today. Advanced physics like Einstein field equations and quantum theory are all based on the idea of flat space. If the central concepts of a theory are not correct then most likely the results may not be quite correct. At the age of 10 I didn't know all of this but I wanted to understand it. I wanted to find a new solution¹.

¹ There are fundamental problems in our math & physics. We have discovered mathematical concepts and assumed there are corresponding physical constructs. For example, the concept of dimension. If we use our mathematical 2-dimensional Cartesian plane in a physics equation we are led to believe physics happens in 2 dimensions. *Just because our mathematics points us to a concept, does not mean that that concept is real in the material world.* From "Nassim Haramein Talks Reality," 1-pager which is a summary of a video interview done with Michael Hudson of Bitstocks.com. The 1-pager can be downloaded from <http://www.randylangel.com/science.html>

The Bus Ride

I had a long bus ride home and I determine I was going to figure this out. I didn't know that many philosophers and scientists had graveled with this same problem but I was young and didn't concentrate on obstacles. I closed my eyes and visualized myself seeing the bus from above. I rose further and further and as I did the bus started to look like a dot. Rising further the country started to look like a dot. Then the earth became a dot, the solar system a dot, the galaxy a dot. I thought, It's all dots. Descending back through the celestial formations and into the bus I opened my eyes and thought, what's in my hand? Closing my eyes again I flew into my hand and saw millions of dots – we call them cells. Flying to the surface of a cell I saw more dots – we call them atoms. Descending to the atom and looking to the middle I saw another teeny dot that we call an atomic nucleus. I thought, WOW, it's dots all the way down too.

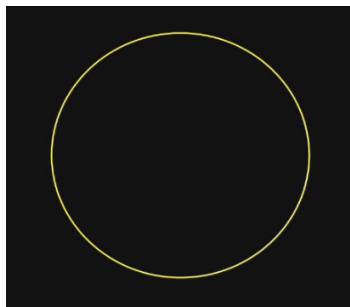
Suddenly a light went on and I thought that the way to solve the dimensional problem is to reverse the action completely and say the only thing that exists is the dot. Within the dot is an infinite amount of division or put another way an infinite amount of information. I hypothesized that everything was made from dots and by arranging the dots in all sorts of ways the whole world could be created.

Opening my eyes, I began to see that all the people in the bus were made of dots too. I could envision the infinite dots of their existence. For a moment I got really excited but that was soon tempered by the question, if it's infinite how is it that we get a finite structure? How is it that we get a finite boundary? How is it that we have finite systems with infinities?

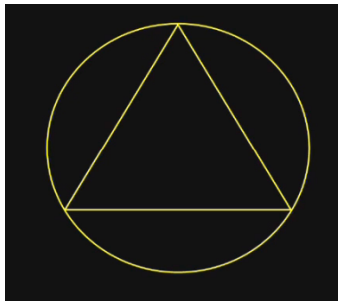
Haramain didn't know it at the time but he was grappling with one of the biggest chasms in current physics. Einstein's theory of general relativity covers the cosmic scales and the relationship between gravity, time and space. It predicts continuum to an infinite point of singularity or a black hole. Quantum theory covers the smallest units in the universe and predicts finite in linear boundaries. The two theories are at odds but Haramain believes both viewpoints are interconnected because everything big is made up of something small.

In general, we could define our society in two ways. Spiritual people tend to think in terms of infinities and scientific people think of finite systems i.e., closed systems with very defined boundaries. The two don't necessarily agree. I think that these two ideas need to merge. In a very simple way I'm going to show you geometrically that infinities and a finite system are actually complementary.

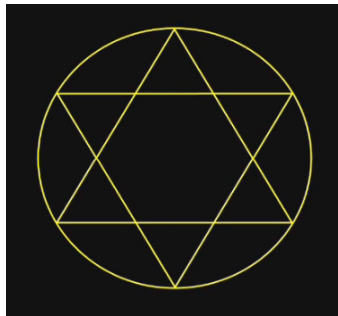
Take the boundary of a circle and define it as our finite space.



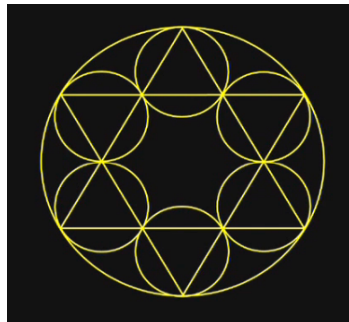
Now divide the circle so an equilateral triangle is formed in it.



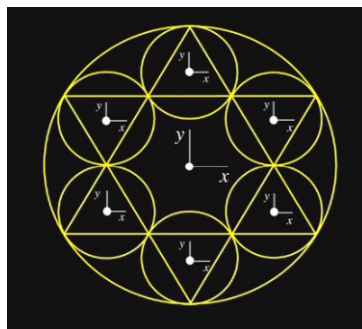
Everything in the universe spins and spin produces polarity so we would need to add a reverse triangle at the same time.



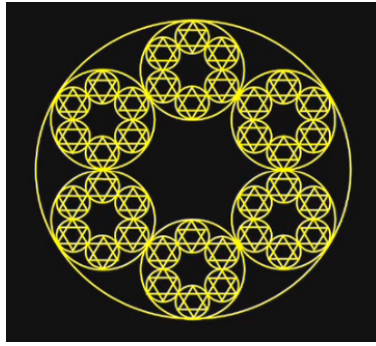
As soon as we do this we've created a new boundary condition at the next iteration (fractal level) down.



Each of these new boundaries are centered around a very specific center (coordinate) in space-time so each boundary could be thought of as a very specific set of information.



I can continue to divide the space to produce new boundary conditions. Now I've got another iteration down and another set of information. I can continue to do this and create new boundaries again.



At this point you can imagine how a computer could zoom-in and continue to divide the space to infinity, however, it would never exceed that first boundary. Thus, I have embedded an infinite amount of divisions i.e., an infinite amount of information, within the confine of a finite space. So, in very simple terms I've shown that infinities and finite structures are complementary. That is, within the confine of what appears to be a finite space can be embedded an infinite amount of information. This simple concept could not only change all of our concepts of physics but also how we view our relationship to the universe².

Consider that you are made out of cells which themselves are built from atoms. There are about a hundred trillion cells in your body and billions of atoms per cell. Imagine that all these cells and all these atoms can be further divided into subatomic particles that can then be divided into sub-subatomic particles and so on towards infinity. That would mean you have within your physical body a function of infinity i.e., you have an infinite nature within the confines of what you call the physical world. So, you don't need to have a spiritual concept of your infinite nature. It's actually the way you're made.

This complementary fractal condition could change the fundamentals of physics. Quantum theorists adhere to a concept called the god particle. If we look hard enough, they believe, they will discover the smallest division that the universe creates. Here's another way to approach it.

With the invention of our first microscopes and viewing of cells, our initial reaction was that these are so small they must be the smallest thing in the universe. This was short-lived because we quickly found those cells were made out of atoms. Once again, we jumped to the conclusion that due to their small size (in our perception of the universe) atoms must be nature's basic building block. The discovery of a nucleus in the middle of an atom composed of protons and neutrons then dispelled that conjecture. Follow-on analysis found quarks and so on. At this point in physics history we're building enormous devices called accelerators in order to accelerate particles to faster rates in the hopes of finding the fundamental particle. However, based on the concept of infinities within a finite space, we know that this can be done to infinity i.e., you can always get a smaller particle if you can get a large enough accelerator. So, what is this really telling us about the universe?

"I think a worthier exploration would be to stop looking for a fundamental particle and start looking for a fundamental pattern of division. If we could find a pattern in which the universe divides then we would have the key to creation and that could be really useful."

² The Black Whole DVD segment showing the animation of the discussion of infinities in a finite space can be seen at <https://www.youtube.com/watch?v=4W5y5bIw1hc>

Who's This Guy?

My first sponsors wanted me to spend time interacting with physicists to try to get support for my theory and discuss how it applied to mainstream physics and the standard model. I wasn't enthused by this prospect as I had previously encountered a significant amount of resistance to my ideas from the scientific community. I eventually consented and attended a private conference of advanced physics at Georgia Tech. At one point in the meeting I stopped the proceedings and asked a fundamental question from the book "Gravitation" which was considered the bible of relativistic equations. I opened it to page 719 (it's a very large book) and said that according to the current model, the universe looks like a balloon with pennies glued to it representing galaxies. As the balloon inflates the pennies (galaxies) move away from each other thereby mimicking the expansion of the universe. They all snidely agreed.



I then said that I had been doing extensive research and had not been able to obtain any information or equations to solve the problem I had with the diagram and I hoped they could shed some light on my confusion. I then asked:

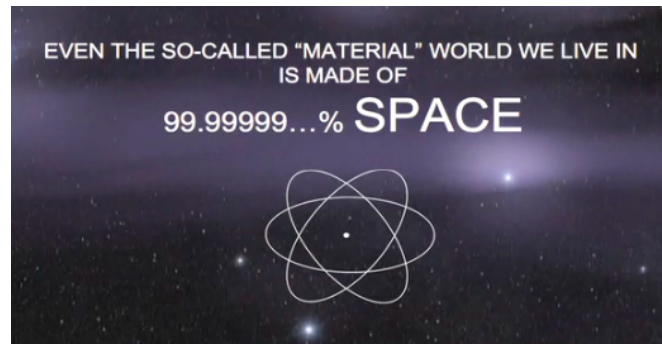


The room went deafly quiet.

I will always remember one of the students was drinking coffee and he coughed a little bit at my question. The room was sure I was about to utter the word god in the physics department. Look at it this way. For every action there's an equal and opposite reaction, one of the first laws of physics. Therefore, when the balloon expands, the lungs contract. In our current model, the universe is expanding but nothing is contracting to make it expand. So, how can the balloon expand if you're not compressing air into it? This was a crucial moment for me.

What Connects All Things

When I was young I realized from my experiences that there was an internal world as well as the obvious and visible external world. I began to imagine what one thing could connect everything. I eventually concluded the one thing that's everywhere and connects all things is space. Space is everywhere; between galaxies, between stars, between planets, between cells, between atoms. Even the atomic structure is made out of 99.99999% space. So, the reality we live in is mostly space. Everything you see, all the material world that you think is so solid is actually mostly space. What you're experiencing as your reality, what you call the material world is actually .0000001% of what's there.



However, we spend most of our time paying attention to this miniscule .0000001% and forget to look at the space. For me it was crucial to realize that maybe it's the space we should be looking at. Maybe we should pay attention to the 99.999999%.

“Maybe objects don't define the space but space defines the objects.”

Sinceⁱ all things radiate in space and since space connects all things it follows that space cannot be empty. What we call empty space, or the vacuum, is actually very full i.e., very dense.

Does current quantum field theory account for this density? Hamein turned again to the book of Gravitation where he was surprised to find supporting evidence, quote: “Present-day quantum field theory gets rid by a renormalization process of an energy density in the vacuum that would formerly be infinite if not removed by this renormalization.”


In current quantum field theory, it is necessary for the vacuum to have a very high-density level in order to run the equations and account for everything going on at the atomic level. This was confirmation that my initial thoughts were correct in hypothesizing that space was not empty. Space was actually a fluctuation and possibly the source of our reality.

Butⁱⁱ what is renormalization? There are two kinds of infinities in physics, infinitely small and infinitely large. An approach yielding an infinitely small number can usually be disregarded from the calculations because it does not affect the validity of the theory's contention. However, when an infinitely large number appears it's very uncomfortable and is even given a special name. It's called a nasty infinity. When an equation gives you an infinitely large number you can't ignore it.

If the scientific community was completely logical, a physics theory generating a nasty infinity would be reevaluated as to its authenticity because an infinitely large number indicates it probably is breaking down at that level. Instead, to protect the “validity” of the theory, the number is renormalized. Usually a fundamental constant is used to reduce the number to a palatable finite number. In this case the Planck distance i.e., length was used.

...present-day quantum field theory “gets rid by a renormalization process” of an energy density in the vacuum that would formally be infinite if not removed by this renormalization.

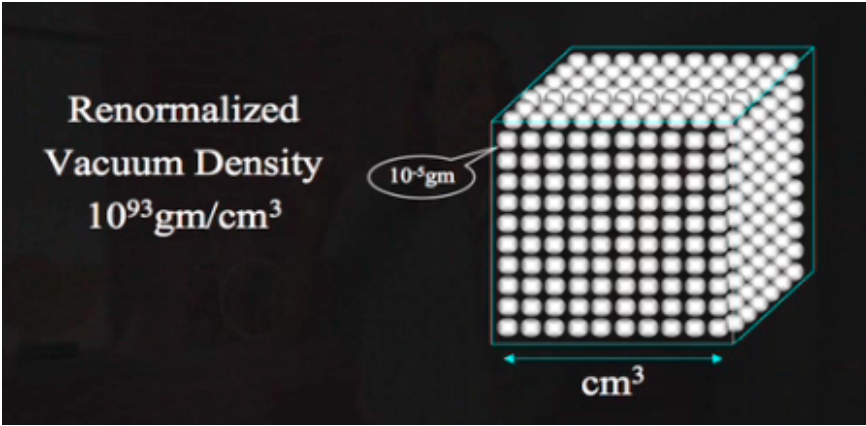
Gravitation
Misner, Thorne, Wheeler



Planck Distance
 $1.616 \times 10^{-33} \text{cm}$

The Planck distance is supposedly the smallest thing the universe does. You could think of it in as the time or the distance it takes a photon to go across itself. It's supposedly the smallest wave length the universe generates. Do I think the Planck distance is the smallest thing the universe does – no. I think the Planck distance is a fundamental boundary condition in relationship to our experience in this universe. However, I think there is further structure below the Planck distance. In any case they used the Planck length³ of $1.616 \times 10^{-33} \text{ cm}$, an extremely small number (billions of times smaller than the atom), to renormalize the vacuum.

Thisⁱⁱⁱ renormalization procedure involved taking a cubic centimeter of space and calculating how many cubes of Planck length (representing fluctuations), could be contained in that volume of space. The result would be a finite number for the density of the vacuum. The mass of each Planck length cube was known, not by observation but rather through calculation using universal constants⁴. This computed mass is 10^{-5} grams. They then took the number of Planck length cubes and multiplied each by its mass to get a fundamental density. The result was still extremely large i.e., 10^{93} grams per cubic centimeter.



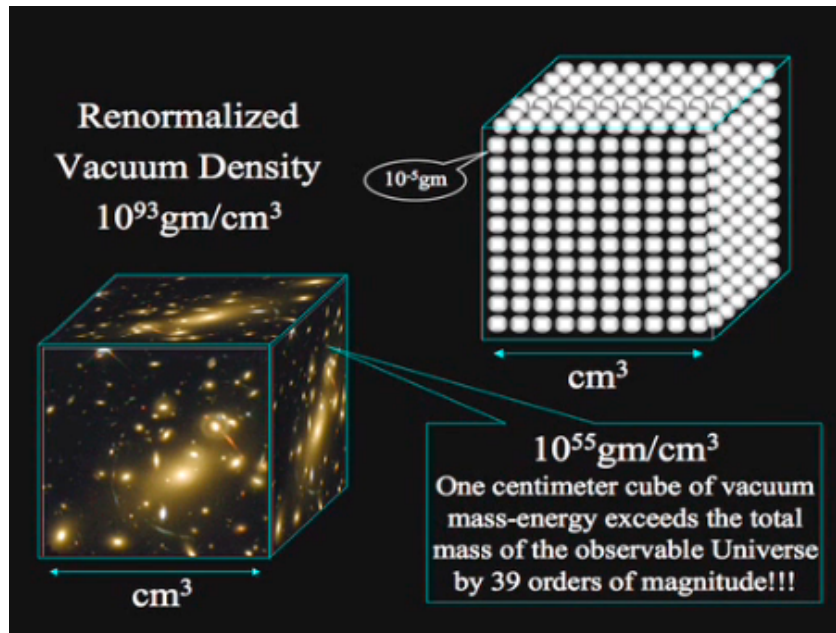
³ The Planck length represents the smallest limit of length we know how to measure. The reason for this is that all of our measurement ability in the current age is based on light. The smaller the wavelength of light we can produce, the smaller the objects we can shine that light upon and measure. Resonance Academy Delegate Course, Modern Physics, section 3.5.3 – Planck Units.

⁴ In 1899, Planck proposed a series of completely *natural units* based on the properties of fundamental physical theories. These natural units are thus based only on observed properties of the universe — the universal constants. So instead of using a measuring standard created by humans, Planck units are calculated directly from the universal physical constants, namely the gravitational constant, G, the speed of light, c, and the Planck constant h. Resonance Academy Delegate Course, Modern Physics, section 3.5.3 – Planck Units.

Planck Length: $l_P = \sqrt{\frac{\hbar G}{c^3}} = 1.616\ 199(97) \times 10^{-35} \text{ m}$

Planck Mass $m_P = \sqrt{\frac{\hbar c}{G}} = 2.176\ 51(13) \times 10^{-8} \text{ kg}$

That is an enormous number. To give you an idea of how dense this is, take all the stars we see in the universe, including the billions of galaxies each of which has billions of stars in them. If we took all of this matter and somehow squished it all into a centimeter cube of space, you still wouldn't have the energy density of the vacuum. The universe is approximately 10^{55} grams so even that is still some 39 orders of magnitude smaller than the structure of the vacuum. To think of space as empty is incorrect. Space is full of energy fluctuations. According to my research, this energy density is source of all reality.

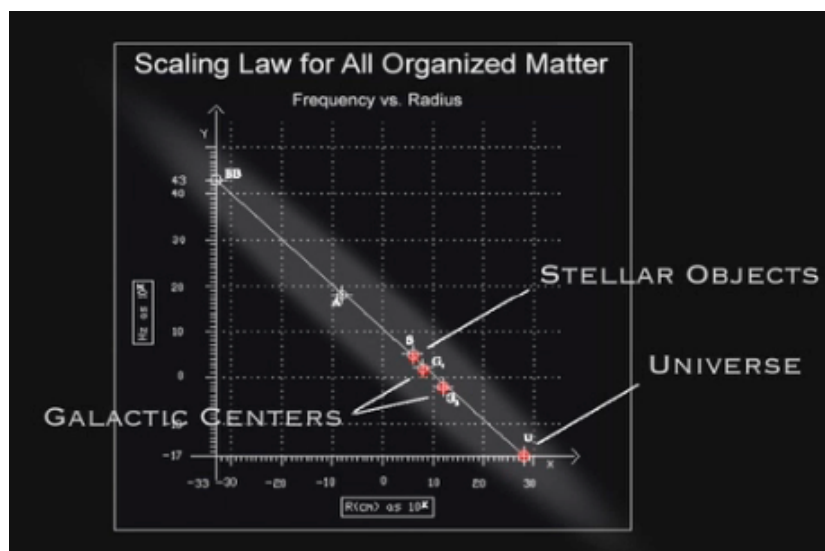


Division of the Vacuum

Having postulated that space is what produces our material world, I started to think of our reality not as an object in the space but rather as a division of the space. If this was correct we should be able to find patterns of the divisions. Elisabeth Rauscher and I investigated this idea and we discovered that the universe is indeed fractal. We published a paper⁵ to this effect describing a scaling law that is consistent across cosmic systems.

The^{iv} scaling law describes a simple relationship. We plotted energy density in terms of Hertz on the y-axis and the radius of the cosmic entity on the x-axis. Using the available data, we approximated the radius and energy data for the universe itself, and plotted our first data point. When you look at the size of our universe and the amount of material in it, you find that our universe actually obeys the condition of a black hole. Our universe is too dense for light to escape it. If we were to shine a laser in our universe it would get bent a little bit by our local star, the Sun. Eventually the laser light would get to another star and get bent a bit more by that gravitational field. Continuing past stars and galaxies the light would continue to bend, bend and bend some more. There's so much mass and matter in our universe that light would not be able to escape it. The light would eventually come back onto itself. Our universe technically obeys the condition of a black hole⁶. Did you know that you live in a black hole universe?

The universe with its black hole condition was the first data point Haramain charted. He next added galactic centers and stars. They lined up in a linear progression with the universe. An amazing result.

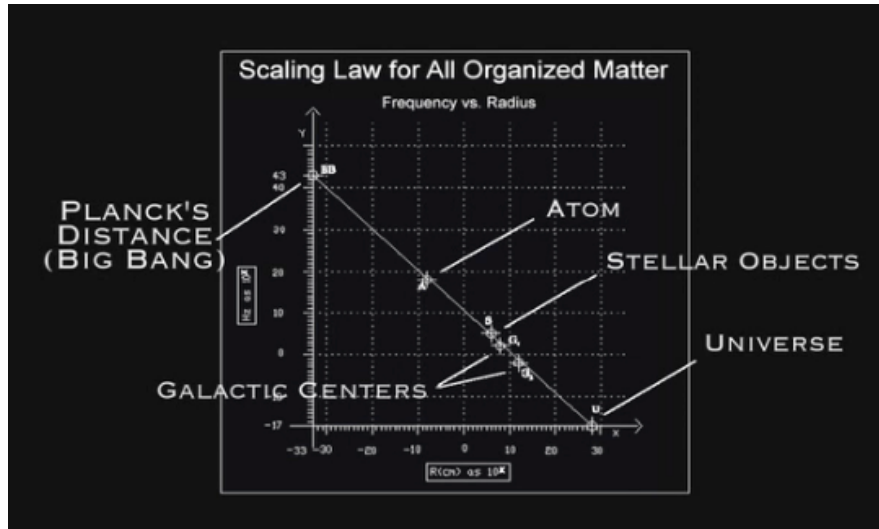


If the vacuum is the source of the division then it divides in very specific relationships. The next step was to see if the pattern continued on the other end of the physics scale.

⁵ "Scale Unification – A Universal Scaling Law for Organized Matter," Nassim Haramain, Michael Hyson, E.A. Rauscher. <https://resonancescience.org/wp-content/uploads/2019/04/SU.pdf>

⁶ Shortly after Einstein released his theory of General Relativity, Karl Schwarzschild found a solution to the Einstein field equations. His calculations showed that at a specific radius around the center point of a spherical body, now called the *Schwarzschild radius*, some of the terms in the Einstein field equations become infinite. The *Schwarzschild solution* to Einstein field equations essentially shows that if an object is massive enough, it will curve spacetime so that not even light can escape, and determines at what radius this occurs (the Schwarzschild radius). Within that region, a *singularity* would occur, both at the radius (later considered to be the "event horizon") and in the center of the object. This suggests that infinite mass and energy could exist within the Schwarzschild radius of that object. These singularities were eventually called "black holes." Resonance Academy Delegate Course, Modern Physics, section 3.4.4 – Black Holes.

Now^v we went from the cosmic scale down to the atomic. We plotted the energy level of an atom and its corresponding radius and sure enough the data point lined up again. Then we went all the way down to the Planck length and that lined up as well. It's remarkable that objects in such a wide range of sizes and energies would all share a fractal relationship, from the very large to the very small, or saying it another way, from the arena of relativistic equations to that of the quantum world. All the data points lined up close to a near perfect linear progression.



The scaling law showed that there is structure and order in the vacuum i.e., it divides in very specific relationships. Curiously, the relationship between the data points was were very close to the Phi ratio.

The Phi ratio is found everywhere in nature. Your hand is a good example. The end of your finger is 1.618 (Phi ratio) smaller than the second part of your finger and the second part is 1.618 smaller than the third.



Your hand relative to your forearm and your arms relative to your body also obey this proportion. The Phi ratio is present in plants, flowers, tree branches, tree roots, the human body's nervous system, arteries and veins - all Fibonacci sequences.

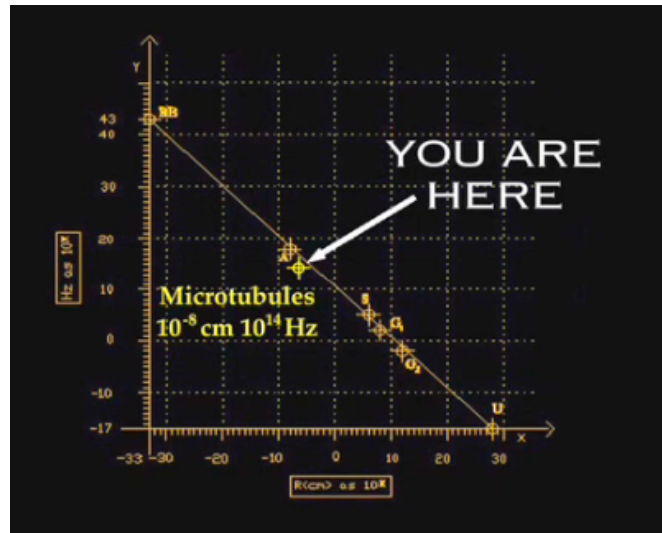
The Phi ratio is evident even beyond where our eyes can see. The most recent discovery confirmed that the Phi ratio exists even at the atomic level. Researchers in Germany observed that a chain of atoms acts like a nanoscale musical instrument whereby the Phi ratio seems to be the preferred division of the musical notes.

It was remarkable to find a linear relationship between so many data points within such a huge range. It indicated that the scaling law was correct.

“It was clear to me that the vacuum must have a fundamental structure.”

You are the Event Horizon

Another interesting data point was microtubules. These are small biological entities that make up the structure of cells. They are much larger than atoms and oscillate at a very high rate i.e., between 10^{11} and 10^{14} Hertz. The microtubule plot landed almost perfectly on the linear progression and curiously they were very close to the scales' midpoint. This means that a biological entity was dividing the scale between the extremely large and the extremely small. It's almost as if biology is the universe's boundary condition between the large and small. Thus, it could be said that you are the event horizon.

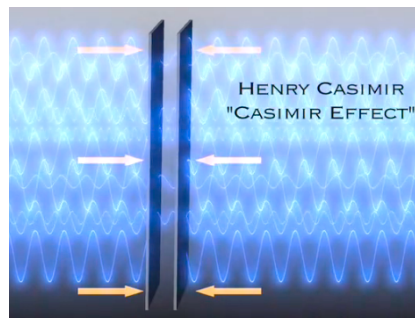


Atom = Mini Black Hole

The atom, whose size lies between that of the universe and the Planck length, was the next data point we plotted. Recall that both the universe and the Planck length both obey the Schwarzschild condition which classifies them as black holes. Since the atom lies on the same linear progression as these two black hole conditions, it follows that the atom would also be a black hole.

As we saw earlier, the division of space can be done to infinity. If an atom has subatomic particles that are made out of sub-subatomic particles and these are made out of sub-sub-subatomic particles and so on to infinity and each one has a mass then there's infinite mass at the center of atoms. To me this meant that atoms must be mini black holes. From this conclusion I extrapolated that there must be a black hole at the center of all galaxies. I said that very early almost 25 years⁷ ago. However, at the time there was not much data about galactic centers so many physicists thought this improbable. As more experimental data became available it was eventually confirmed that black holes were at the center of all the galaxies observed. This confirmed I was on the right track but how is an atom a black hole? Is it possible? Does our current physics say that? No, it doesn't. Could we approach physics at the atomic level in a different way? Could we approach the atom as a mini black hole?

Eventually^{vi} I did solve it and that solution became the centerpiece of the unification theory I'm proposing. If we can describe the atom as a mini black hole then we can describe the atomic world with Einstein field equations. Looking at the atom in detail, I wondered if the large vacuum density of 10^{93} grams/cm³ had ever been considered in calculating their attributes. This number is used all the time in quantum theory to make the equations work, however, it's assumed the vacuum density doesn't have any physical meaning. We now know from laboratory experiments that the vacuum density can be measured⁸ and does indeed have mechanical effects. If it has mechanical effects it obviously has meaning in our material world.



I wondered how much vacuum energy would be present inside the nucleus of an atom and would that energy be enough to make it a black hole?

I started^{vii} by looking at the proton which is in the nucleus of an atom. The volume of a proton is much smaller than a cubic centimeter, namely, 10^{-39} cm³. Given that a one cubic centimeter of the vacuum has 10^{93} gms/cm³ of vacuum energy⁹, I calculated how much vacuum energy would be in the proton's small size. The result¹⁰ was 10^{55} grams of vacuum energy is present in the proton volume¹¹.

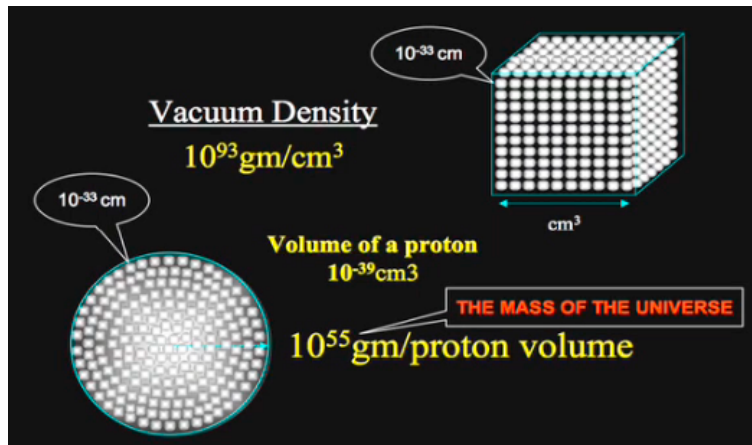
⁷ The number of years given in the original DVD published in 2011 was 17 years. This number has been updated to reflect 2020

⁸ In 1948, Hendrik Casimir theorized that you could verify the existence of vacuum energy by creating a gradient in the vacuum energy between metal plates placed extremely close together. This is commonly referred to as the *Casimir effect*, and was confirmed experimentally in 1996 by Steven Lamoreaux and since verified by extensive experimentation. In the experiments, two plates are placed in a vacuum, where only the vacuum fluctuations are present whose wavelengths fit a whole number of times within the space between the plates. Any longer wavelengths are thus eliminated creating a gradient in the energy density that forces the plates together. Resonance Academy Delegate Course, Modern Physics, section 3.5.7 – Quantum Field Theory – Vacuum Catastrophe

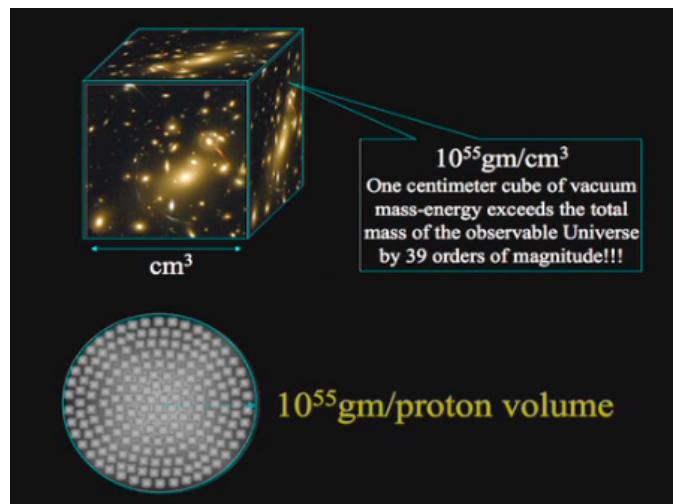
⁹ Also known as the Planck Density

¹⁰ For more detail on the calculation, see Appendix A: Equations Section of Black Whole DVD

¹¹ The Schwarzschild Proton, Nassim Haramein, December 2010. <https://resonancescience.org/wp-content/uploads/2019/04/SP.pdf>



It's very interesting that the result of the calculation yielded the value 10^{55} gms. Why? Because 10^{55} gms is also the currently accepted mass of the universe. That is, the mass of the universe is present in vacuum energy density (vacuum fluctuation) in the volume of a proton¹².

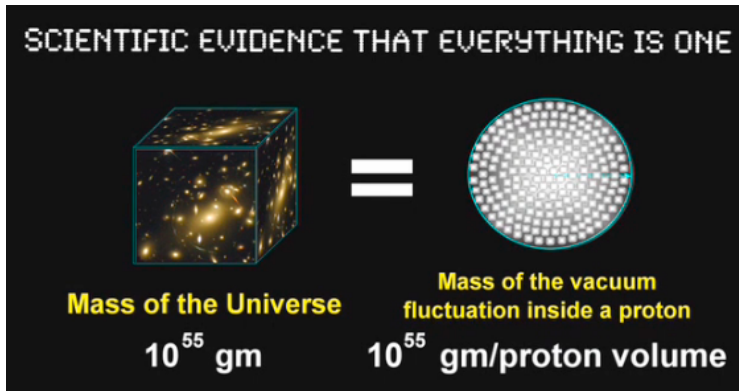


What's important to remember here is that we are not saying that all of the protons in the universe are inside one proton, but that the information of all other protons is holographically present within a single proton. Just like the information that makes up a piece of classical music from an orchestra can be encoded on the magnetic medium of a hard drive or the optical medium of a CD or DVD, the instruments and the people who play them are not present on the medium¹³.

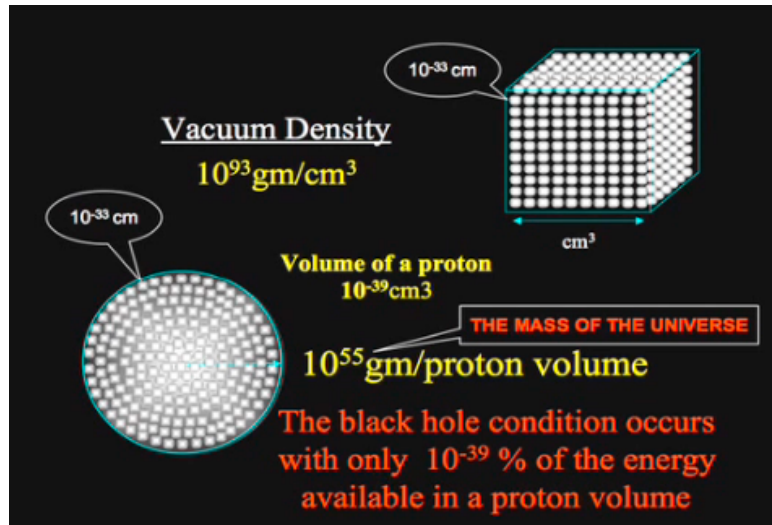
¹² The most stable particle is the proton. It is what makes up matter and us. It is fundamental. Therefore, this particle must be in touch with everything everywhere. The proton must be the throughput of the data streaming across the nodes of the universe. All the little Plancks inside the proton equal the mass (remember – what we call mass is really bits of information) holographically of the universe. Each bit of information that makes up the rest of the universe is present holographically within the field of information within one proton. The reason I'm not measuring the mass (information) of the universe when I measure the mass (information) of the proton is because I'm only measuring one node. This node can only emit (information) that's able to come out through its little surface. However, in the central volume of the proton is the shared volume (information) of all the other protons in the universe because they are all connected through tiny Planck wormholes. The whole thing is connected. "Consciousness & the Human Antennae," by Nassim Haramein, Presentation at Conscious Life Expo, Feb 2019.

¹³ Resonance Academy Delegate Course, Unified Physics, section 4.2.5 – The Density of Spacetime & Holographic Information Storage

These results confirmed something fundamental to me i.e., the vacuum is truly the thing that connects all things. It showed that everything is entangled and everything is one. It's one thing to spiritually say everything's one, however, it's quite another to prove it mathematically.



So, is 10^{55} grams enough to make the proton a black hole? Absolutely. Since 10^{55} grams is enough to make the whole universe a black hole then when the same amount is present in a small volume of a proton it's more than enough. I calculated how much of the vacuum energy is actually necessary to make the proton a black hole and that found only $10^{-39}\%$ is required to make the proton a black hole¹⁴. That's a very small number – a decimal with 39 zeros to the right.

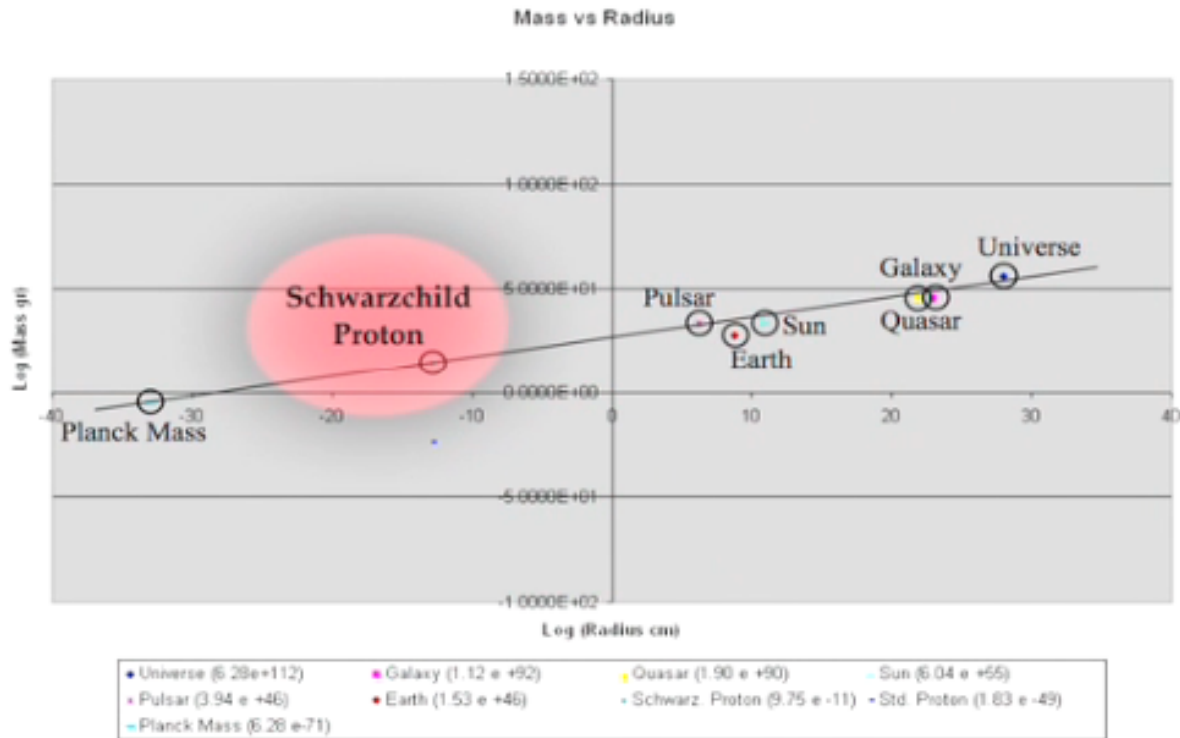


“A very small amount of the vacuum energy can become coherent and be converted to mass to make the proton a black hole.”

¹⁴ For more detail on the calculation, see Appendix A: Equations Section of Black Whole DVD

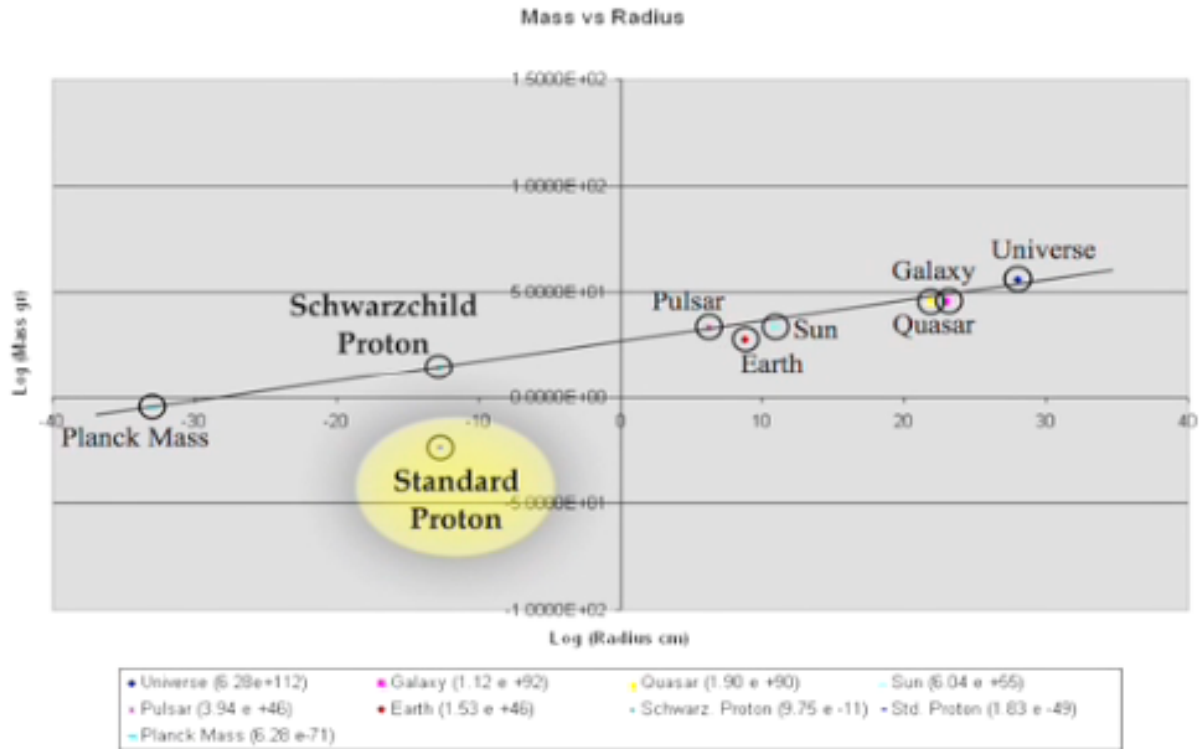
Schwarzschild Proton

While various proton¹⁵ calculations using the vacuum density method were proving correct, our proton was much heavier than the standard proton. So, which one is right? We were getting the right answers from a completely different approach than quantum theory. In fact, our solutions used classical mechanics. So, we decided to create another scaling law to see if our proton mass was correct for our universe. We used all the data points again but this time, we plotted mass versus radius. We started with the universe's mass and radius and went all the way down to the Planck scale. In between we included points for the earth, sun, pulsars, quasars and galaxies. When we plotted our Schwarzschild proton i.e., black hole proton, it fell almost perfectly on the linear progression.

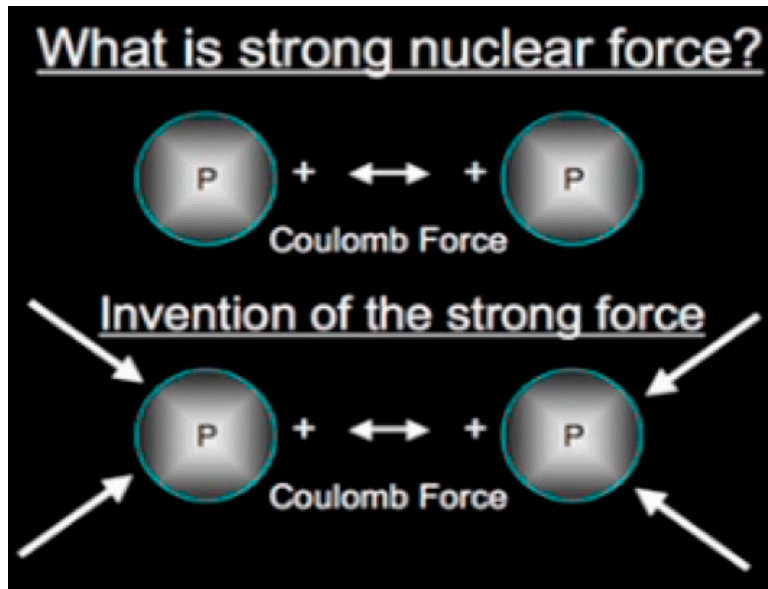


However, the standard proton with the mass of 10^{-24} didn't even come close. It was completely off in left field. This confirmed to us that our black hole proton was more aligned with the fundamental principles of our universe.

¹⁵ Nassim Hamein talks about charge, spin and proton formation from the vacuum in a Resonance Academy Live with Nassim talk from January 2018. <https://www.youtube.com/watch?v=VjBxPTuJ6Qg>

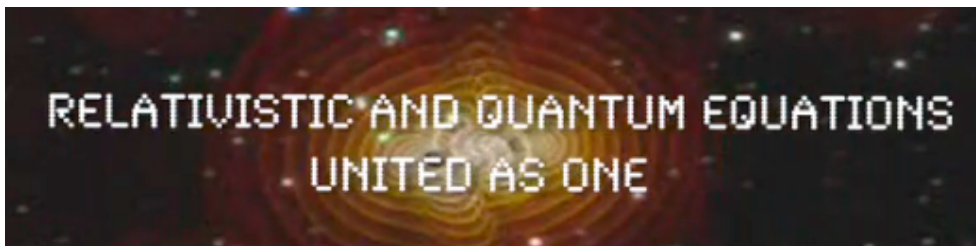


Our proton mass produced a large gravitational field. Investigating this we found it was exactly the amount of attraction needed between protons to overcome the Coulomb force. The Coulomb force is an electrostatic charge that pushes protons apart. A good example is two magnets of the same polarity approaching each and creating a natural repellent force. With two protons being close to each other and each being positively charged, there would be a strong repulsive Coulomb force. So how do they stay together if there is such a great force trying to repel them? When this was discovered it was thought that gravity was too weak to be the force overpowering the repulsive Coulomb force. So instead of reevaluating the Standard Model's concept of atoms, they invented a new force, which they called the Strong Force.



Conveniently they made it exactly what would be needed to overcome the electrostatic charge of two neighboring protons. The strong force was simply made up with no fundamental mechanics attached to it or source for the energy needed to produce such a force. This force and all its associated mathematics don't agree with the forces and calculations we have for cosmological objects. This created a division in physics between quantum theory and relativistic equations. However, taking the Schwarzschild proton approach, the gravitational force of a proton with 10^{14} gms of mass, is the exact amount of gravity needed to confine the protons with no need for a strong force.

By using the Schwarzschild proton approach, we have eliminated one of the fundamental forces of quantum theory, namely, the strong force. In so doing, we have united the physics of relativity and the physics of the quantum world. The equations that we have used to describe cosmic-scale entities such as planets, stars, galaxies and black holes can now be used for the atoms as well.



Geometry of the Vacuum

What is dividing the vacuum? How does it divide? What is its structure? How does it become coherent? Is there a fundamental geometry that defines it all?

While searching for this fundamental structure of the vacuum in physics and mathematical equations, Hamein discovered geometrical knowledge in other curious places. Ancient texts and traditions unknown to him at the time, many famous physicists found supporting data from historical manuscripts, including the founder of modern physical science, Isaac Newton. And German astronomer Johannes Kepler used geometrical concepts often found in ancient knowledge to elaborate the mechanics of our solar system.

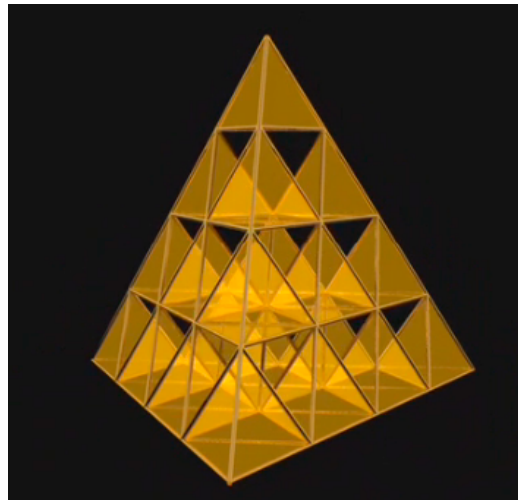
I looked at various traditions all around the world; Mayan, Incan, Egyptian, Chinese, Japanese et al, and found many had constructed geometric structures. One of them is Teotihuacan, an amazing creation north of Mexico City. The complex includes the Sun pyramid, the moon pyramid, the way of death and many other structures. Fortunately, an American engineer named Hugh Harleston Jr., spent 20 years mapping the relationships of all the buildings to each other. Ultimately, he found that not only did this ancient complex portray the movement of the planets and their orbits relative to our Sun but they also exhibited a fundamental mathematical constant relating a tetrahedron to a sphere. As I had already postulated that a tetrahedron would be involved in the structure of the vacuum, since it's the most stable of the platonic solids, I was intrigued.

Why would the ancient Mayans represent this very specific relationship between a tetrahedron and the sphere? I thought they might possibly be trying to deliver a message they considered important to some future culture. Upon further investigation I found that not only was this mathematically portrayed in the relationship of the complex's buildings but also that the complex itself occupied a position on the earth's surface that mapped the relationship of a tetrahedron in a sphere. I thought it was very significant and that it was not a coincidence. Could it be they were trying to tell us the structure of the vacuum is tetrahedral and that the sphere is the boundary condition that divides space?

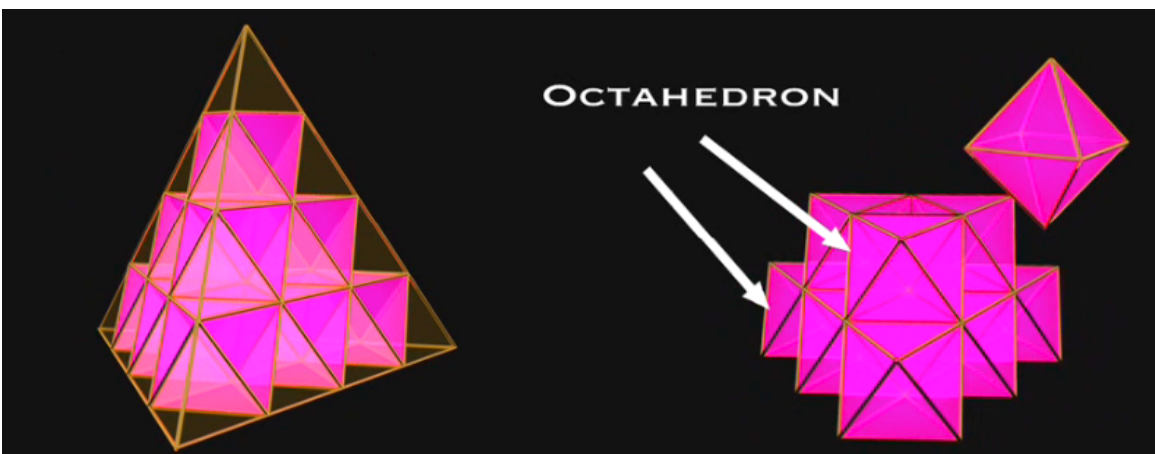


Energy events across the solar system frequently happened along or near the 19.47 meridian which is the base of the inverted tetrahedron in the earth sphere. The pyramid system at Teotihuacan in Mexico lies on this Meridian as does one of the most active volcanoes on earth. Kilauea in Hawaii has been erupting continuously for the last 19 years and shows no sign of stopping. The largest volcano in our solar system is located on Mars and it too is located in this vicinity. The well-documented Red Spot on Jupiter, a large vortex like storm larger than the earth, is also stabilized near this critical 19.47 latitude.

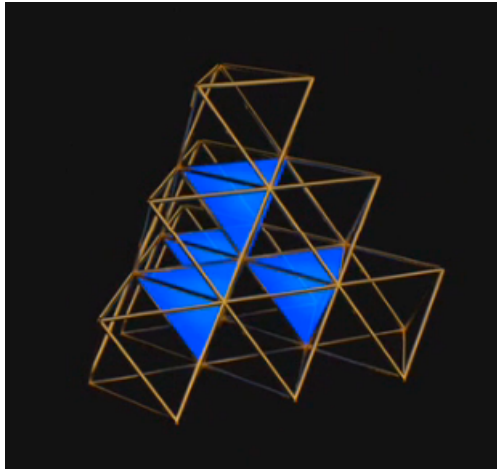
As I studied more geometry I came across Buckminster Fuller who had done a lot of work describing complex geometry relative to our reality. He concluded that the fundamental blueprint of the universe was what he called a Four Frequency Isotropic Vector Metric. This object contains 20 individual tetrahedrons; ten on the bottom, six in the middle, three on the third floor and one on top. Assembling all these creates a larger tetrahedron.



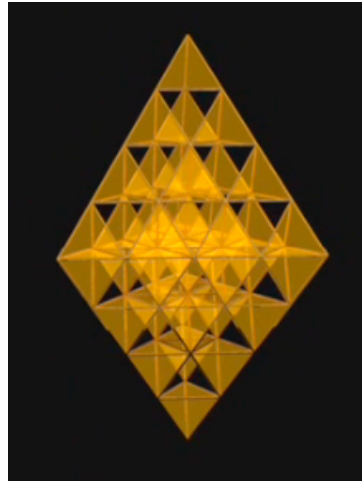
I was immediately drawn to the structure's negative space and wondered what would lay between the tetrahedrons. Putting tetrahedrons edge to edge, or edge bounded, you get octahedrons in between. Octahedrons are pyramids base to base.



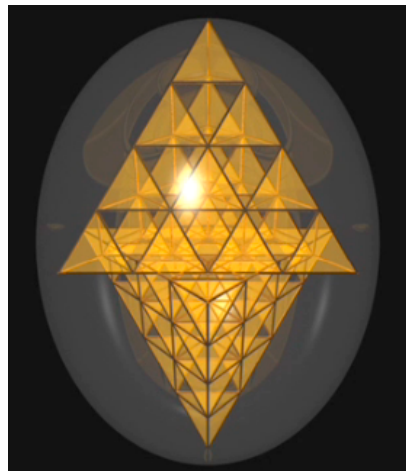
When I looked at the negative space I discovered another set of tetrahedron which could be envisioned as a negative-negative space. These tetrahedrons were in the middle and were reversed and rotated 180 degrees. I didn't know what they were doing there.



It looked like there was asymmetry in the isotropic vector metric, however, with the word isotropic you would expect no asymmetry. I was looking for perfect equilibrium so this was not satisfactory. I had to figure out what these other tetrahedrons were doing there. I realized that one isotropic vector metric could not be alone, it had to be polarized, so I stacked two on top of each other.



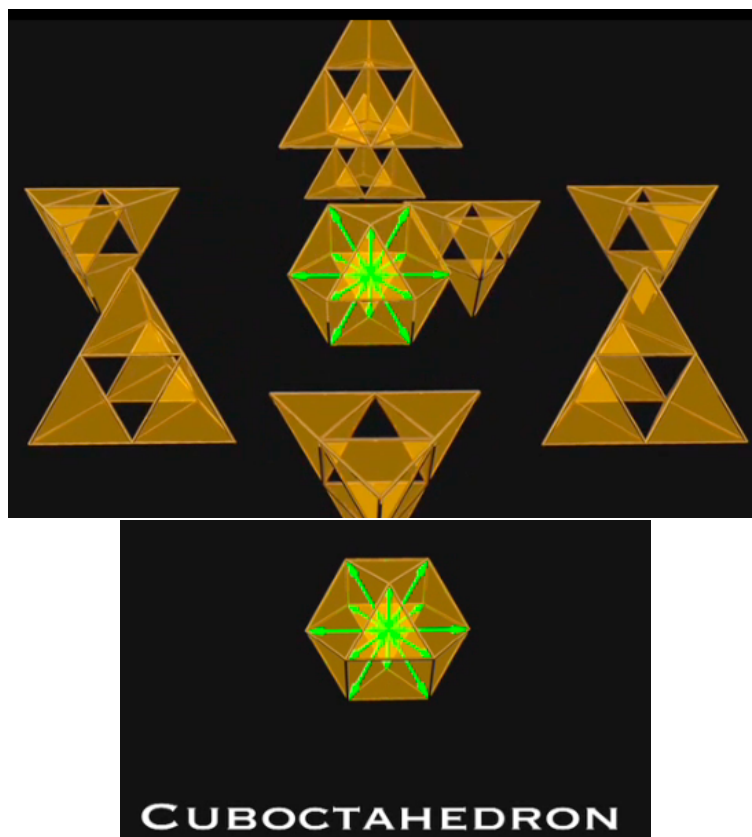
However, now I had another problem. The two on top of each other didn't make a sphere but rather an egg.



The concept I had developed was that the tetrahedrons produced a sphere that divides the boundary from infinitely large to infinitely small. I thought about it for weeks and eventually realized I had to push one into the other. Without distorting any tetrahedron's geometry, I slid them together till they formed a perfect sphere. It was then I realized what the other negative-negative spaces were for. In fact, one metric could not stand on its own as it wouldn't be complete until the reverse metric of the opposite polarity was entwined. Seeing the resulting object, it became obvious that other spaces were there to accept the reverse tetrahedron. It's almost as if one tetrahedron male metric was waiting for its counterpart.



When I looked at what geometry was produced in the middle, no tetrahedrons were distorted and the resulting geometry in the middle was a cuboctahedron.



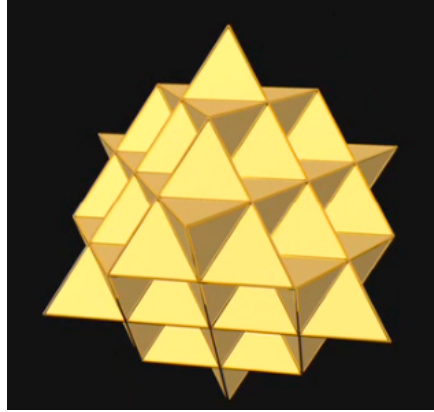
Buckminster Fuller coined a new term for the cuboctahedron in the middle of the 64-star tetrahedron - the vector equilibrium. It's important because it's the only geometry in perfect equilibrium in all vectoral possibilities. This was exactly what I was looking for. The polarities coming together to produce Singularity i.e., to produce perfect equilibrium at its center. I thought this must be the geometry of the vacuum.

Buckminster Fuller reasoned that if the force of a vector is its length and two vectors are driven against each other in opposite directions you will get equilibrium. But it will be unstable equilibrium because any other force in any other direction can break the balance. You could add two more vectors at 90 degrees from the initial point but in that case the edge vectors that contain the geometry would be longer than the vectors to the center creating instability. Fuller realized that the edge vectors and the vectors to the center have to be the same distance. This creates a hexagon, or in three dimensions, a cuboctahedron or vector equilibrium. From this Hamein concluded that this structure must be the geometry of the vacuum since in perfect equilibrium all the forces would cancel out and appear to us to be empty space¹⁶.

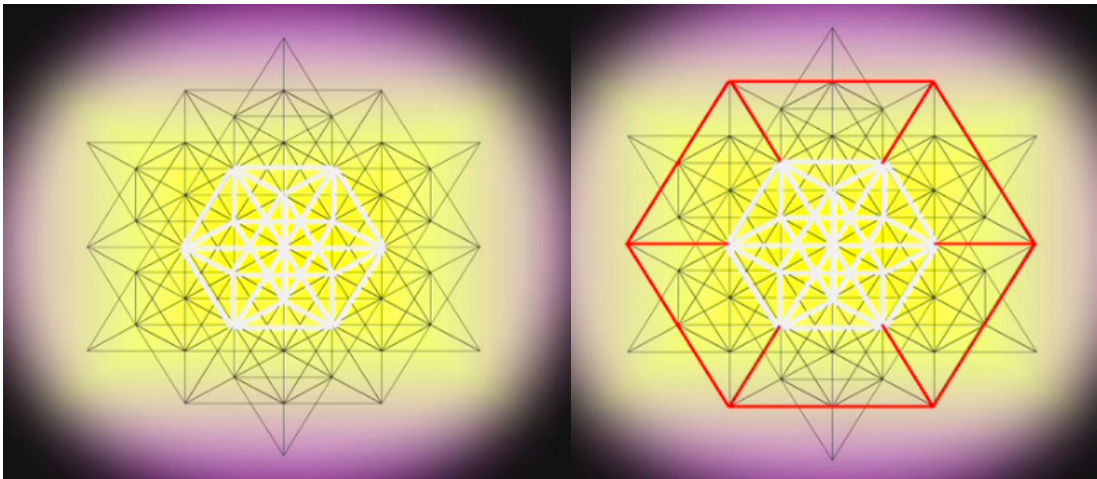
¹⁶ An excerpt from the Black Whole DVD that explains by animation the last three pages, can be found at <https://www.youtube.com/watch?v=xLRazZUYuqU>

64 Tetrahedron

Carefully^{viii} viewing the geometry, I noticed that the vector equilibrium¹⁷ in the middle was completely covered with tetrahedrons. However, the edges of the metric still had open faces. I was looking for perfect symmetry so I had to continue adding tetrahedrons to cover those open areas. I already had two isotropic vector metrics of 20 tetrahedra each. I had to add another 24 tetrahedrons to cover all of the faces that were open. This yielded 64 tetrahedrons.

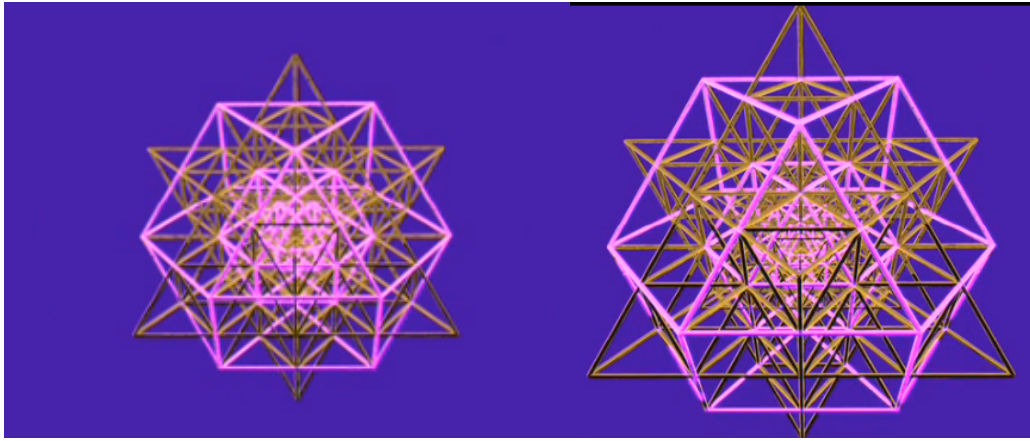


This turned out to be a very significant number. Not only is the number 64 found in many ancient traditions but it's also integral in many natural processes. The 64 tetrahedron grid brought me to a whole new understanding of the vacuum structure. It was exactly what I needed. It had an equilibrium at the center that was surrounded by another equilibrium.



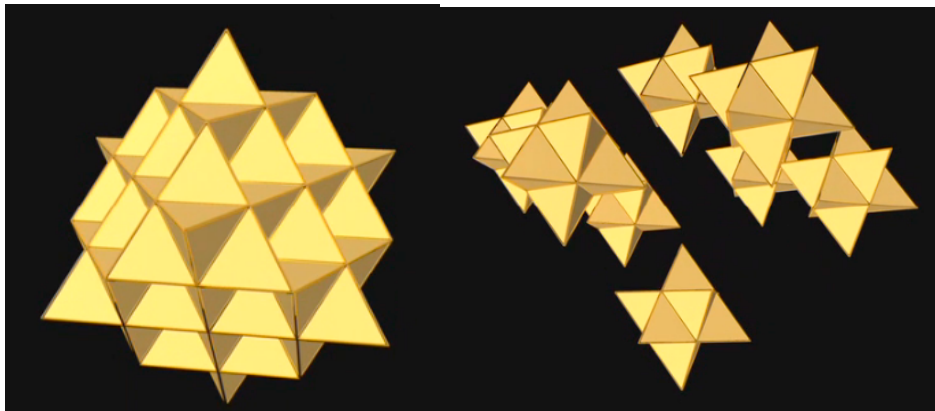
You could visualize this structure growing in perfect fractal octaves from infinitely big to infinitely small.

¹⁷ More detailed information concerning the Vector Equilibrium has been summarized on one page. This 1-Pager can be found at <http://www.randylangel.com/science.html>

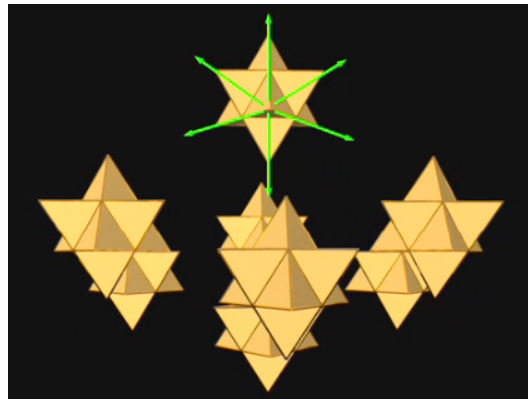


Besides fractal scaling the geometry also had the polarities I needed to produce equilibrium and singularity. I felt I had found something very profound. It was a true 3-dimensional fractal structure and it grew in perfect octaves.

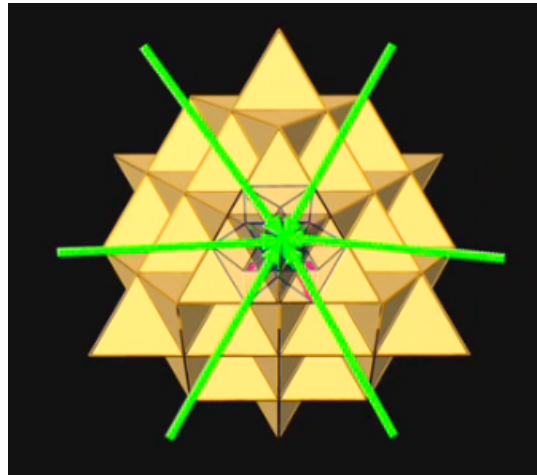
I could see that the 64-star tetrahedron metric could be built in another way. Starting with a grouping of 8-star tetrahedron clusters with each cluster made up of 8 tetrahedrons, the clusters (each containing 8 tetrahedrons) could join to form the 64-tetrahedron grid.



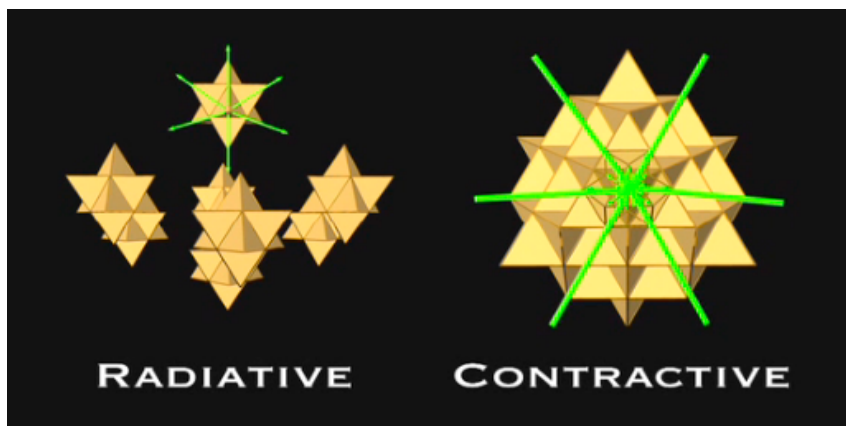
The 8-star tetrahedron clusters have their tetrahedron's pointing out – or radiating.



As we have seen, when the 8-star tetrahedron clusters come together they form the 64 tetrahedron grid and this produces a vector equilibrium in the middle. However, the vector equilibrium has 8 tetrahedra pointing in.



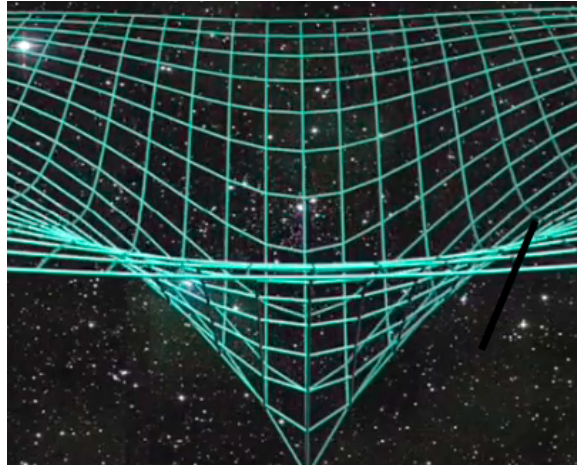
So now I had both sides of an event horizon which produces a boundary condition. The radiative side and the contractive side of the event horizon.



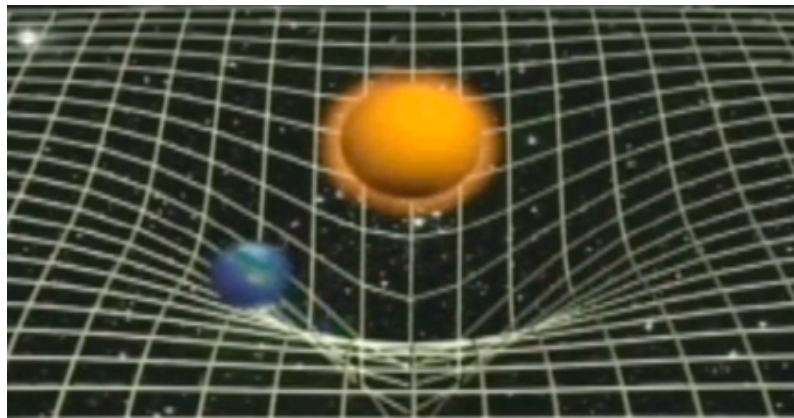
*I now had all of the elements necessary to map and describe the vacuum structure – the key to understanding creation.*¹⁸

¹⁸ An excerpt from the Black Whole DVD that explains the 64 Star Tetrahedron (the last three pages) in animation, can be found at <https://www.youtube.com/watch?v=wRppPU5dbHU>

Now with the structure of the vacuum realized the next step was resolving how it moves. This required updating the theories that preceded Hamein. When Einstein wrote general relativity, he described the structure of space-time as curving to produce a gravitational field. This was a change from Newton who believed gravity was a force generated by the object itself.



To visualize Einstein's concept of gravity, imagine a trampoline that's curved due to a large ball being placed on it. When a smaller ball is introduced it will appear to be attracted to the larger ball because of the surface curvature.

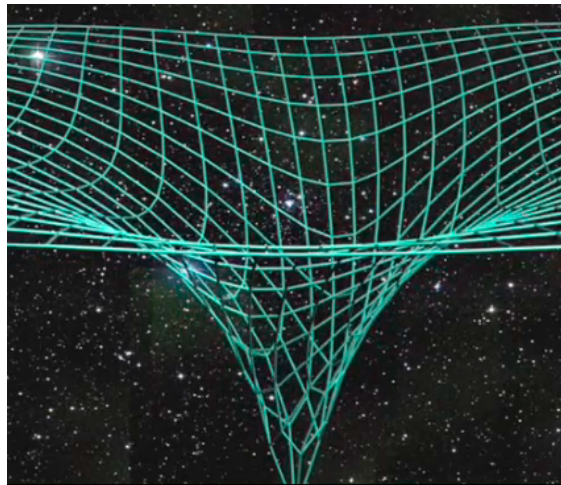


When Einstein wrote the equations for general relativity he didn't solve them as the complexity of finding a solution was beyond what he wanted to do at the time. Upon reading the published theory, the German physicist Karl Schwarzschild decided to work on the problem. He became the first person to find a solution to Einstein's field equations. To this day this proof is known as the Schwarzschild Solution.

The Double Torus

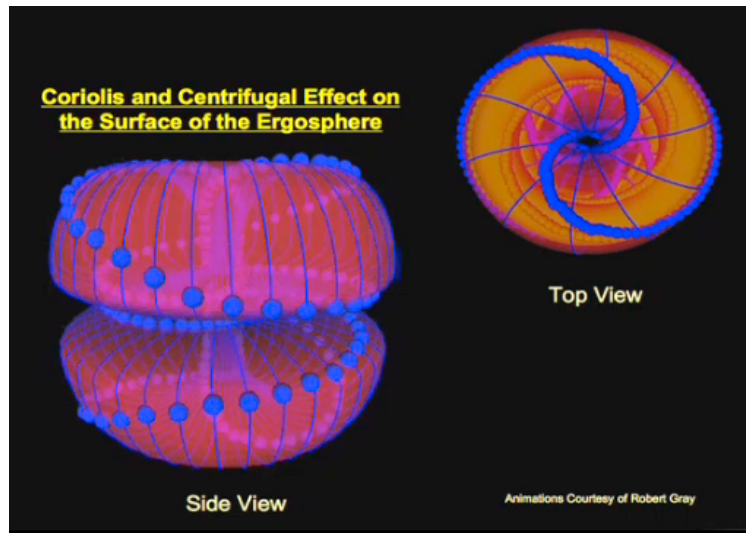
Unfortunately, months after Karl Schwarzschild solved Einstein's field equations he died of an autoimmune disease, leaving the solution without any mention about the spin of the black hole. Spin and charge were introduced in the 1960s in what is commonly known as the Kerr-Newman solution. However, this theory did not account for the gyroscopic effect that Hamein knew needed to be included.

I realized that we might have missed something in the way we were describing spin in our current physics. This led to another paper written with Dr. Elizabeth Rauscher titled: *The Origin of Spin*.¹⁹ The paper described a new way to define the structure of spacetime. By adding gyroscopic effects, the trampoline is not curving smoothly but spinning as it curves. Spacetime has a fundamental spin.



Imagine water going down a drain. It doesn't go straight down. It spins as it goes down the drain and that produces a fundamental torque. This meant that torque and Coriolis effect had to be put into Einstein field equations. Dr. Rauscher and I worked a year and a half to make that happen. The solution gives a different picture of black hole structure. Instead of a spherical smooth surface it's a torus. A torus is like a doughnut – it has a hole in the middle. By including the Coriolis effect in the equations, the black hole had a dual torus structure. Because of the Coriolis effect one donut would be going in one direction and another donut would be going in the opposite direction - for every spin there's a counter spin.

¹⁹ “The Origin of Spin: A Consideration of Torque and Coriolis Forces in Einstein’s Field Equations and Grand Unification Theory,” by N Hamein & E.A. Rauscher, January 1, 2004. <https://resonancescience.org/wp-content/uploads/2019/04/OS.pdf>



Just like our planet's weather patterns, hurricanes spin in one direction in the Northern hemisphere and spin in the other direction in the Southern hemisphere. They meet at the equator but go back to the poles and meet at the equator again. All of a sudden you can see that the information can move to the poles, in towards the singularity²⁰, and back out at the equator and back into the pole. This is a feedback structure which can be seen at various levels of nature. At the atomic level there is the electron and the positron. At the stellar level we see the plasma dynamics around the Sun which produces the same dual torus dynamic.



What's in the middle of a torus? What's in the middle of a doughnut – a hole. It's space – the vacuum. This is why the vacuum connects all things. The vacuum divides not with the complete boundary of a sphere but with the torus in which the vacuum is at the center of every object. Where you'd expect singularity i.e., the infinite density of a black hole, instead you find the vacuum which is infinitely dense and connects all things. This explain many different things including the way magnetic fields are produced and the origin of spin. Not only is spin inherent to the structure of space itself but it is prevalent at all levels if the structure of the vacuum acts like a fluid i.e., acts like water going down the drain.

²⁰ Haramein's equations say that black holes are the driving mechanism of entities (e.g., stars, galaxies etc.) not the result. Supernova explosions don't create black holes but rather reveal the black hole that was always there.

<https://www.youtube.com/watch?v=TmJ8uAdshDk>

The Black Whole

We know that the electron and the positron exchange i.e., disappear and reappear and disappear and reappear etc. The exchange seems to cross the vacuum i.e., the vacuum fluctuates and produces an electron, then fluctuates again and the electron disappears. The electron carries the information from the material world to the vacuum and informs it. The vacuum then informs back to material world when the electron comes back out. An extension of this is the understanding that we are constantly appearing and disappearing at the speed of light. Did you know that half the time you're one with the vacuum? Who are you when you're the vacuum? What are you saying to the rest of the universe when you're informing the vacuum?

From this model of the double torus we can start to understand why consciousness emerges. Consciousness demands feedback. In order for you to be self-aware you must know that you exist, thus it demands feedback. This structure of the double torus allows for this feedback. Between what's coming from the outside and returning to the inside to inform the vacuum and emerging from the inside going back outside to inform us of the result of the information present in the vacuum.

There is a concept that a person can create their own reality²¹. This concept is only partially correct because it is generally discussed in a one-way manner i.e., a person sending a message to the field with a request/intention/prayer desiring an outcome. This is only 1/2 of the loop. The wave you're sending is the feed-forward part of the loop. You need to realize that the wave coming back is the feed-back which is the rest of the universe creating its reality and responding to you. The universe (Planck Field or "the Divine") interacts with the rest of humanity and your creation and gives you a result that is a combination of everyone's feed-forward waves. If a person could create a reality exactly the way they wanted it, a few things would happen: 1) you would be the only one in it because everybody else would be creating their own. It would be very lonely. 2) you'd also be bored within seconds since you had everything you wanted. What happens is that you put your intention out into the field and you stay open to what comes back, realizing it's going to get modified for the highest evolution of the whole. This unexpected feed-back gives you empathy for yourself and others. You might not get exactly what you expected but now you're learning from the experience.

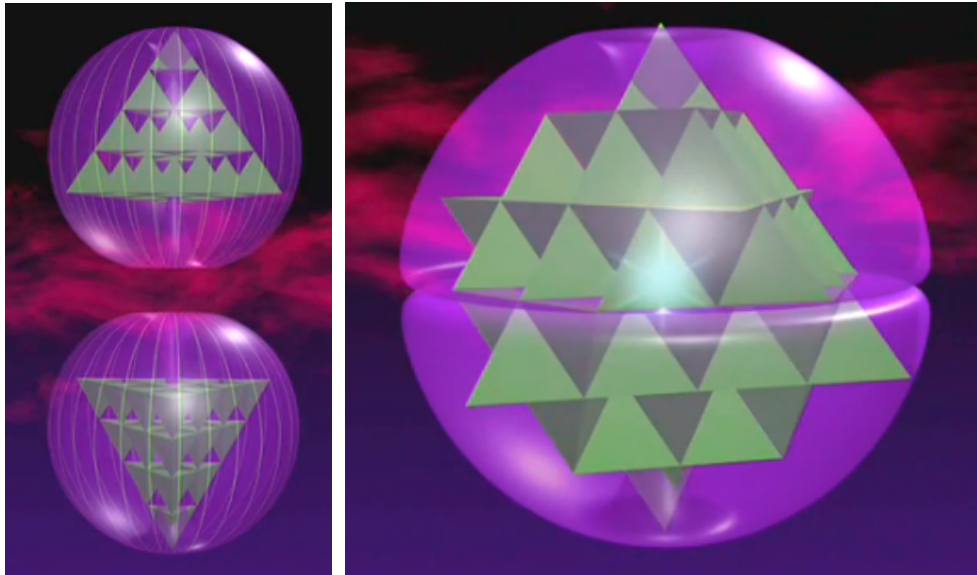
"The totality of everyone's learning is how the universe learns about itself."

"You're not creating your reality, you are co-creating your reality with everybody else."

But how does the double torus geometry relate to the tetrahedral structure of the vacuum. For Hamein it all came together when he visualized two Isotropic Vector metrics surrounded by a toroidal field. Each represents a polarity of the Coriolis effect, As the two come together to form the vector equilibrium the double torus structure is generated. When all the components are producing equilibrium at the center the result is singularity²² and all of creation emerges from it.

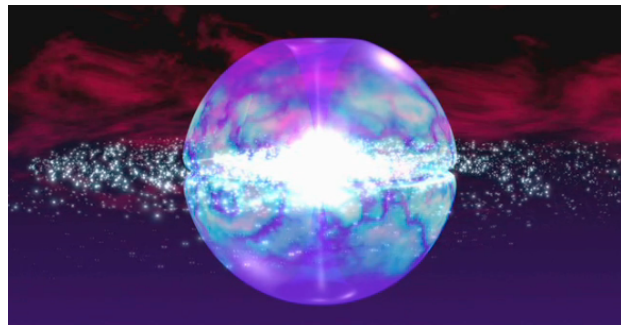
²¹ Video interview of Nassim Hamein by Michael Hudson of Bitstocks.com, February 2020. The video was in two parts. The 1st section is at <http://tinyurl.com/qspermw> the 2nd part is at <http://tinyurl.com/tr3yzir>. This discussion of reality from these two videos has been summarized in a 1-pager called "Nassim Hamein Talks Reality." It can be downloaded at: <http://www.randylangel.com/science.html>

²² Nassim Hamein discussed the concept of a singularity (and infinity) at a Resonance Science Foundation Live with Nassim call in December 2017. <https://youtu.be/V1ZINQwQNNc>



When we solve this new solution to Einstein field equations, with torque and Coriolis effect included, we found that we could mathematically show a fundamental relationship between a cuboctahedron and the double torus. Doing this produces all the information we need to generate a unified field theory. So, this relationship between the structure of the vacuum and the dynamical division of the vacuum based on spin, torque and Coriolis effect produced a complete understanding of the geometry of space and the reality that emerges from space.

Look at this galaxy for instance. You can see that stars are emerging from the central bulge in which an enormous black hole resides. We know now that there's a black hole at the center of all the galaxies.



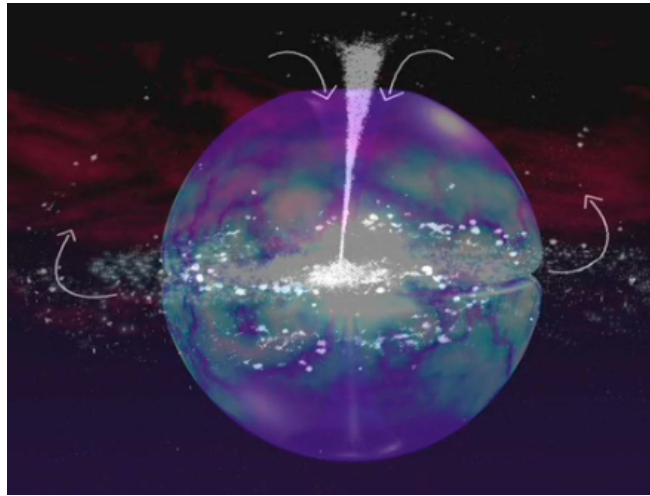
This theory also predicted that galaxies are the result of black holes not the cause. That is, the material reality we see emerging is being produced by the central heart of the galaxy - the black hole. Particles are being created in a continuous creation process²³.

There was not just one Big Bang²⁴ where everything was formed but rather continuous creation events at all levels of singularities along the scaling of our universe.

²³ Nassim can find no place in physics or philosophy that points to a start or an end of the universe. This was very difficult for him to assimilate. He had to let go of the concepts of a beginning and an end goal. He concluded that these are concepts of man not of the universe. He had to surrender to the continuum of creation. Once he got comfortable with this he realized how this continuum is actually the most beautiful thing because it means there is continuous learning. The universe can't reach a point where it stops learning. On an individual basis this means that as a person encounters things there is a learning lesson behind it since it is a response of the universe where all points have been considered. You will never get exactly what you want since you would be bored after that for all eternity. This also means that within you are the possibilities to access the information of the universe. Enlightenment is a process not a destination. It's hard to be enlightened every Planck second but you have to keep at it because the universe is changing every Planck second and you have to keep up. "Consciousness & the Human Antennae," by Nassim Hamein, Presentation at Conscious Life Expo, Feb 2019.

²⁴ Nassim Hamein explains his theory of the Big Bang to a 14-year-old boy at one of the "Live with Nassim" virtual classroom events in the Resonance Academy 12/27/19. <https://www.youtube.com/watch?v=M2H7Y5coxhw>

When we look at the stars in a galaxy they emerge from the central black hole and move in spiral path away from it towards the edge. At the edge they enter into the Galactic halo which is the edge of the double torus. They then fall back in at the top just like water going down the drain.



From recent data, not only do we find that black holes are at the center of all galaxies but it seemed that black holes were there prior to galaxies. This is exactly what my theory would predict. Black holes are a fundamental pattern of the vacuum itself and they produce matter. Eventually this matter becomes visible to us as a galaxy, a star, a planet or a subatomic particle.

This changes our concept of black holes. Black holes should no longer be written "black holes" h-o-l-e but rather "black wholes" w-h-o-l-e. They just don't absorb information but they radiate information as well. If you're on the inside of the black hole, for instance when you're inside our universe, it appears black. However, if you're on the outside of the event horizon of the black hole it would appear very bright white. They radiate information just like stars in our universe.

The Pyramid at Giza

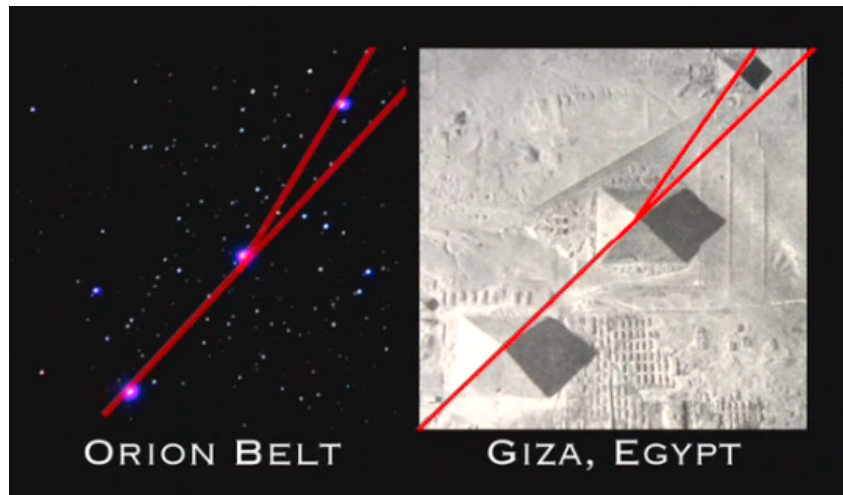
All this relates nicely to many concepts found in ancient civilizations. Many sects have propagated ideas around the concept of a center, or being centered e.g., God is the center of all things, Buddha centers himself, the kingdom of heaven is within our center et al. Many traditions talk about us turning our senses inward and going toward the center of our existence i.e., to link with the whole universe from the center of our experience. We find this said in many different ways from many masters all around the world in ancient traditions.

In these same ancient traditions, we find very interesting buildings. For instance, consider the Great Pyramid at Giza. It's made of approximately two million, three hundred thousand stones. It stands 481 feet tall. After placing all those two million three hundred thousand stones on a base of 13 acres, the apex of the Great Pyramid is only a quarter of an inch off center. Is that possible with the means the Egyptians had five thousand years ago? Is it even possible with today's engineering and construction techniques? Absolutely not? If you calculate how precisely each block had to be placed from the base up to the top, the level of centering accuracy at the apex is beyond our best tools today. So, is it plausible that this feat could have been accomplished by a bunch of farmers and slaves rolling stones on top of logs and pulling on vine ropes? Preposterous.



When we study pyramid sites all around the world we find they seem to be laid out in ways that represent the Orion constellation.

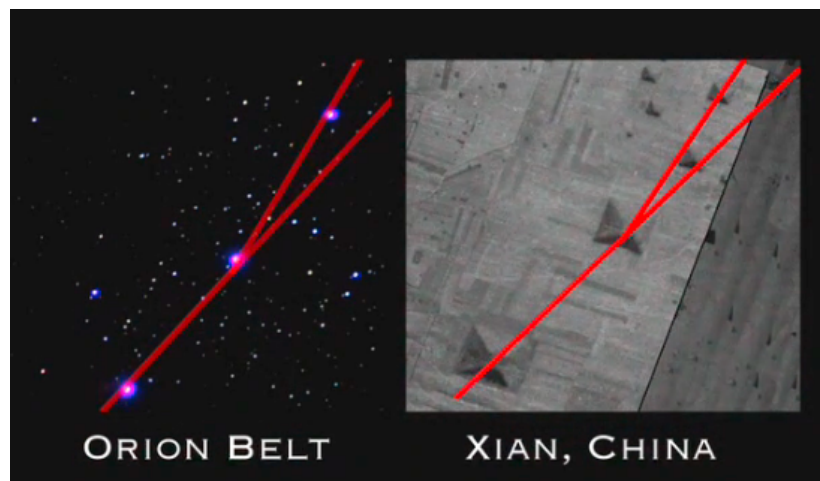
This discovery was made by Egyptian born engineer Robert Bauval and writer explorer Graham Hancock. If you view the Great Pyramid at Giza and her two companion pyramids from the sky at night, the three axes line up very closely with the belt in Orion's constellation.



Hancock and Bauval discovered that the Orion map also lines up in the same fashion with the pyramids at Teotihuacan Mexico. The Sun, the moon and a smaller pyramid emulate this connection between stars and structures.



This mystery continues across the globe in China where three pyramids close to the same size as those at Giza and Teotihuacan are located.



It is unlikely that these alignments are coincidental.

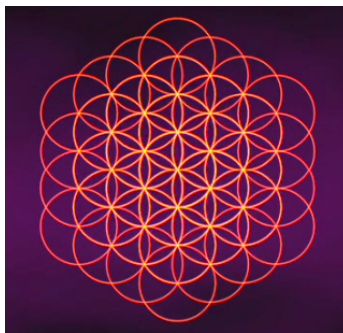
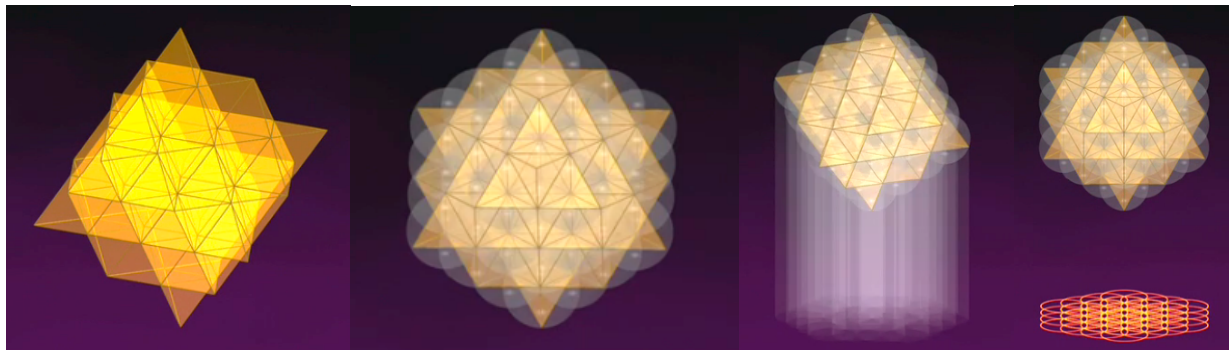
Many of these structures have another commonality. The stones are enormous and include unusual precision carvings between the blocks as well as on them.



The picture just above was taken at the Osirion temple in Abydos, Egypt. Within these same confines we find another important anomaly in the stone – the flower of life.



When we look at this symbol and extrapolated it to three dimensions, it looks like bubbles all agglomerating together defining the position and geometry of a 64 tetrahedral grid. If we were to shine a light above this formation we would see the flower of life projected below²⁵.



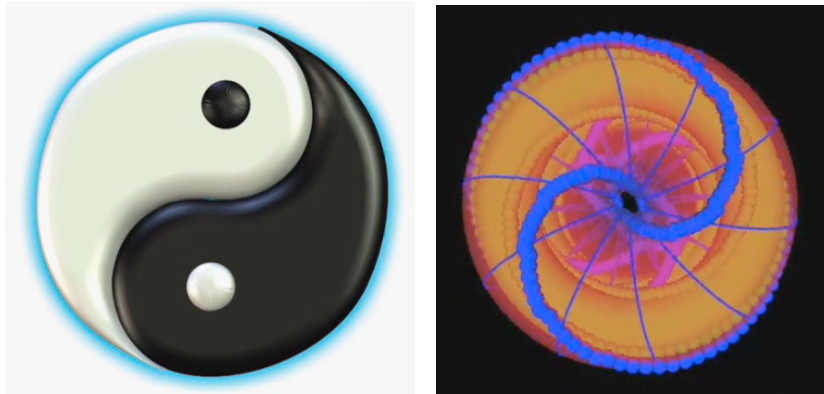
Were^{xi} they trying to tell us something significant about the structure of space in such a way that it could not be erased throughout the ages by erosion? Were they trying to reveal something about the technology that was used to move these large rocks long distances? When we look in ancient Egypt nowhere do we find any hieroglyphs or text that mention how they built the Pyramid, how they moved the stones or how they got the accuracy necessary to do such a job. However, everywhere in the hieroglyphs that do exist, there are images of Sun gods or beings that seem to have come from a different part of our universe. Could they have brought engineering information with them that they willingly shared with the people of earth? Could it be that advanced people interacted with humans in a time prior to our written history?



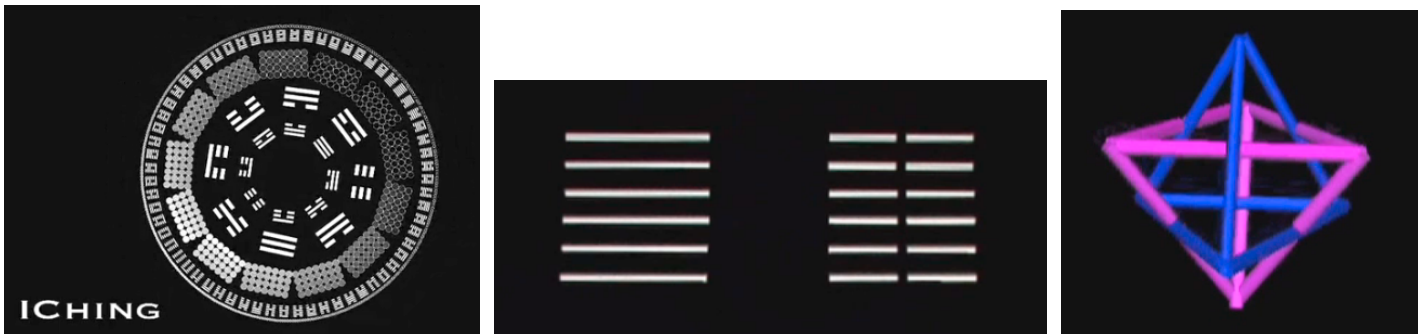
²⁵ Nassim Hamein on the pattern known as the “flower of life.” <https://www.youtube.com/watch?v=W16M-OwRZhl>

Chinese Symbols

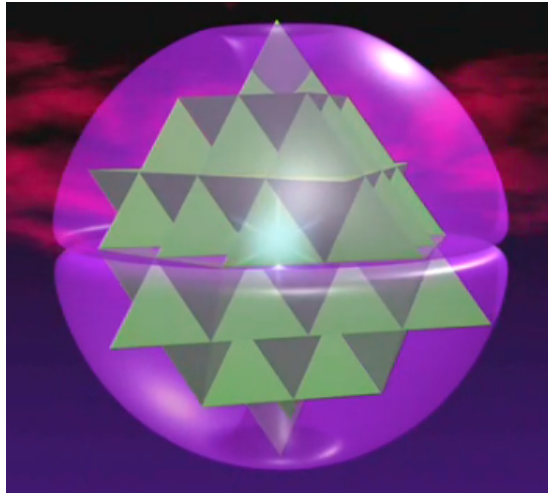
Other cultures have symbols and traditions that seem to indicate an ancient knowledge of the structure of space. In China the yin and yang symbol is very similar to the double torus structure when viewed from above.



Associated^{xii} with the yin and yang is a set of 64 mathematical symbols called the IChing. Each symbol is itself made up of six sticks – 6 full sticks or 6 broken sticks. Six sticks put together in 3-space can only produce a tetrahedron. To generate a star tetrahedron you need to break the sticks of the reverse tetrahedron to put it through the other. So, by following the IChing we can in fact rebuild the entire 64 tetrahedron grid.



Associating the IChing with the yin and Yang produces the double torus and the structure of the vacuum. All the information necessary to describe the profound understanding of creation and the structure of the vacuum producing it.



Also, in China we find the foo dogs guarding the entrance to the Forbidden City. The foo dogs are analogous to the Sphinx in Egypt i.e., they are considered the guardians of knowledge. They watch over this intelligence by keeping it safe under their right front paw. Looking under the paw we once again find the flower of life symbology. That is, the same fundamental geometry of intersecting spheres but in this case a 3D structure that embeds the tetrahedral array of the vacuum.



Hebrew Tradition

It's found in the Hebrew tradition where God is typically represented as a tetrahedron sitting on the throne and not as a bearded old man.



Looking deeper into the Old Testament it seems to refer to a specific object possessing the power of God i.e., the Ark of the Covenant. The Ark is described as a very powerful object. Could it be that some of the advanced technologies given to us by the Sun gods remained in our culture? The Ark was described as a very bright object producing a large cloud, or vortex, above it. This sounds like the object was radiating in some way. It's described in rabbinic tradition as an object that could lift itself and its carriers. An obvious example of gravitational effects.

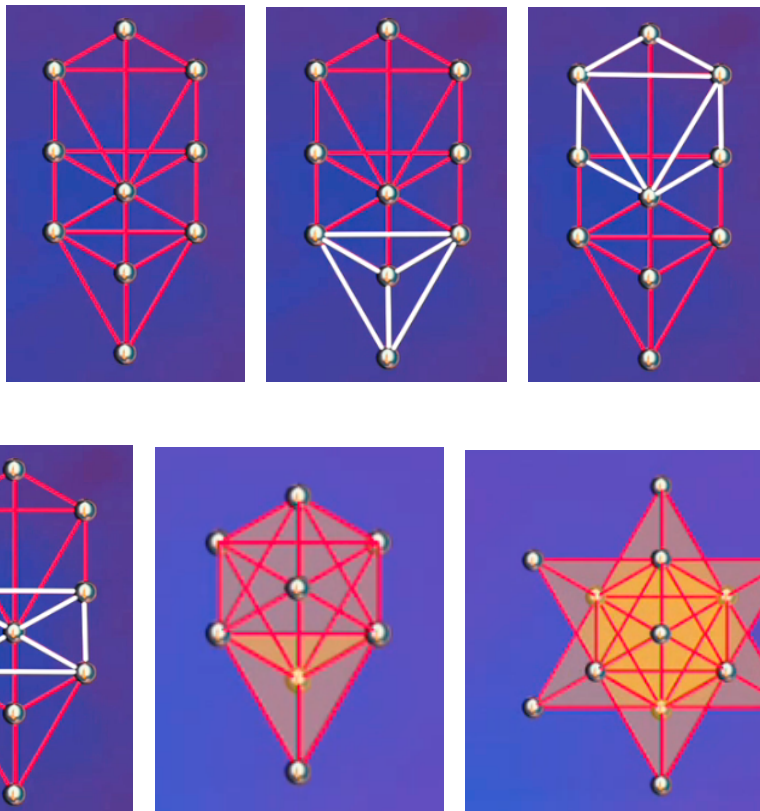


Looking at the actual word "God" in the Old Testament we find that it's a translation of a Greek word Tetragrammaton. The Tetragrammaton is typically represented as a triangle with the Kabbalistic letters of God inside it.



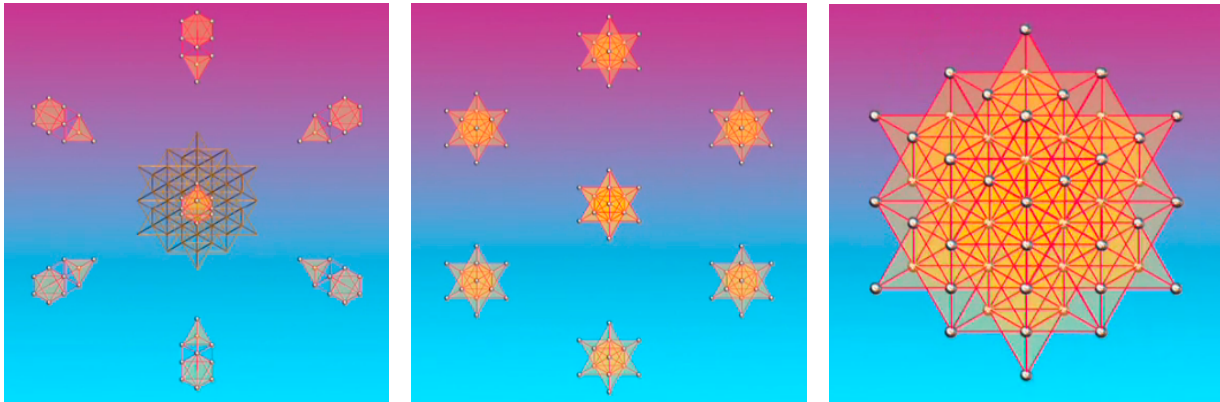
Deciphering the word Tetragrammaton, we have Tetra which can stand for tetrahedral as well as the Greek word for 4. Graviton, however, has always been interpreted as grammar for the four letters of God i.e., YHWH (Yahweh). The root word of graviton can be as well be interpreted as grams or gravity, and refers to the weight of an object. So, now we have an expression for the word “God” that includes the tetra and gravity. Could it be there is a double meaning for the word “God” in the Bible?

The Kabbalistic tree is an ancient geometry that supposedly when decoded will yield an understanding of the universe’s fundamental principle of creation. It is akin to the tree of knowledge in the bible.

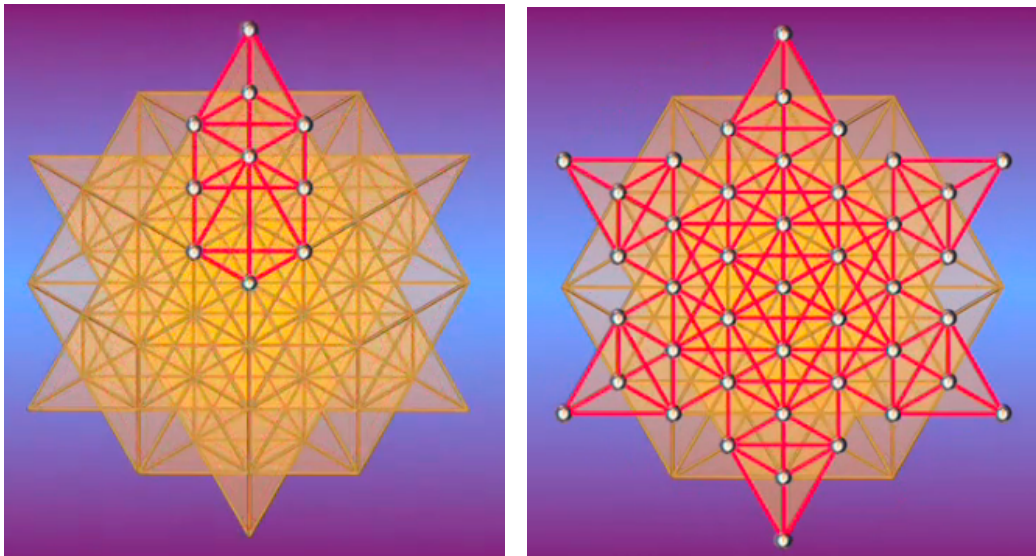


After spending many months looking at it I realized that the bottom part of the Kabbalistic tree is a tetrahedron and the top part an octahedron. However, I had this box in between with an ‘X’ in it and I wasn't sure where it fit. Eventually I came to understand that I could slide the bottom part into the top part and it became a three dimensional object giving me all the vortices to produce the star tetrahedron. The Kabbalistic tradition further states that there are four trees and a principle of mirroring. If there's four and they're mirrored that means altogether there's eight. It goes on to say they are all attach at the root. If I

attach eight Kabbalistic trees together, having decoded each of them into a single star tetrahedron, I then have a 64 tetrahedron grid and the Kabbalistic tree has been decoded.



How do I know it's been decoded? Because I can take the two-dimensional image of the Kabbalistic tree and plaster it back onto the 64 tetrahedron grid. This kind of loop in the code is actually described in the Kabbalistic tradition where it says that the root is attached and then the crown is attached and then the root is attached again.



The really interesting thing about these Kabbalistic trees coming together is that when you decode them it seems as if they're being compressed into the center and become the star tetrahedron. So, you have the sense of the compressive contractive part of the vacuum structure. They're collapsing together producing the star tetrahedron and the 64 tetrahedron grid of the vacuum when they are put together. The root of the Kabbalistic tree becomes the singularity.

Conclusion

The Mayans, the Egyptians, Chinese, Hebrew and many others, were these ancient civilizations from all different points across the globe leaving us detailed information about the structure of the vacuum? And even the fundamental physics of creation? According to Hamein, the structure of the vacuum and the fluctuations of energy in it, are at the foundation of all our reality and even the consciousness that animates it. We are in a relationship with the universe at all times, exchanging information on all scales. Has the time come when we can finally wake and acknowledge this powerful connection and even harmonize with it?

I think^{xiii} we are standing at the brink of the biggest transition society can ever endure. We are moving from a society that perceives there is only a limited amount of goods and space available and therefore must fight for it, to a society bathing in an infinite amount of energy available to them anywhere in the universe. A society that understands this energy is the source of all creation. A society that understands how this fluctuation of energy functions. How this energy produces our material world and how in a harmonious way it can transform the way we think of energy usage and transportation. A society that believes that we can leave this planet and travel the solar system in a safe and easy way. A society that does not think of the universe as limited²⁶. This is the ride we are on and I invite you to be a full participant.

²⁶ A good summary of Nassim Hamein's theory was given at a 17-minute TEDx talk at the University of California at San Diego. <https://www.youtube.com/watch?v=z8q7poL8US8>

Appendix A: Equations Section of Black Whole DVD

The following material comes from the 3rd selection of the DVD's main menu - Equations²⁷. It contains mathematical detail to show how Nassim Hamein arrived at his conclusions. There was no narration in this section so all the text is Hamein's. However, as with the main body of the DVD, I have edited the video's transcribed audio text to eliminate phrases and exclamations that may not be appropriate when appearing in print. I have also condensed some audio/text to make it more readable.

Is the Proton a Black Hole?

Can the proton in the nucleus of an atom truly be a black hole?

Can we ignore the vacuum density, the vacuum fluctuation present in the volume of a proton?

I postulated that a very small portion of the vacuum available in the proton is converted to mass to make the proton a black hole. I first had to calculate the volume of a proton. I took the volume of a proton based on the volume of a Fermi proton the radius of which is 1.3×10^{-13} cm. We also know that the vacuum density is 10^{93} gms/cm³. The simple geometric formula for the volume of a sphere is 4/3 times Pi times the radius cubed (see figure below). This calculation gives us approximately a proton volume of 10^{-39} cm³. If we divide this by the density of the vacuum we get the amount of energy still available inside the volume of a proton in terms of vacuum fluctuation.

Vacuum Density
 $5.1 \times 10^{93} \text{ gm/cm}^3$

10^{-33} cm

Vacuum Energy Per Proton Volume

Spherical Volume of a Proton
 $\frac{4}{3} \times \pi \times (1.3 \times 10^{-13})^3$
 $9.6 \times 10^{-39} \text{ cm}^3$

1.3 Fermi
 (1.3×10^{-13})

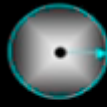
Vacuum Density in a Proton Volume
 $\frac{5.1 \times 10^{93} \text{ gm/cm}^3}{9.6 \times 10^{-39} \text{ cm}^3} = \frac{4.9 \times 10^{55} \text{ gm}}{\text{Proton Volume}}$

The energy density available in the volume of a proton is still 10^{55} gms of energy fluctuations from the vacuum. Obviously, there's plenty of vacuum energy available inside the volume of a proton to be calling it a Black Hole. 10^{55} happens to be the mass of the universe which leads Hamein to assume that the black hole proton must be entangled to all other protons in the universe.

How much of that proton density is required to make it a black hole? That is, what is required for the proton to obey the Schwarzschild condition. This condition is given by the equation;

²⁷ A good animation and explanation of the Equations section of the DVD can be found at https://youtu.be/az7Kl_pL7fw

Schwarzschild Radius of a Black Hole


$$R_s = \frac{2GM}{c^2}$$


1.3 Fermi
(1.3 x 10⁻¹³)

4.9 x 10⁵⁵ gm
Vacuum Energy

Since we know the radius of a proton we need to solve for the mass by rearranging the equation's parameters.

$$1.3 \times 10^{-13} \text{ cm} = \frac{2 \times 6.6 \times 10^{-8} \text{ cm}^3 / (\text{gm s}^2) \times M}{8.9 \times 10^{20} \text{ cm}^2 / \text{s}^2}$$

$$M = \frac{8.9 \times 10^{20} \text{ cm}^2 / \text{s}^2 \times 1.3 \times 10^{-13} \text{ cm}}{2 \times 6.6 \times 10^{-8} \text{ cm}^3 / (\text{gm s}^2)} = 8.9 \times 10^{14} \text{ gm}$$


This yields what the mass of an entity with the radius of a proton would need to be in order to be classified as a black hole i.e., 8.9×10^{14} gm. 10^{14} gm is only a very small portion of the vacuum energy available inside the proton. In fact, we only need to convert $10^{-39}\%$ of the available vacuum energy inside the proton to make the proton a black hole.

$$\frac{8.9 \times 10^{14} \text{ gm}}{4.9 \times 10^{55} \text{ gm}} = 1.7 \times 10^{-39} \% \text{ of the Energy Available in a Proton Volume}$$

This is miniscule. Imagine – all of reality comes from this small amount of mass.

The Strong Force

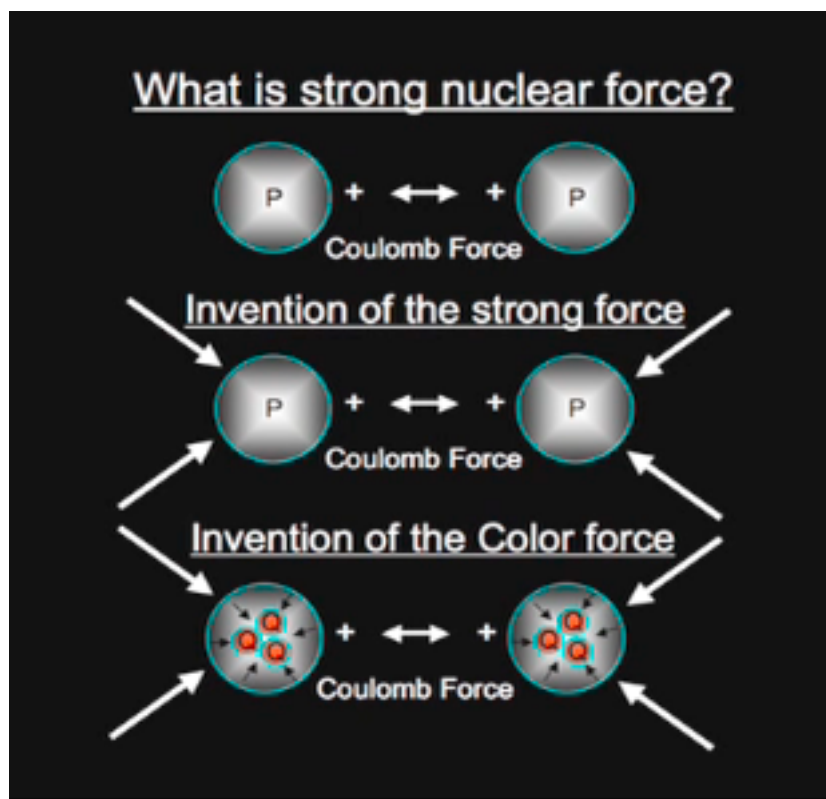
Is it reasonable to think of the proton as a black hole? If we looked at the Standard Model we would have issues. Our proton at the Schwarzschild radius is 10^{14} grams. The Standard Model predicts a proton mass of 10^{-24} grams. A huge difference of 10^{38} grams in orders of magnitude.

A BLACK HOLE PROTON HAS A MASS OF
 10^{14} grams
THE STANDARD MODEL SAYS IT'S
 10^{-24} grams
THAT'S OFF BY **10^{38} grams**

Many physicists would call this insanity. However, the key to this discrepancy is the Strong Force. What is the Strong Force? When two protons are in an atomic nucleus they are very close to each other and with each being positively charged, there is a strong repulsive force. This force is called the Coulomb Force.

So how do they stay together if there is such a great force trying to repel them? When this was discovered it was thought that gravity was too weak to be the force overpowering the repulsive Coulomb Force. So instead of reevaluating the Standard Model's concept of atoms and what they are, they invented a new force, which they called the Strong Force. Conveniently they made it exactly what would be needed to overcome the electrostatic charge of the proton.

Later on, more complications occurred. It was found that protons were most likely made of smaller particles which they called quarks. These quarks are confined in an even smaller space than the protons and they have a charge. In order for them to be confined in such small space inside the proton you would need a force even stronger than the Strong Force. So, they created another force which they labeled as the Color Force. This force was thought to be what confined the quarks inside the proton.



Then it was said that the Strong Force was only a residual force of the Color Force in the middle of the proton that confined the quarks. Further, with no fundamental mechanics attached to it, with no source for the energy necessary to produce such a force, it was said that the Color Force was infinite at the quark level. This type of adventure in physics can lead to many complications. I call this, "physics as we go." We invent new forces, new kinds of matter (like dark matter and dark energy), to make the equations work. In this case, we now have an infinite force at the quark level with no source for it and its mathematics and descriptions don't agree with the forces we have for cosmological objects. This created a division in our physics between quantum theory and relativistic equations. However, taking the approach of the Schwarzschild proton, the gravitational force of a 10^{14} gm proton is the exact amount of gravity necessary to confine the protons with no need for Strong or Color Forces.

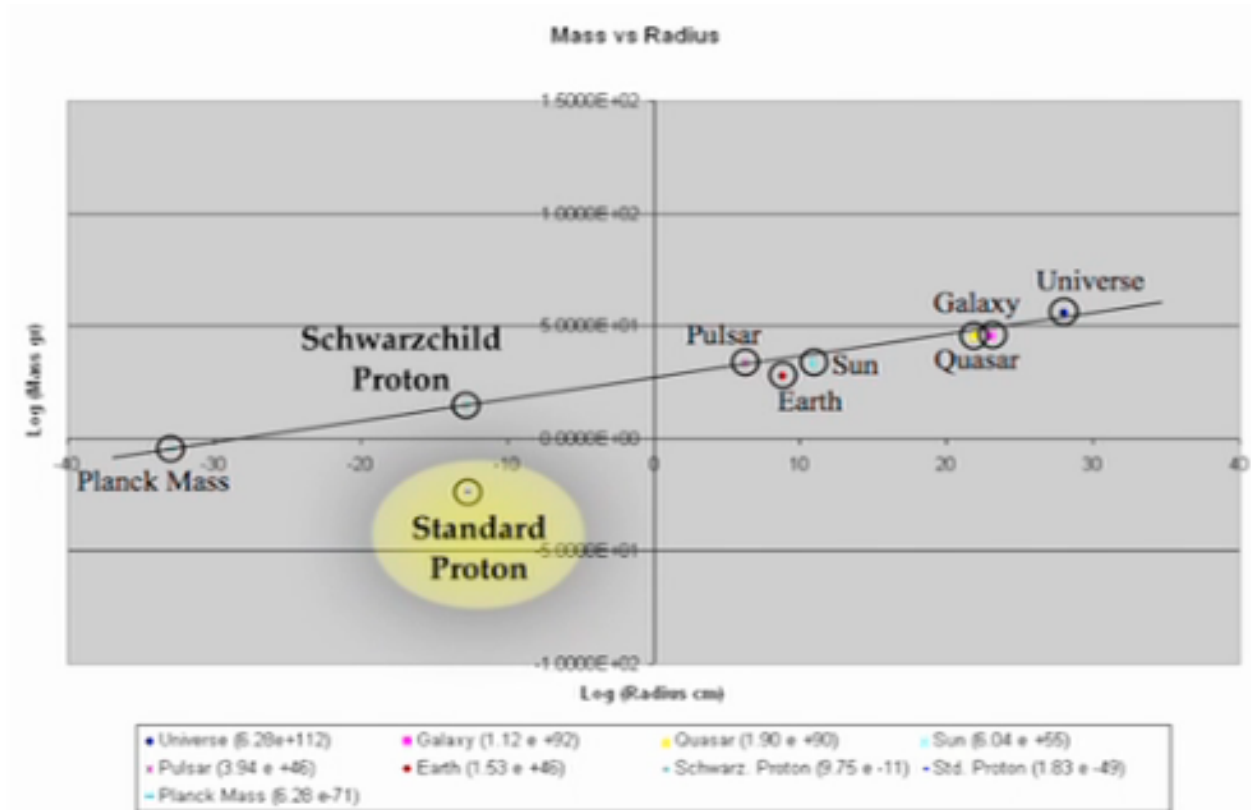
So how strong is the Strong Force. It's said that if gravity = 1 then the Strong Force is approximately 10^{38} to 10^{39} times stronger. This is exactly the amount of mass the Schwarzschild proton exceeds the proton mass calculations from the Standard Model. However, in the Schwarzschild proton case, we are able to explain the source of the energy necessary to produce the confining force. Whereas in the Standard Model, a force of infinite nature is added into model with no explanation to where the energy comes from.

The Scaling Law

Is a 10^{14} gram proton appropriate? In order to find this out, I joined with Dr. E. A. Rauscher & Dr. M. Hyson to create a scaling law to investigate if the Schwarzschild proton mass was anywhere close to being appropriate in relationship to all the other masses in the universe. We included a lot of data points to get a very good average on the progression of the masses.

•SUMMARY	•Radius •(cm)	•Mass •(gm)	• Torque (dyne-cm)
•Universe	•1.00E+28	•1.00E+56	• 6.28E+112
•Galaxy	•9.46E+22	•1.99E+45	•1.12E+92
•Quasar	•6.17E+21	•7.96E+45	•1.90E+90
•Sun	•6.95E+10	•1.99E+33	•6.04E+55
•Pulsar	•1.50E+06	•2.79E+33	•3.94E+46
•Earth	•6.37E+08	•5.98E+27	•1.53E+46
•Schwarz. Proton	•1.32E-13	•8.89E+14	•9.75E-11
•Standard Proton	•1.32E-13	•1.67E-24	•1.83E-49
•Planck Singularity	•1.00E-33	•1.00E-05	•6.28E-71

The data points plotted went from the universe all the way down to the Planck distance and everything in between; galaxies, quasars, our sun, the earth and pulsars. When we incorporated the Schwarzschild proton on the graph it fell very close to a perfect linear progression with all the other masses. However, the Standard Model proton fell very far from the line. This implies that a large amount of energy has not been considered in describing the proton and nucleus structure in the Standard Model. That energy is the confinement energy necessary to keep the atom together. And that energy is gravity.



Measuring Schwarzschild Proton Characteristics

Then I went on to calculate the speed of two Schwarzschild proton i.e., black holes, rotating around each other. First, I had to calculate the gravitational attraction of two such protons. The calculations used classical physics formulas.

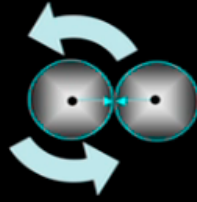
Now we calculate the gravitational force between two Schwarzschild Proton situated at a diameter distance of each other

$$F = \frac{GM^2}{r^2} = \frac{6.6 \times 10^{-8} \text{cm}^3 / (\text{gm s}^2) \times (8.9 \times 10^{14} \text{gm})^2}{(2 \times 1.3 \times 10^{-13} \text{cm})^2} =$$

7.5 × 10⁴⁷ dynes

This is the strong force necessary to confine the protons and the quarks. Then I calculated the acceleration of such protons. If the protons are just touching how fast would they accelerate around each other, again, using classical physics formulas. In this case for acceleration, we have;

We now calculate the velocity of two Schwarzschild protons orbiting each other with their centers separated by a proton diameter in this semi-classical approach. We utilize the gravitational force calculate the associated acceleration



$$a = \frac{F}{M} = \frac{7.5 \times 10^{47} \text{ dynes}}{8.9 \times 10^{14} \text{ gm}} = 8.5 \times 10^{32} \text{ cm/s}^2$$

From the acceleration I went on to calculate a relativistic velocity.

We utilized this acceleration to derive the relativistic velocity

$$v = 2\sqrt{ar} = 2\sqrt{8.5 \times 10^{32} \text{ cm/s}^2 \times (2 \times 1.3 \times 10^{-13} \text{ cm})} =$$

$$2.9 \times 10^{10} \text{ cm/s}$$

$$v = c$$

The Speed of Light

The two protons are spinning around each other at the speed of light or very close to it.

When we look at ancient writing it's common to find that they tell us that we are light. That the universe is light. Well if the protons are mini black holes rotating close to the speed of light for all the atomic structure of our universe, then this might be an accurate statement.

Now I calculated the period i.e., how long a proton takes to go around the other one once.

Then the period is

$$t = \frac{2\pi r}{v} = \frac{2 \times 3.142 \times (2 \times 1.3 \times 10^{-13} \text{ cm})}{2.9 \times 10^{10} \text{ cm/s}} =$$

$$5.5 \times 10^{-23} \text{ s}$$

This just so happens to be the measured period, or the measured interaction time, of the so-called Strong Force. We get very similar results as we get from the Standard Model using the Strong Force and from measured quantities in laboratories.

From the period I go on to calculate the frequency in hertz i.e., how many times the protons are going around each other in 1 second. This is simply 1 over the period or;

Now we calculate the frequency

$$f = \frac{1}{T} = \frac{1}{5.5 \times 10^{-23} s} =$$

$1.8 \times 10^{22} Hz$

Which is the typical measured gamma ray emission frequencies of the nucleus of an atom.


Remarkably 10^{22} hertz is the measured value of the gamma emission of the decay of the nucleus of the atom. Again, from semi-classical approaches we get exactly the correct result for measured values in the laboratory.

Anomalous Magnetic Moment

There is something called the anomalous magnetic moment. It's called this because no source for the magnetic moment of the proton or electron is given. That is, the charge of these particles is actually given without a source. It is not said where the charge comes from. That's why we actually don't really know where electricity comes from.

I took a Schwarzschild proton and put a little point charge on it. Remembering that the proton is spinning near the speed of light, I went on to calculate how much magnetic component that would produce.

"Anomalous Magnetic Moment"



$$\mu = \frac{qrv}{2}$$

where q is an elementary charge of 1.6021×10^{-19} Coulombs, the proton radius is $r = 1.321 \times 10^{-15}$ meter and the velocity $v = 2.998 \times 10^8$ m/s.

The Result is 3.17×10^{-26} Joules/Tesla

The Measured Value is 1.40×10^{-26} Joules/Tesla

The calculated and experimentally measured results are very close to each other. This fulfills Einstein's dream that the quantum world could be explained with fundamental physics. Fundamental mechanics that would describe the atomic structure, the nucleus of the atom, the dynamics at the nucleus, and the energy levels. It is an amazingly simple solution to unification. It shows that gravity is the fundamental force that holds our universe together i.e., all of the atoms.

It shows that the vacuum structure is a component of the structure that produces our reality and that there is a constant exchange between the vacuum structure and all atomic structure in the universe. We are constantly exchanging information and this exchange may be mediated with the electron exchanging

across the vacuum with the positron every milli-second at the speed of light. Information transfer is occurring across all scales along the scaling law from universal size to the Planck distance. This exchange of information mediated by the vacuum may be the organizing agent that produces the complexity and the organization of our world even at the biological level. We start to see the possibility of explaining the source of consciousness as this feedback between the vacuum and the atomic structure. This leads us not only to a unification of the forces of physics but a unification of physics with biology and consciousness studies.

Appendix B: Index of Resonance Academy Delegate Course Topics

The Black Whole DVD introduces the physics and research of Nassim Hamein's 30+ year study into unified field theory. For those wanting more detailed explanations the next step would be to enroll in the free Resonance Academy Unified Science Course and go through the online, self-paced program -

<https://www.resonancescience.org>

The course consists of six modules;

1. Worldview Shift
2. Thinking Differently
3. Modern Physics
4. Unified Physics
5. Ancient Origins
6. Implications & Applications

An index of topics covered under each module is given below. The latest version of this document can be obtained from <http://www.randylangel.com/unified-physics-downloads.html> under the Resonance Academy Unified Science Course section.

1 [Worldview Shift](#)

1.1 [Introduction](#)

1.1.1 [A Comprehensive Perspective](#)

1.2 [Two Worldview Lenses](#)

1.3 [The Disconnected World View](#)

1.3.1 [Scientific Perspective](#)

1.3.2 [The Importance of Shifting our Worldview](#)

1.3.3 [How Did the Disconnected Worldview Arise?](#)

1.3.4 [Consequences of a Disconnected Worldview](#)

1.4 [Shifting our Worldview](#)

1.4.1 [A Natural Evolution of a Society](#)

1.4.2 [Shifting from Disconnected to Connected](#)

1.4.3 [Feedback is Inherent in Cosmic Evolution](#)

1.5 [Roots of Unified Physics & a Connected Worldview](#)

1.6 [Implications of a Connected Worldview](#)

1.7 [Summary](#)

2 [Thinking Differently](#)

2.1 [Introduction](#)

2.2 [The Courage to be Bold](#)

2.2.1 [Revolutions in Thinking](#)

2.3 [Different Thinkers – Roots of Scientific Ideas](#) (for better or worse)

2.3.1 [Pythagoras](#)

2.3.2 [Plato](#)

2.3.3 [Euclid](#)

2.3.4 [Hypatia of Alexandria](#) (circa 370-415 AD)

2.3.5 [Leonardo Da Vinci](#) (1452-1519)

2.3.6 [Nicolaus Copernicus](#) (1473-1543)

2.3.7 [Giordano Bruno](#) (1548-1600)

2.3.8 [Galileo Galilei](#) (1564-1642)

2.3.9 [Johannes Kepler](#) (1571-1630)

2.3.10 [Rene Descartes](#) (1596-1650)

2.3.11 [Lady Anne Conway](#) (1631-1679)

2.3.12 [Isaac Newton](#) (1642-1727)

2.3.13 [Nikola Tesla](#) (1856-1943)

2.3.14 [Max Planck](#) (1858-1947)

2.3.15 [Albert Einstein](#) (1879-1955)

2.3.16 [Barbara McClintock](#) (1902-1992)

- 2.4 [Nassim's Personal Reflections on Thinking Differently](#)
- 2.5 [Principles of Thinking Differently](#)
 - 2.5.1 [Question Everything](#)
 - 2.5.2 [Intuitive Knowing](#)
 - 2.5.3 [Follow the Breadcrumbs](#)
 - 2.5.4 [Confirmations from Nature](#)
 - 2.5.5 [The Solution is Always Beautiful](#)
- 2.6 [Changing Course – From 2D Isolation to Holographic Wholeness](#)
 - 2.6.1 [Modern Physics – 2D Isolation](#)
 - 2.6.2 [Unified Physics – Holographic Wholeness](#)
- 2.7 [Summary](#)

- 3 [Modern Physics](#)
 - 3.1 [Introduction](#)
 - 3.2 [Reductionism](#)
 - 3.2.1 [Descartes](#)
 - 3.2.2 [Newton & his Contention to Cartesian Thinking](#)
 - 3.2.3 [A Flat Universe](#)
 - 3.2.4 [Summary](#)
 - 3.3 [Closed Systems](#)
 - 3.3.1 [Energy](#)
 - 3.3.2 [Entropy & the Laws of Thermodynamics](#)
 - 3.3.3 [Summary](#)
 - 3.4 [Einstein & the Relativity Revolution](#)
 - 3.4.1 [Light & Special Relativity](#)
 - 3.4.2 [Mass Energy Equivalence](#)
 - 3.4.3 [Gravity & Einstein's General Theory of Relativity](#)
 - 3.4.4 [Black Holes](#)
 - 3.4.5 [Summary](#)
 - 3.5 [Quantum Theory](#)
 - 3.5.1 [What Does Quantum Mean?](#)
 - 3.5.2 [Blackbody Radiation & the Ultraviolet Catastrophe](#)
 - 3.5.3 [Planck Units](#)
 - 3.5.4 [The Birth of Quantum Theory](#)
 - 3.5.5 [Copenhagen Interpretation](#)
 - 3.5.6 [Quantum Electrodynamics](#)
 - 3.5.7 [Quantum Field Theory – Vacuum Catastrophe](#)
 - 3.5.8 [Summary](#)

[3.6 The Standard Model](#)

[3.6.1 Fundamental Questions](#)

[3.6.2 Particles](#)

[3.6.3 The Strong Force](#)

[3.6.4 The Electroweak Interaction](#)

[3.6.5 The Higgs Mechanism & Higgs Boson](#)

[3.6.6 Attempts at Unification](#)

[3.6.7 Quantum Gravity](#)

[3.6.8 Summary](#)

[3.7 Summary of Modern Physics](#)

[4 Unified Physics](#)

[4.1 Introduction to Unified Physics](#)

[4.1.1 What is Unified Physics?](#)

[4.1.2 Big Unsolved Problems in Physics](#)

[4.1.3 Holographic Universe](#)

[4.1.4 Fractal Universe](#)

[4.1.5 Black Holes](#)

[4.2 Space](#)

[4.2.1 Modern Unified Theories & Space](#)

[4.2.2 99.99999999999996% Space](#)

[4.2.3 What is Spacetime?](#)

[4.2.4 Dividing Spacetime \(Quantization\)](#)

[4.2.5 The Density of Spacetime & Holographic Information Storage](#)

[4.2.6 Dark Energy & the Expanding Universe](#)

[4.3 Quantum Gravity](#)

[4.3.1 Resolving the Vacuum Catastrophe](#)

[4.3.2 A Quantized Solution for Gravity](#)

[4.3.3 Gravity at the Quantum Scale](#)

[4.3.4 Predicting the Radius of the Proton](#)

[4.3.5 Publishing the Solution & Predictions](#)

[4.3.6 Collective Quantum Coherence & the Source of Mass](#)

[4.4 The Confining Force](#)

[4.4.1 Introduction](#)

[4.4.2 The Hierarchy Problem](#)

[4.4.3 The Gravitational Coupling Constant](#)

[4.4.4 Energy & Spin of a Proton](#)

[4.4.5 A Unified View Emerges](#)

- 4.4.6 [Gravitational Falloff & the Yukawa Potential](#)
- 4.4.7 [Summary of Hamein's Solutions](#)
- 4.5 [The Connected Universe](#)
 - 4.5.1 [The Holographic Network of Spacetime](#)
 - 4.5.2 [Entanglement](#)
 - 4.5.3 [The Universe is a Black Hole](#)
 - 4.5.4 [Experiencing the Unified Network](#)
 - 4.5.5 [Fundamental Harmonics of the Planck Scale](#)
 - 4.5.6 [The Large Number Hypothesis](#)
 - 4.5.7 [Cosmogogenesis](#)
 - 4.5.8 [Continuous Creation Model](#)
- 4.6 [Geometry & Spin](#)
 - 4.6.1 [The Torus](#)
 - 4.6.2 [The Origin of Spin](#)
 - 4.6.3 [The Geometry of Spacetime](#)
- 4.7 [Summary](#)

5 [Ancient Origins](#)

- 5.1 [Patterns, Symbols & Buckminster Fuller](#)
 - 5.1.1 [Cosmic Patterns & Ancient Origins](#)
 - 5.1.2 [Buckminster Fuller](#)
 - 5.1.3 [Pattern Integrity & Fractal Structures](#)
- 5.2 [The Tetrahedral Structure of Space](#)
 - 5.2.1 [Fuller's Tangential Sphere-Packing Model](#)
 - 5.2.2 [The Tetrahedron & Teotihuacan](#)
 - 5.2.3 [64 Tetrahedron Matrix](#)
- 5.3 [All-Space Sphere Packing](#)
 - 5.3.1 [Hamein's Overlapping Sphere-Packing](#)
 - 5.3.2 [Combining Spheres & the 64 Tetrahedron Matrix](#)
 - 5.3.3 [PSU Tiling & the Flower of Life](#)
- 5.4 [Signs from Ancient Times](#)
 - 5.4.1 [Controversy at Abydos](#)
 - 5.4.2 [Cultural Synergy](#)
 - 5.4.3 [The Chinese Connection](#)
 - 5.4.4 [I Ching & Taijitu Symbolology](#)
 - 5.4.5 [Continuing our Journey](#)
 - 5.4.6 [The Face & Name of God](#)
 - 5.4.7 [Kabbalistic Tradition](#)

5.4.8 [Pythagoras, Egyptians & the Tetragrammaton](#)

5.5 [Journey of the Ark](#)

5.5.1 [The Ark & the Bible](#)

5.5.2 [Box within Boxes](#)

5.5.3 [Gravity Control](#)

5.5.4 [Evidence of Gravity Control in Egypt](#)

5.5.5 [Codes Through the Ages](#)

5.5.6 [Newton's Ancient Sources](#)

5.5.7 [The Order of the Knights Templar](#)

5.5.8 [The Ark in Ethiopia](#)

5.5.9 [The Templars in Europe](#)

5.5.10 [Ancient Origins in Modern Times](#)

5.6 [Summary](#)

6 [Implications & Applications](#)

6.1 [Energy Generation & Gravity Control](#)

6.1.1 [Quantum Vacuum Engineering](#)

6.1.2 [Isolated Systems & Their Impact on Society](#)

6.1.3 [Overunity Energy Generation & Gravitational Modulation](#)

6.1.4 [Civilization's Graduation from Type 0 to Type 1 or More](#)

6.1.5 [The EMDrive](#)

6.1.6 [Engineering the Spacetime Vacuum](#)

6.1.7 [Ladies & Gentlemen, Spin up your Drives](#)

6.1.8 [The So-Called Tajmar Effect](#)

6.2 [ARK Crystal](#)

6.2.1 [The ARK Resonator](#)

6.2.2 [The ARK Crystal Experiments](#)

6.2.3 [Characterization of Biological Effects from Advanced Resonator Quartz Crystals](#)

6.2.4 [Materials & Experimental Methodology](#)

6.2.5 [Experimental Results](#)

6.2.6 [Faraday Cage ARK Crystal EM Shielding](#)

6.2.7 [Conclusions of ARK Crystal Plant Growth Experimentation](#)

6.2.8 [ARK Crystals for Personal Utilization](#)

6.3 [Biology & Awareness](#)

6.3.1 [On the Unified Physics of Biology & Awareness](#)

6.3.2 [Cellular & Molecular Information Processes](#)

6.3.3 [The Cellular Membrane](#)

6.3.4 [The Deep Dive: Cubic Membranes](#)

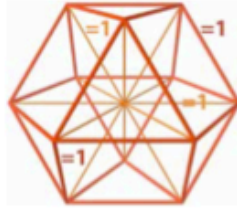
- 6.3.5 [The Cytoskeleton](#)
- 6.3.6 [Mitochondria & Electromagnetic Signaling](#)
- 6.3.7 [The Ubiquitous Presence of Awareness](#)
- 6.3.8 [Summary](#)
- 6.4 [The Bright Future of Humanity](#)
 - 6.4.1 [Ecological Restoration](#)
 - 6.4.2 [Planetary Terraforming](#)
 - 6.4.3 [Traveling Through Wormholes](#)
 - 6.4.4 [Humanity's Interstellar Future](#)
- 6.5 [Summary & Course Completion](#)

Appendix C: 1-Page Summary of Vector Equilibrium (VE)

The Vector Equilibrium (VE) – The 10% You Need to Know

Source: "Cosmometry – Exploring the HoloFractal Nature of the Cosmos" by Marshall Lefferts. (p = page #s)

In every system of measuring there is a frame of reference upon which the units of measurement are established — seconds, minutes and hours of Time; degrees of Temperature and Angle; Imperial and Metric units of length and spatial distance. While each is unique in its special-case application, they all share one common point of reference — Zero (p38). Zero is also the equilibrium point between positive and negative. p41



The VE is the only energetic form wherein all of the vectors that radiate from its center and all of the vectors surrounding its circumference are of the same length. Therefore, they all have the same force value. p44

Buckminster Fuller found a geometric form wherein all positive and negative differentials are in perfect equilibrium i.e., equal to zero. He called this form the Vector Equilibrium. p41

The VE is the zero starting point for all events. p39

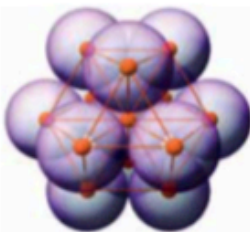
The inner radial vectors are radiating energy outward (explosively, as radiation) and the circumferential vectors are containing this radiation with an equal value of force (implosively, as gravitation). This condition describes the event horizon of a black hole. p45

The simple geometric form of the VE is the origin of all dynamic activity in the cosmos; origin meaning it is the zero reference of equilibrium around which exists all oscillating vibration and movement, and within that movement emerge the resonant structures of atomic, molecular, crystalline, fluid, gaseous, biological, planetary, solar and galactic forms of matter. p42

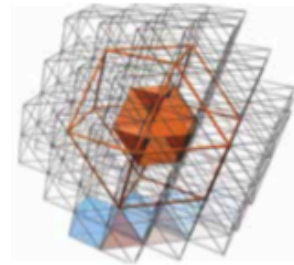
The VE is the mathematical zero reference for our 3-dimensional experience of reality (called "spacetime" in physics). p41

Being the zerophase of energy the VE is inherently invisible and non-empirically-discoverable... The VE is not and never will be observable because observation through our senses and scientific instruments requires fluctuation — disequilibrium. p45

The VE as the minimum system of cosmic equilibrium is a 12-around-1 geometry. Fuller pictured the spheres touching tangentially. p46



At the center of the VE is a single sphere or central point around which the other twelve are equally distributed, what Fuller called a nucleus. Being that the outer twelve are distributed equally around it, we can extend this idea such that every one of those twelve can become the nucleus of another VE, thus creating a larger matrix of equal-length vectors in the same relationship of equilibrium. This matrix can be extended in all directions in what is then referred to as an Isotropic Vector Matrix (IVM). p49

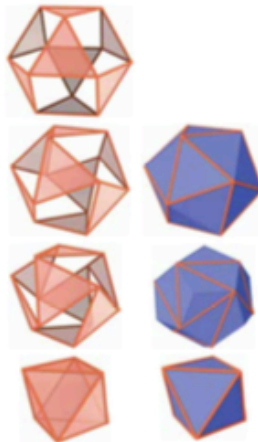


In essence, the VE and IVM are the same thing. The VE refers to a single unit and the IVM is used for the field of such units. p50

The IVM is the geometry of the fundamental zero-point unified field at the center of all phenomena, be it a galaxy, a star, a planet, a human, a heart, a cell, or an atom. The VE is the "local" version of the universal IVM state of equilibrium. p49

While the IVM has been so far described as a vector matrix and illustrated with a pattern of straight lines, it is actually more appropriately described as a superfluid medium composed of dynamic spherical (toroidal) oscillations in a state of balanced equilibrium. This is the foundational concept of the theory of unified physics. p53

Just as the dynamic pulsation of the universe is meaningless without a zero reference, so too is the zero reference meaningless without pulsation. The VE accommodates both. Not only is it unique in being the only geometric form with equal-length vectors throughout, it is also unique in that the form is able to dynamically pulsate (jitterbug) in an oscillating motion and, in so doing, it generates the basis for all form and flow in the cosmos. p85 See the Jitterbug movement with an explanation by Buckminster Fuller at https://youtu.be/jcq_Hzo8PC8



The Jitterbug is a shift from zerophase equilibrium to manifest disequilibrium (or dynamic equilibrium). It occurs when the VE/IVM experiences a spin (a vortex), which introduces tension in the matrix. This tension pulls the twelve vertices of the VE towards the center point, creating disequilibrium between the outer gravitational force (the circumference vectors) and the inner radiational force (the radial vectors). p359

The VE is for the premanifest universe what the torus is for the manifest universe — a fundamental form of energy. p97

The IVM, and the VE's jitterbug motion within it, are the source of the base geometries that combine to form all atomic, molecular, crystalline, cellular, biological, planetary, solar and galactic structures and systems. p359

Contacts; Marshall@ThriveOn.com or Randy.Langel@gmail.com or Lexioliviahyland@gmail.com

Download at - <http://www.randylangel.com/science.html>

Appendix D: 1-Page Summary of Planck Spherical Units (PSU)

Planck Spherical Units (PSU) – The 10% You Need to Know

Source: "Cosmometry – Exploring the HoloFractal Nature of the Cosmos" by Marshall Lefferts (p = page #s)

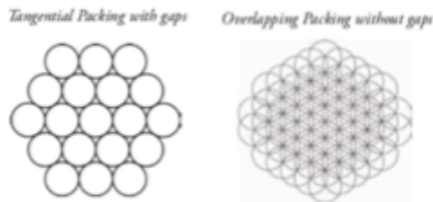
Max Planck discovered that the energy emitted from every kind of electromagnetic radiation (visible light, x-rays, infrared, radio waves, etc.) comes in discrete packets, or quanta, of action. In quantum mechanical physics, the **quantum of action** became formalized as a physical constant, appropriately named the Planck Constant.....It is correlated with the frequency of an electromagnetic wave (such as a color in the visible light spectrum) to derive the energy value of that frequency using the equation $E=hf$ (E (energy) = h (Planck Constant) \times f (the frequency)). In simple terms, every frequency across the electromagnetic spectrum has a discrete value or quanta of energy associated with it. It is this realization of the quantized nature of the energetic cosmos that kicked off the field of quantum mechanics and led to Einstein's coining the name 'photon' for the quantum energy event. p267

Max Planck is also known for proposing a set of units of measurement derived from properties of nature, rather than from human contrivance (such as degrees of temperature). These "natural units" (based solely upon known physical constants) is called the Planck scale. They are at the foundation of physics theories, including Quantum, Relativistic and Unified Physics. p13

The Planck scale is the tiniest scale of reference used in scientific analysis. p58

If Planck Length = size of Grain of Salt, then Grain of Salt > size of Universe! p57

The cosmos (more specifically, the vacuum of space) is quantized, and there is a primary "ground state" of quantization at the Planck scale. As such, spacetime is granular as "pixels" on the structure of space. p1X



Both tangential and overlapping arrangements of sphere packing produce the same triangulated and hexagonal pattern that creates an isotropic vector matrix IVM (see VE). p58

Nassim Haramein imagined that at the Planck scale there are "eeentsy-weensty" little spherical energy units that are packed together in an isotropic vector matrix. In doing so, though, he made a fundamental shift in the arrangement of the little spheres. Instead of having them just touching each other tangentially as Buckminster Fuller envisioned (therefore leaving small gaps between them), he realized that they could be overlapping each other in a coherent standing wave pattern of dynamic energy in equilibrium, thus becoming all-space-filling with no gaps between them. This is because these little spheres are not solid balls, but rather they are *spherical oscillators of electromagnetic energy*. They are the same as Light energy, just at a wavelength that is extremely small. It is these little quanta of electromagnetic energy that he calls Planck Spherical Units. p56

The fractal aspect of wholeness is the harmonic expression of quantization. p20

The Planck Spherical Unit (PSU) is the very base of the universe. It is the zero phase ground state of dynamic equilibrium and the origin of quantized energy-matter-information dynamics found at all scales. p57-58

Even though the PSU-IVM field (see VE) is in equilibrium, each PSU is still oscillating and has a current of electromagnetic energy flowing through it at the speed of light. So, it is both zerophase stillness and speed-of-light motion simultaneously! p64

The world as we know it is fundamentally a standing-wave fluctuation within the underlying aetheric superfluid medium of the PSU-IVM field. p65

The Planck-scale field of electromagnetic equilibrium was historically referred to as the Aether. While physicists rejected this idea it is now being proved correct. p59

The PSU-IVM is the ground state from which all manifest form and flow arise, these being a consequence of the shift from zerophase equilibrium to dynamic disequilibrium — the fluctuations of light and sound that we know as the observable universe. p199

The fundamental voxel of our size universe is a Planck Spherical Unit — the ground state fractal scale. The next fractal scale most directly relevant to matter formation is the proton that makes up the mass of the observable universe. p69

Haramein's holographic mass solution for the proton and electron demonstrates that the atomic elements are composed of this quantized PSU field and that through this field all particles are universally entangled. p359

Question: In the history of the universe no proton has ever decayed. Where is the energy coming from to keep it spinning?

A proton is a torus made of Planck Spherical Units. It is because the protons are made of this superfluid aether medium that continuously supplies them with energy that they are observed to never decay. This one fact tells us about the true nature of the cosmos — it is absolutely abundant. p360

Question: Knowing that 1) atoms, the matter the universe is made of, are 99.9999% space and that 2) our current physics theories can only account for 4% of the universe's matter, wouldn't it make more sense to study "space" rather than "matter?"

Contacts; Marshall@ThriveOn.com or Randv.Langel@gmail.com or Lexioliviahvland@gmail.com

Download at - <http://www.randylangel.com/science.html>

Appendix E: 1-Page Summary of Planck Spherical Units (PSU) – Technical

Planck Spherical Units (PSU) – The Technical 10% You Need to Know

Source: "Cosmometry – Exploring the HoloFractal Nature of the Cosmos" by Marshall Lefferts (p = page #s)
Source: Resonance Science Foundation's Delegate Course by Nassim Hamein (NH) (x,y,z = course section #)

By the late 1800s, it was well known that the temperature of an object was somehow connected to how brightly it would glow or radiate light, as well as what color it would radiate, however it was not known as to why certain temperatures radiated certain colors. Further discoveries showed that at a given temperature the intensity of radiated energy is proportional to the frequency. However, while their calculations matched experimental results at low frequencies, for higher frequencies (ultraviolet and above) the predicted intensity of radiated energy increased to infinity. This became known as the "ultraviolet catastrophe." In 1894, Max Planck was working for a consortium of electric companies attempting to produce a better light bulb. This required the UV catastrophe be addressed. Through rote trial and error he eventually worked out a mathematical expression that fit the experimental data. NH 3.5.2

According to Quantum Electrodynamics (the relativistic model of Quantum Mechanics) even a small area of the vacuum has an infinite amount of energy. In order to eliminate the infinities from the mathematics a renormalization was agreed to where the Planck wavelength was established as the cutoff value. This wavelength was used since it is the smallest oscillation of the electromagnetic field. Using the Planck distance of 1.616×10^{-33} cm (note that the Phi Ratio is 1.618) the physics community renormalized the vacuum by taking a cm^3 of space and calculating how many Planck volumes (Planck length cubed) could fit into it. Each Planck has a mass of 10^{-53} grams and when they added it all up the fundamental density of the vacuum came out to be 10^{93} grams/ cm^3 – an enormous number. To give you an idea how dense this is, if we compacted all the stars in all the galaxies in the universe into one cubic cm, the resulting density would be 10^{55} grams/ cm^3 . That's 38 orders of magnitude smaller than the density of space. NH 3.5.7

The Planck distance is supposedly the smallest thing the universe does. In simple terms, you can think of it as the time or distance a photon takes to go across itself. It's the smallest wavelength the universe is supposed to be able to do. Hamein does not believe the Planck distance is the smallest thing the universe does but he does believe it is a fundamental boundary condition in relationship to our experience.

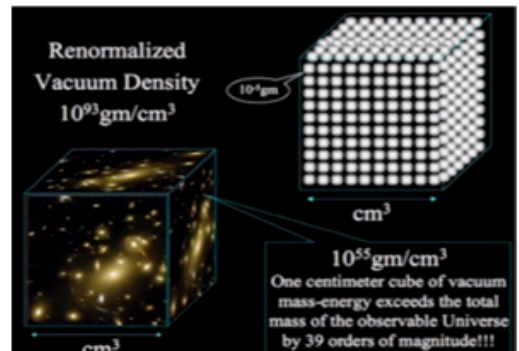
The origin of mass is directly out of the vacuum fluctuation of space. From the dynamic of space itself emerged energy and mass. NH 4.3.6

The vacuum density is the source of all reality. NH 3.5.7

The Vacuum's totally empty space is actually a seething turmoil of creation and annihilation, which to the ordinary world appears calm because the scale of fluctuations in the vacuum is tiny and the fluctuations tend to cancel each other out. NH 4.2.2

Gravity is, in fact, an effect of the Planck field co-moving at the cosmological scale, defining the mass of an object and the gravitational "tensegrity" between objects, which are all centered by a singularity. p71

the so-called vacuum of space is actually filled with a Planck-scale matrix of electromagnetic (EM) energy fluctuations in balanced equilibrium – the PSU-IVM, which more appropriately ought to be called the plenum. p98



To help you comprehend how a cubic cm of "empty" space can be more energy dense than cramming all the mass of the universe into the same volume, consider these items;

1. Humans evaluate everything based on our five senses. This is incredibly limiting. Science has given us tools to extend our measurement capabilities but this can only go so far. All of our measurement systems are based on light. The PSU diameter corresponds to the Planck Length which is the distance a photon takes to travel across itself which is the smallest we define. In order to measure an actual Planck length we would need a device with a smaller wavelength than a photon. This is impossible (at least in this universe).
2. We've been told since childhood about the Big Bang when supposedly all matter that ever will be was created from nothing. Does this make any sense? Maybe the "nothing" was actually "something" and we just didn't understand it. Hamein mathematically proves the beginning of the universe involved a proton escaping from another universe.

Why is over 96% of the total mass of the universe missing from our theories?

Contacts; Marshall@ThriveOn.com or Randy.Langel@gmail.com or Lexioliviahland@gmail.com

Download at - <http://www.randylangel.com/science.html>

Appendix F: 1-Page Summary of Planck Units – Technical

Planck Units – The Technical 10% You Need to Know

Source: "Cosmometry – Exploring the HoloFractal Nature of the Cosmos" by Marshall Lefferts (p = page #s)

Source: Resonance Science Foundation's Delegate Course by Nassim Hamein (NH) (x,y,z = course section #)

In 1899, Planck proposed a series of completely *natural units* based on the properties of fundamental physical theories. These natural units are thus based only on observed properties of the universe — the universal constants. So instead of using a measuring standard created by humans, Planck's units are calculated directly from the universal physical constants, namely the gravitational constant, G , the speed of light, c , and the Planck constant h . Interactions between base Planck units can then be used to derive other units. For example, if 1 Planck length separates two bodies of 1 Planck mass each, they have a gravitational attractive force of 1 Planck force. At the speed of light, the time it takes light to travel 1 Planck length is 1 Planck time. This approach drastically simplifies the use of some large natural units, and reveals relationships between certain properties in the world. NH 3.5.3

Planck Length:

$$l_P = \sqrt{\frac{hG}{c^3}}$$
$$= 1.616\ 199(97) \times 10^{-35} \text{ m}$$

Planck Mass

$$m_P = \sqrt{\frac{hc}{G}}$$
$$= 2.176\ 51(13) \times 10^{-8} \text{ kg}$$

The Planck length represents the smallest limit of length we know how to measure. The reason for this is that all of our measurement ability in the current age is based on light. The smaller the wavelength of light we can produce, the smaller the objects we can shine that light upon and measure. In order for a photon to have a wavelength small enough to measure the Planck length, it would need to have an immensely high energy level. In fact, it would need to be so high that the photon itself would match the conditions of a black hole. NH 3.5.3

The maximum possible energy a photon can have (before collapsing on itself) is approximately equal to the "Planck energy," and the wavelength of the photon at this level is approximately equal to the Planck length. Since this wavelength is the smallest wavelength that light can travel, it's also the lower limit of what we currently believe we could be capable of measuring, though our technology is not yet capable of generating light at these immensely small wavelengths. It's a natural length unit that emerges from the properties of light and gravity in the universe, and so it's the most accurate "tick on a ruler" we currently have to measure the universe. This is essential to understanding Quantum Gravity. NH 3.5.3

Planck Force

$$F_P = \frac{E_P}{l_P} = \frac{h}{l_P t_P} = \frac{c^4}{G}$$
$$= 1.21027 \times 10^{44} \text{ N}$$

Planck Time

$$t_P = \frac{l_P}{c} = \frac{h}{m_P c^2} = \sqrt{\frac{hG}{c^5}}$$
$$= 5.391\ 06(32) \times 10^{-44} \text{ s}$$

The Gravitational Constant is an empirical physical constant involved in the calculation of gravitational effects in Sir Isaac Newton's law of universal gravitation and in Albert Einstein's general theory of relativity. It was first measured in 1798 by Henry Cavendish.

There is no experimental proof the photons have zero rest mass. NH 3.5.3

It is important to note that in the standard model of quantum mechanics, photons are not considered to have mass or size. They are considered "point particles." The reason that photons cannot have mass according to the standard theory is that if they did, they would not be able to travel at the speed of light, or they would have infinite mass and infinite energy. Yet, from a Unified Physics perspective, light may not travel at all. We know from Einstein's work that time does not exist at light speed. This may mean that light is already distributed throughout the Universe in a standing wave, and we are only observing local fluctuations of its frequency. In fact, this may actually be what the quantum vacuum fluctuations are all about! NH 3.5.3

Contacts; Marshall@ThriveOn.com or Randy.Langel@gmail.com or Lexioliviahyland@gmail.com

Download at - <http://www.randylangel.com/science.html>

Appendix G: 1-Page Summary, Nassim Talks about Reality

Nassim Hamein Talks Reality

Source: Nassim Hamein with Michael Hudson video – pt1 = tinyurl.com/qspermw & pt2 = tinyurl.com/tr3yzir

The material world (that which is manifested from the Planck field) is composed of atoms which are 99.99999% space. Therefore, our material world is mostly space. Our science deals with the material world almost exclusively. Instead of concentrating on the .000001%, shouldn't we pay more attention to the 99.99999% to discover what reality is actually about?

Science has made bold statements about existence based on a small amount of visible or human senses-acquired experiences i.e., a very small band of what is actually there. *We are making dramatic errors based on observation.*

The visible light spectrum is only about .0003% of all the information fields available.

There are fundamental problems in our math & physics. We have discovered mathematical concepts and assumed there are corresponding physical constructs. For example, the concept of dimension. If we use our mathematical 2-dimensional Cartesian plane in a physics equation we are led to believe physics happens in 2 dimensions. *Just because our mathematics points us to a concept, does not mean that that concept is real in the material world.*

When we look at space in the quantum world it's not empty but actually full of electromagnetic fields fluctuating at very high density. But because in our day-to-day lives we experience space as empty we tend to think that matter is independent of the space around it when in fact there is nothing else other than space. *There is only ONE thing (the Planck Field) and everything comes from it. In a more personal way you could also call it The Divine.*

Einstein's field equations separated mass from space-time meaning where there's mass or energy then space-time curves and makes gravity. However, Nassim realized that there was no separation between mass and space-time but that in fact where spacetime spins and coalesces i.e., the gradient exists, then we see that as an energy event we call mass. *Mass is the result of space-time spinning at the quantum level.* For example, in your bath when you pull the plug the surface of the water curves toward the drain and you put a rubber ducky there it will start to orbit. But why is the water curving toward the drain? It's because there is a gradient at the drain (eg air coming out & water going down) and the whole thing spins coherently. The rubber ducky is orbiting because all the water molecules in that region are co-moving in a vortex and the ducky gets caught in it. If you take the ducky out and put it on the other side of the bath it doesn't feel it because the movement is incoherent. In the Standard Model gravity control is not possible because you can't curve spacetime as it would require enormous energy, it's like trying to curve the surface of water in your bath. However, if you realize it's from spin, you can then put your finger in the bath and turn it and the water will start curving. If in the lab you can couple to the structure of space at the quantum level (entrain the Planck field) you can create your own vortex and control gravity.

Nassim says it's more accurate to use the term space-memory rather than space-time i.e., if there is no memory there is no time. With no memory you could not assign a linear evolution of things.

Each coordinate in space holds the information specific to those coordinates, specific to the perspective that supplied the info. So, *time is information on the structure of space.* E.g., if I imagine space as a snowflake crystal, as I move my arm through it I'm melting sections i.e., I'm leaving a trail of info. All these points in space interacting with each other produce reality.

Einstein could have united relativistic and quantum physics if he would have known about fractals (i.e., self-replicating reiterative patterns) and feedback. *As soon as you have feedback you can get self-organizing systems because the system learns about itself.* These systems can get complex very rapidly. Suddenly the complexity you see on our planet becomes feasible.

People are not going to be positive everyday but if you make an effort it becomes – how fast can you return to that inner place of centeredness. That is why meditation is important because if you know where the center of you is inside you can go back to it. However, if you don't know where that inner center is you're kind of out-of-control.

There is a concept that a person can create their own reality. This concept is only partially correct because it is generally discussed in a one-way manner i.e., a person sending a message to the field with a request/intention/prayer desiring an outcome. This is only ½ of the loop. The wave you're sending is the feed-forward part of the loop. You need to realize that the wave coming back is the feed-back which is the rest of the universe creating its reality and responding to you. The universe (Planck Field or "the Divine") interacts with the rest of humanity and your creation and the universe gives you a result that is a combination of everyone's feed-forward waves. If a person could create a reality exactly the way they wanted it, a few things would happen: 1) you would be the only one in it because everybody else would be creating their own. It would be very lonely. 2) you'd also be bored within seconds since you had everything you wanted. What happens is that you put your intention out into the field and you stay open to what comes back, realizing it's going to get modified for the highest evolution of the whole. This unexpected feed-back gives you empathy for yourself and others. You might not get exactly what you expected but now you're learning from the experience. *The totality of everyone's learning is how the universe learns about itself.*

Contact: Randy.Langel@gmail.com

Download at <http://www.randylangel.com/science.html>

Appendix H: Recent Comments from Nassim on his Theory

The Black Hole DVD was produced in 2011 and contains the core concepts of Nassim Hamein's Unified Field Theory. At the Conscious Life Expo in February 2019 he gave a talk entitled, "Consciousness and the Human Antennae" where he discussed further observations. The text below are some snippets of information transcribed from the audio portion of that presentation. The talk can be viewed at [https://www.gaia.com/share/ck7w8wt5q00120inr7e4chhba?language\[\]=en&startAt=2.260169324](https://www.gaia.com/share/ck7w8wt5q00120inr7e4chhba?language[]=en&startAt=2.260169324)

Holographic Mass

The holographic mass solution is the result of describing the structure of spacetime at the quantum level in terms of Plancks (and PSU or Planck Spherical Units). Spacetime is quantized at the very fine level of the Planck. Space is discrete – it is not smooth. It just looks smooth because the quantization factor is so small.

When Plancks (actually information) is orbiting in a coherent manner, that's what we call mass & gravity. Mass & gravity are the same thing i.e., information moving in spacetime. Where you have a vortex it's mass or gravity – it's all made of the same stuff. The information (Plancks) that come out of a proton through its surface is the thing we call mass.

The Holographic Mass Solution gave radius of the proton and it's the most accurate theoretical solution on the planet. This was extended to the electron and all the elements. With my current paper I can accurately predict the radius and critical mass of the universe without the need to incorporate fudging factors like dark matter/energy. The standard model's equations only account for 4% of the universe mass which of course means that the standard model is off by 96%.

The most stable particle is the proton. It is what makes up matter and us. It is fundamental. Therefore, this particle must be in touch with everything everywhere. The proton must be the throughput of the data streaming across the nodes of the universe. All the little Plancks inside the proton equal the mass (remember – what we call mass is really bits of information) holographically of the universe. Each bit of information that makes up the rest of the universe is present holographically within the field of information within one proton. The reason I'm not measuring the mass (information) of the universe when I measure the mass (information) of the proton is because I'm only measuring one node. This node can only emit (information) that's able to come out through its little surface. However, in the central volume of the proton is the shared volume (information) of all the other protons in the universe because they are all connected through tiny Planck wormholes. The whole thing is connected.

If I take a proton and grow it to the size of the universe the surface size is changing so it can radiate more information so consequently a larger mass. Doing this and using the Holographic Mass Solution Equations he gets the exact mass of the universe. The theory accurately measures the mass of the proton and the mass of the universe using the same equation which are based on Planck oscillators. One equation – One theory. No Dark Matter. No Dark Energy. This is all done using measurements on the Planck scale. These measurements are the only units based on nature itself rather than something esoteric like the length of a king's forearm. They

come from fundamental constants like the Planck constant which is the energy for an electron to jump from one energy level to another. Fundamental Natural Units.

Biology

We are made of a hundred trillion cells and each cell is made up of a hundred trillion atoms. If you take one of these atoms and imagine its electron cloud is the size of the dome in the Vatican (42 meters), then the nucleus in the center would be the size of a head of a pin. Now a nucleus is made up of protons (neutrons are fundamentally just objects waiting to become protons) and inside the proton are many Planck oscillators. How many are there? Imagine you take one of Planck oscillator from inside the proton and make it the size of a grain of sand, how big would the proton need to be to incorporate all the Planck oscillators contain inside one proton? Answer - 40 trillion kilometers or the distance from the Sun to Alpha Centauri. Nassim's Holographic Mass Solution equation counts the number of grains of sand inside the 40 trillion-kilometer bubble and compares it to the number of grains of sand on the surface of the bubble. When he does this, he gets the critical mass of the object being evaluated to an accuracy of 8 digits.

Imagine the energy needed to run the human body of a hundred trillion cells for 100 years at about 100 degrees Fahrenheit. Information is being exchanged every second at a very high rate. At the cell level there are a 1000 billion, billion chemical changes per second. Nassim is proposing a reversal in the concepts of biology. He is saying that chemical activity in the body is not the source of organization but rather the result of information transfer from the atomic scale. Contrast this to the standard model's interpretation of stuff just bumping randomly into other stuff to produce these reactions.

The body's biochemistry is informed from the quantum field which is doing the coordination. The field knows where everything is. Think of all the processes going through the Planck field into the atom, into the cells, into the molecules creating the biology. Producing this structure that you are. Think of it as a conduit that is oscillating e.g., heartbeat, lung expansion, spinal fluid flowing up and down the spine, blood going through the 100,000 kilometers of passageways. Think of this biology as an antenna in the structure of spacetime picking up and sending out information. When you receive information, you interpret it and the field reacts to your interpretation. Your state of emotion is the dial that the antennae is tuning in to. You change your state of emotions by changing the way you see the world.

The chemistry in your body is driven by information transfer at the field level of the Planck scale which happens to be your consciousness. We have a linguistic problem with the words around consciousness. We call the part that handles all of this interaction the unconscious or subconscious and then the part we humans use as conscious. Nassim feels these should be flipped around.

Information flows from the Planck field to the atomic level to the cell and then to the molecular level producing the chemistry of the biological relationship. Between the cellular and molecular scales there is a very important step – the molecule of water. This is the fundamental transducer and gating mechanism that allows the information to go or not to go through. This is why life

comes from water. Water is super important. If you take water out of the DNA it stops working. Without water there is no information transmission (DNA). Water does this with all bio molecules, not just DNA. Structured water is what structures DNA. Structured water is more like a solid than a liquid.

There is approximately 2 meters of DNA in every cell. If you take all the DNA in one human being and string it out it would wrap around the world 5 million times. This is the same distance as going from Jupiter to the Sun 6 times. The point is that our science tends to break things into small pieces and then predict how something will work. For instance, looking at DNA in only one cell. Science needs to look at the big picture to really get an accurate model of how things work.

ATP (Adenosine Triphosphate) is the body's life force energy production. If you lie in bed all day and do nothing, your body will produce your body weight in ATP. When you see this kind of energy production from just one part of your body and then look at the integrated whole i.e., atoms, cells, molecules all exchanging energy you start to see how you are truly a light body. A human body running for 100 years at 100 degrees Fahrenheit takes a lot of energy and it has to come from someplace.

Quantum Mechanics

At this point humans think they can figure things out through science and the use of closed systems with classical mechanics. Eventually scientists become so good at measuring things they get into the quantum areas. Now in the quantum realm you are getting close to the Planck field and now the humans notice all this "weirdness" and start to think that observing something changes its measurement. This "weirdness" leads the scientist to the conclusion that classical mechanics no longer is valid so these techniques are abandoned and they say they are going to use statistics. This approach leads them to say that everything is super positioned or an entity can be anywhere at any time in any state. This super positioning says Schrodinger's cat in the box is alive and dead at the same time until the observer determines its state. However, it's important to note that this doesn't say anything about consciousness in standard physics e.g., the observer doesn't have to be a person. It could be a flea on the cat or a microbe on the cat.

The cat in the box illustration is just another closed system and guess what – the cat is not isolated from the rest of the universe. The fact that you are confused about the state of the cat doesn't mean the rest of the universe is confused as well. Another way of saying this is you cannot isolate the frame of reference. What about the flea on the cat? It knows if the cat is alive or dead. What about the microbe on the cat? You see, there are an infinite number of frames.

What this means is that we need to relook at quantum mechanics to see if we missed something in its creation. That something missed is the field that connects everything – the Planck field. We must recognize that this field is the information of things informing all other things.

The Universe

The equation says the universe is a black hole. You think of a black hole as being so dense that not even light can emerge from it with the gravitational force being so strong. If you calculate the density of a black hole the size of our solar system it would be the density of the air in our atmosphere. The bigger the size of the black hole the lower the density. The black holes at the center of galaxies is about the density of water.

We think the universe is expanding because stars appear to be redshifted i.e., moving away from us. However, this would also be true if we are moving away from them. The redshift phenomena is due to the different positions the measured entities are occupying on a moving torus, not a bubble expanding from the center.

There is data pointing to the fact that the universe is spinning but it is ignored because the standard model assumes the universe is static. This is a ludicrous assumption. How can the standard model say the universe is static when everything in it is spinning?

We are living in this dynamic toroidal structure of spacetime that's circulating Planck information across scales, from a proton to the universe.

Nassim's theory predicts there are an infinite number of universes foaming out. These constantly created universes are all entangled because they are all in the Planck field. All natures present in the various universes influence one another. Every point is influenced by every other point.

Nassim can find no place in physics or philosophy that points to a start or an end of the universe. This was very difficult for him to assimilate. He had to let go of the concepts of a beginning and an end goal. He concluded that these are concepts of man not of the universe. He had to surrender to the continuum of creation. Once he got comfortable with this he realized how this continuum is actually the most beautiful thing because it means there is continuous learning. The universe can't reach a point where it stops learning. On an individual basis this means that as a person encounters things there is a learning lesson behind it since it is a response of the universe where all points have been considered. You will never get exactly what you want since you would be bored after that for all eternity. This also means that within you are the possibilities to access the information of the universe. Enlightenment is a process not a destination. It's hard to be enlightened every Planck second but you have to keep at it because the universe is changing every Planck second and you have to keep up.

Consciousness

This sequence of ordered energy information transfer keeps building more complex structures till at some point the feedback mechanism becomes self-aware. The being suddenly becoming aware of itself looks in a mirror and the feedback is "it's me." Becoming self-aware is the feedback loop closing on itself. This threshold of self-awareness produces a separation. From this the self-aware entity assumes that there is no direct relationship between that self-aware feedback and the rest of the universe. It assumes that somehow it is separated from the solution that produced its own existence. It presumes the source of itself is itself, which is correct except that itself is the whole thing and it doesn't know that. The life force and flow of information that eventually has made this self-aware entity becomes something mysterious that is unclear as to the resulting effect. This effect is unclear about the source of its existence never mind its purpose.

Miscellaneous

One of the problems with science is that it was developed to separate it from religion. Therefore, it was critical for science to create a different model rather than "God is doing it." The only thing they could come up with is that everything is random and everything is bumping into everything just right. They don't want to deny randomness because they see that as going back to religion.

The Planck length in miles is a very good approximation of 1. Nassim finds this interesting.

Endnotes

Where I have significantly altered the text from the original DVD audio I included an endnote to indicate the position number on the video where the segment I'm editing starts. I did this in case someone wants to hear Nassim's original words rather than my text summation. It also allows people to quickly go to the appropriate part of the DVD to validate if my new text maintains the context of Nassim's ideas.

ⁱ Black Whole DVD video position 22:39

ⁱⁱ Black Whole DVD video position 24:15

ⁱⁱⁱ Black Whole DVD video position 26:55

^{iv} Black Whole DVD video position 29:27

^v Black Whole DVD video position 32:04

^{vi} Black Whole DVD video position 39:20

^{vii} Black Whole DVD video position 40:53

^{viii} Black Whole DVD video position 56:23

^{ix} Black Whole DVD Video position 100:18

^x At Black Whole DVD video position 1:17:13 Nassim talks about the flower of life symbol found in stone at the Osirian temple in Abydos, Egypt. He states in the video that the markings were etched into the atomic structure of the stone. He later changed this view when the Thrive documentary recanted this same statement he made in their video. Therefore, I have not included any of this audio transcription here. <https://thrivedebunked.wordpress.com/2011/11/25/thrive-makers-back-down-on-flower-of-life-claim/>

^{xi} Black Whole DVD video position 1:18:23

^{xii} Black Whole DVD video position 1:20:15

^{xiii} Black Whole DVD video position 1:28:47