From the desk of Pierre Beaudry

WHAT IS AN AXIOM BUSTING INTENTION?

By Pierre Beaudry. March 4, 2012.

"Hence, the measure and the measured – however equal they appear – will always remain different…For the intellect is to truth as a polygon is to a circle."

Nicholas of Cusa

"The intention of the universe is not merely to hold everything together proportionately, but also to make everything grow proportionately, as does the human mind."

Dehors Debonneheure

FOREWORD

Axiomatic changes are the necessary conditions for the survival of all living species in the universe. However, only human beings are capable of making such willful changes in their lives out of necessity; that is, only for the benefit of future generations of mankind. No one can escape this anti-entropic condition, because all of the peoples of the world have the same choice: ***They are all free to choose necessity!***

If people don't choose to change, they risk going down with the current historical breakdown, and become extinct like the proverbial Dodo bird. However, if you look at the optimistic side, the current strategic situation is a universal condition that no one can afford to miss, because, if you were to successfully go through the current strategic change, your will have contributed to your species' immortality. This report contains five sections:

1. CREATE CHANGE BY ***ENFOLDING***, NEVER BY UNFOLDING
2. PLATO'S CAVE, METAPHOR, AND THE INTENTION OF GEOMETRY
3. THE PLATONIC SOLIDS AND THE MUSIC OF THE SPHERES.
4. WHAT IS THE PLASMA DYNAMICS CALLED HELIOSEISMOLOGY?
5. ELECTROMAGNETIC UNIPOLAR INDUCTION AND COSMIC PLASMA.

1- CREATE CHANGE BY *ENFOLDING*, NEVER BY UNFOLDING.

Let me explain why you always have to start anything from the end. Start with the intention of drawing a line with a moving point as an example. People think wrongly that a moving point is what creates a line, that a moving line creates a surface, and that a moving surface creates a solid. That is incorrect. In fact, all things are created from the higher intention of their creator; that is to mean, from the top down, from a higher manifold to a lower manifold, never from the lower to the higher manifold. In other words, the universe can only be understood if you start from the intention, never from so-called building blocks, which is the generalized fallacy of composition that exists everywhere in society, today.

Trying to understand the universe from building blocks is to believe that one can attain the next higher state of existence by starting from the beginning, and proceeding from the bottom to the top. That is completely wrong. A house must always be built from the roof down. See my report on Brunelleschi's Mind. And the reason one cannot succeed by starting to build a house from the basement up is the same reason that forbids you to create a line from an infinite number of points, a surface from an infinite number of lines, and a solid from an infinite number of surfaces. Cusa identified two opposite movements in the mental process of constructing anything; one which proceeds as an ***enfolding*** (***complicatio***) from the top down, and the other which proceeds from an unfolding (***explicatio***), from the bottom up. In the creative process of the mind, as in the universe as a whole, the process of creation always begins with ***enfolding*** and never with unfolding. As Cusa put it:

> "When I claim in geometry that the total perfection of the line exists from this point A to point B, I have designated through point A and B the totality of the line before it is drawn from A to B. That is, the line ought not to be drawn beyond them. Consequently, to enclose the totality of a line either in actuality or in the intellect, between this place and that, is to ***enfold*** the line in the point. To unfold, however, is to draw the line consecutively from A to B. Accordingly; the line unfolds the ***enfolding*** of the point." (Nicholas of Cusa, ***The Layman: About Mind***, Abaris Books, New York, 1979, p. 72.)

When you draw a line on a piece of paper, you are unfolding what has already been ***enfolded*** in the point of your pen by the intention of the higher domain of your mind from the future. Thus, the creative process starts with the ***enfolding*** of the intention from the top down; that is, from the final cause and never from the so-called efficient cause. You cannot create anything by unfolding efficient causes. That is not an efficient way of dealing with causality at all, because you are merely pushing things one against the other, like dominos. Creativity is never unfolding, because unfolding is based on sense-perception practicality, which proceeds from the past to the future. That never gets you anywhere. If you start anything like this, you will never get to the end of it. ***Enfolding***, on the other hand, is based on the intention of the creative mind which proceeds by time reversal, from the end, and works back from the future to the past. That is the only way to go forward.

For instance, a polygon can never become a circle, and a polyhedron can never become a sphere, even though they are both created with the intention of that aspiration in them. Always start with intention, because it is only with intention that you can get to accomplish anything. Such is the difference between the measure and the measured. Creativity must start with ***enfolding***, because there is always more in the measure than there is in the measured. As Cusa noted: "For mind conforms itself to possibility so that it may measure everything as possible. It conforms itself to absolute necessity so that it may measure everything simply and as one, just as God does." (Ibid., p. 74) Epistemology, therefore, must be understood as the psychoanalysis of sane minds.

2. PLATO'S CAVE, METAPHOR, AND THE INTENTION OF GEOMETRY.

When I began to investigate the intention of the Five Platonic Solids, in 1992, all I had was a bunch of questions. For example: What is the intention of geometry? What is its purpose? What is geometry supposed to teach us, exactly? And, my answers were all coming back to the same thing, which was that ***geometry's intention is to demonstrate how the universe changes, not how it is.*** If I describe how the world is, that is stupid, because I merely show how it is falling apart. The key to geometry is to show how to change the world. So, how was I going to express that? How can you represent change, when it is so fugitive and geometry is so static? How can geometry show change when all it can do is to show that change is an invisible jump from rest to rest? "THAT'S IT," I said to myself. That is when I realized that geometry could never be a curve fitting means of describing our changing reality, but could only be a blind man's stick on the bumpy road of time reversal. "Oh wonderful flaw that gave us time as a measure of change," I thought to myself.

From that moment on, my task was to discover how geometric devices could express change by showing how they fail to make leaps and jumps between one state of existence to another totally different state of existence, like going from two dimensions to three dimensions. But, how was I going to express that crazy idea, geometrically? At Lyn's suggestion, I decided to look for those singularities and discontinuities of axiomatic change that represented paradoxes and ironies in mental processes. In other words, I decided that not only Leibniz, but also Cusa and Plato were right, and that the truth of the matter was that the real changes in the world had to be represented, one way or another, by our experimental

failures in Plato's Cave. "***Looking through a glass darkly***" as in learned ignorance became a new way to see the truth of the world by looking for what was not there for us to know.

The intention of geometry, therefore, became as Lyn said at that time, a metaphorical journey. I refer to Lyn's piece ON THE SUBJECT OF METAPHOR (1992). Lyn's paper on geometry confirmed this question of change in spades. So, this being the case, I asked myself: Where can I find the metaphors representing the principle of manifold change through Plato's Cave? And the best place I found to look for those paradoxes and ironies was in universal history and in the principle of ancient architecture, most surprisingly inside the Great Pyramid of Egypt. I discovered the most improbable missing link between Egypt and Greece. I came to understand the role of geometry in science and art as the method to discover the impossible, the unbelievable. Then, my mind went into a very nice knot like a spinning braided Birkeland current: the change of geometry became the geometry of change.

Now, let me illustrate this with one of my favorite geometric devices. The key to doing properly what I am doing was to discover the gestalt, the One of the Many, the unity of effect of a higher integration. About twenty years ago, I discovered that the best way to express the metaphor of Plato's Cave was by using the shadows that were projected from the outside of that cave by a single sphere. This was suggested to me when I noticed that a unique sphere representing the Platonic Solids was missing in Lyn's 1992 paper on metaphor. I was shocked to discover that past geometers had never succeeded in discovering this integrating sphere during over more than two thousand years. It took me a while to discover that the reason for this missing sphere was that those geometers were looking for ways to express a geometric curve fitting between the Platonic Solids and physical reality, while I was looking for a metaphor to express an axiomatic change between the shadows of sense-perception and the creative human mind. Everybody was looking for a physical correspondence between geometry and reality; I was seeking the opposite. I was looking for an epistemological discontinuity between them.

When I fist constructed my original 10-Circle Egyptian Sphere, in 1992, and showed it to Lyn, he only replied with one word: "This pertains to C-256." I was elated. My intention, however, was not to represent some musical theory, or some atomic theory, but rather to represent the unity of a generative spherical principle generating an axiomatic change. I knew that such a sphere had to exist in ancient times, because the axiomatic change represented by the intention of the Great Pyramid of Egypt, the intention of the Doubling of the Cube by Archytas, and the intention of the Five Regular Platonic Solids were all very real to me, more real, even, than the physical reality I was trampling under my feet.

I realized, then, that if I could demonstrate the existence of such an axiomatic change, constructively, that is, by showing how a single sphere generates all possible polyhedra, for example, I would have the metaphor I was looking for. But, to my surprise, it wasn't just polyhedra that this amazing sphere was capable of ***enfolding***. The irony was that the 10-circle sphere was also capable of ***enfolding*** the angular determination of the Great Pyramid of Egypt, and show how the first great astronomical observatory in the world was created with the musical harmonic proportionality of the equal-tempered system.

The connection between the Angular determination of the Great Pyramid of Egypt and the Doubling of the Cube by Archytas was going to complicate matters even further, because Archytas had already complicated his own model with the intersections of a Cone, a Cylinder, and a Torus. I began to realize that what I had in my hands was the missing link between Ancient Egypt, Ancient Greece, and

modern times from Cusa to Einstein. What made this discovery even more interesting, however, from the vantage point of Cusa, was that Archytas had also ***enfolded*** his own construction from a conical musical range that divided the classical octave into three intervals of the same equal-tempered major thirds as I had found in the mid-section of the Great Pyramid. You could not get more closure than that. That was the link I had been looking for, which represented the mental proportion underlying the projective structure of Plato's Cave. The universal progress of ideas, the very history of ideas, seemed to be holding together through this very thinly disguised inferential function.

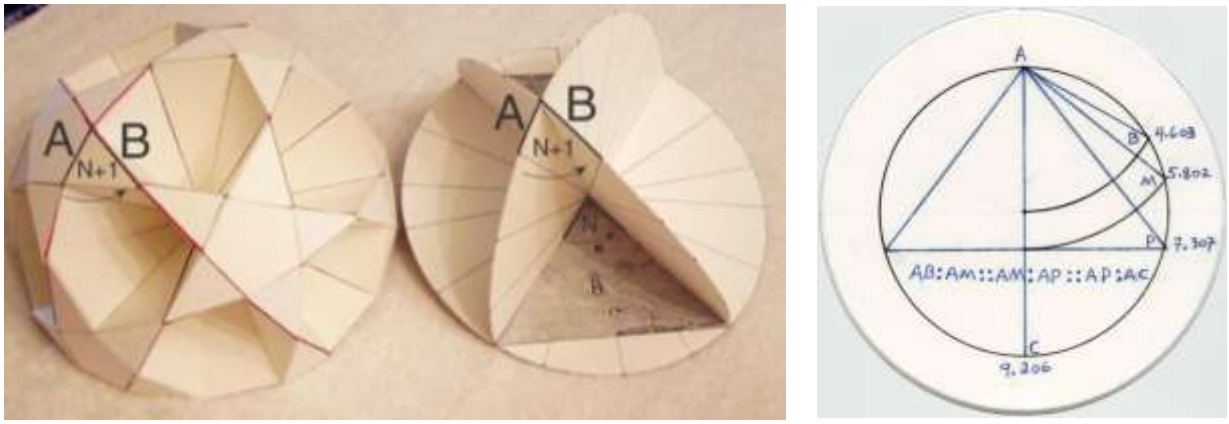
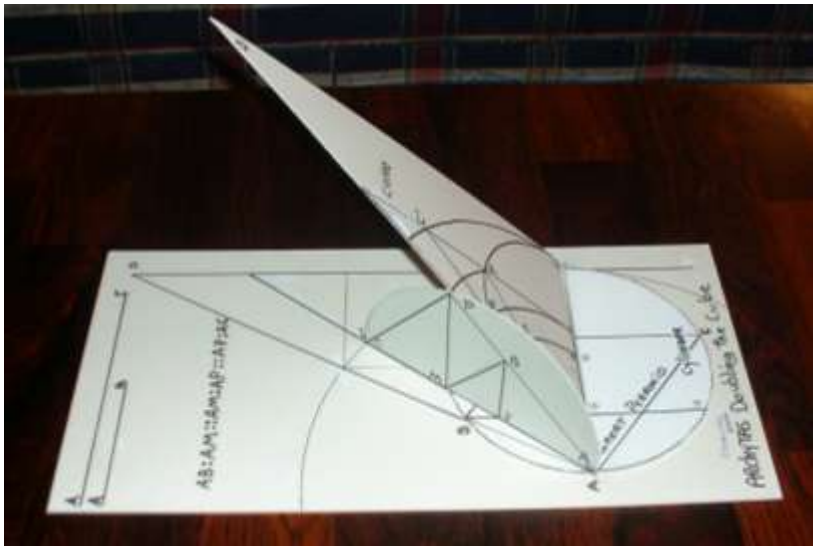


Figure 1. The angle of the Great pyramid of Egypt and the Doubling of the Cube. The proportionality of solid growth is expressed by the perpendicular cross-section of the Great Pyramid of Egypt circumscribed by a circle. That is: **AB : AM :: AM : AP :: AP : AC,** which is the same biquadratic relationship as the Archytas Doubling of the Cube. What this proportionality says is that **AB** is to **AM** as **AM** is to **AP** in the same proportion that **AP** is to **AC**. In other words, the radius of the circumscribing circle is to the height of the Great Pyramid as the height of the Great Pyramid is to its slanted side, in the same proportion that the slanted side is to the diameter of the circumscribing circle.

Thus, it became clear that what the Great Pyramid of Egypt and the Pythagorean Archytas discovery of Doubling the Cube represented for human civilization was the forgotten art of axiom busting that must have been exercised more than three thousand years ago, during pre-Egyptian times, in order to solve the deadly conflict between the Creative Principle and the Oligarchical Principle; the Promethean conflict generated by ancient astronavigators in what became known as the science of Sphaerics, which was solved by means of the creative mental proportion of **AB : AM :: AM : AP :: AP : AC.**



Pierre Beaudry's model of the Archytas Doubling of the Cube

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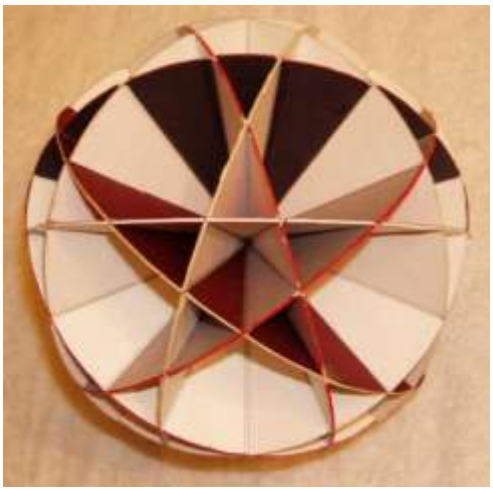
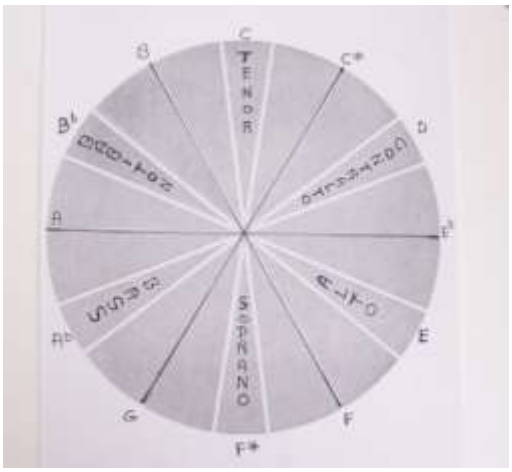
Figure 2. The Archytas Doubling of the Cube with the intersection of a Cone, a Torus, and a Cylinder in the musical proportion where **AB : AM :: AM : AP :: AP : AC.** The resulting shadow of the ***enfolding*** motion is projected as two doubly-connected biquadratic curves: a doubly-connected curve between a moving Cone across a fixed Cylinder and a doubly-connected curve between a moving Torus around a fixed Cylinder. The Ferréol biquadratic curve shown above represents the action of the Torus motion around a fixed Cylinder.

3. THE PLATONIC SOLIDS AND THE MUSIC OF THE SPHERES.

The proportional power of such an axiomatic device of change became even more tangible when I found a way to insert the different Platonic solids inside the interstices of the 10-Circle Egyptian Sphere which already appeared to have served more than its share of ancient discoveries. I was able to construct each of the Five Platonic Solids in this manner, and make the sphere ***enfold*** them like twenty tetrahedral pancakes popping out of a fiery Icosadodecahedron. There was a Promethean smell penetrating the nostrils of my intention. This was the proportionality that Leibniz had identified as the crucial harmonic relationship between reason and power. Their effective connection must reside in the fact that they are only effectively functional in time reversal and that neither one can exceed the other in matters of knowledge or political action. The relationship had to be performative.



The 10-Circle Egyptian Sphere



The circular musical partitioning of the octave

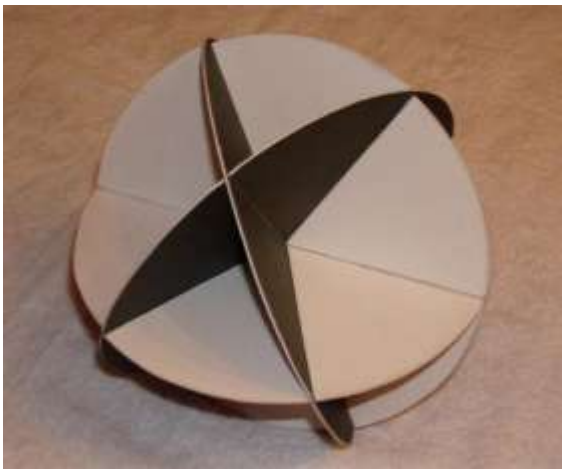
Dodecahedron

Octahedron

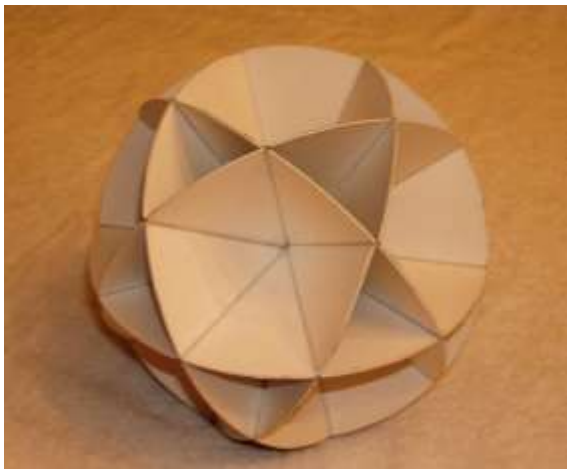
Cube

Figure 3. The 10-Circle Egyptian Sphere ***enfolding*** the shadows of the Dodecahedron, the Octahedron, and the Cube. Every circle is traced with the shadows of a musical proportionality among all of the register-shifts of the six human voices. **TENOR** is to **ALTO** as **ALTO** is to **BASS** in the same proportion that **BASS** is to **TENOR**. Similarly, **SOPRANO** is to **BARITONE** as **BARITONE** is to **CONTRALTO** in the same proportion that **CONTRALTO** is to **SOPRANO.**

Suddenly, the gestalt of this singularity of change became clear; but, only when the axiomatic connection between the sphere and the five solids came together with music for the mind only, and in complete defiance of sense-perception. My senses were banned, locked out. There was no way that I could see or hear the passing of one domain into the other domain, because their connecting jump from one state of existence to the other was made possible only by invisible angular changes whose significance remain unknown. Why were such angular changes so fundamental and so universal? Why only those angles, and no other, were necessary? I could not answer those questions, and this has remained a puzzle for me to this day. All I know is that this cornucopia of learned ignorance had solved a very ancient epistemological and political problem and also provided a spherical solution for the modern scientific paradox of Cusa's squaring of the circle.



Cuboctasphere



Icosidodecasphere.

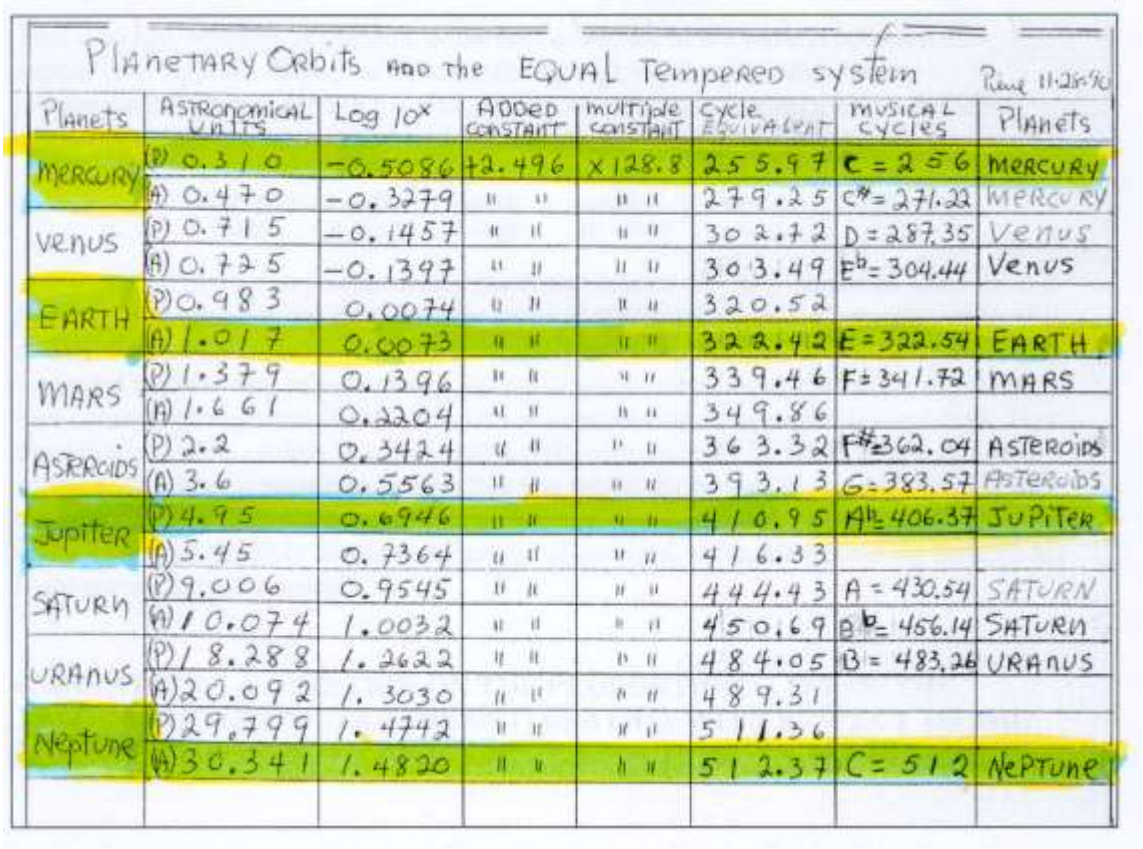
Figure 4. Traditional spherical representations of the platonic solids.

The solution for the integration of the Five Platonic Solids was so easy that I could not believe my eyes. All I had to do was to mix together a 4-Circle Cuboctasphere generating the Cube and the Octahedron, and a 6-Circle Icosidodecasphere generating an Icosahedron and a Dodecahedron. The Tetrahedron was implicitly generated by the Icosahedron. That was all that sense-perception was allowed to provide as shadows projected on the wall of Plato's Cave.

However, this integral metaphor worked beautifully because, just like a good joke, I did not have to explain it. Thank God it was self-explanatory, and I did not have to write a thirty page report to make the point. At a certain point, everything came together into this unifying gestalt and the intention of the Five Platonic Solids sprang out of the sphere like the singularities of the Many spring out of the One Godhead of universal creation. Thus, the metaphor worked because, as Cusa put it, "***the creature reflected the intention of the creator***." These five different creatures came out in different ways, but all from the same intention.

Again, I realized that this geometry was merely a crutch, because I remained ignorant of how such a multiply-connected axiomatic change had come about. It worked, but I did not know why it worked. However, this was not what Cusa meant by learned ignorance. Learned ignorance is not simply the realization that you don't yet know certain things that are knowable. It is the recognition that God cannot be known in any form of positive cognition. As Cusa put it: "The Absolute Maximum, with which the Minimum coincides, is understood incomprehensibility." (Nicholas of Cusa, ***Of Learned Ignorance***, The Arthur J. Banning Press, Minneapolis, 1990, p. 53.) It must be clear to your mind, therefore, that the object of such an experiment of axiomatic change does not lie within the domain of learned ignorance. What does lie in learned ignorance is the principle underlying the intentionality that is built into the model. That is beyond your limited intelligibility and can only be reached by attaining incomprehensibility. It is in that sense that geometry always fails in what the mind of its creator intends to do with it, and it is that limitation that you want to look for and bring others to discover.

Moreover, if you apply the same principle of harmonic partitioning among the intervals of the planets of our solar system, you will find the same proportionality. Following in the footsteps of Kepler you can find an excellent approximation of equal-tempered frequencies of the Solar System planetary orbits based on a correlation between the tuning at C-256 and the respective planets aphelion and perihelion distances from the Sun calculated in astronomical units. The intervals between Mercury, Earth, Jupiter and Neptune, for example, reflect the same proportionality as the Great Pyramid and the Archytas Doubling of the Cube.



PLANETARY Orbits and the EQUAL Tempered system

Planets	ASTRONOMICAL UNITS	Log 10^x	ADDED CONSTANT	MULTIPLE CONSTANT	CYCLE EQUIVALENT	MUSICAL CYCLES	Planets
MERCURY	(P) 0.310	−0.5086	72.496	×128.8	255.97	C = 256	MERCURY
	(A) 0.470	−0.3279	" "	" "	279.25	$C^{\#}$ = 271.22	MERCURY
VENUS	(P) 0.715	−0.1457	" "	" "	302.72	D = 287.35	Venus
	(A) 0.725	−0.1397	" "	" "	303.49	E^{b} = 304.44	Venus
EARTH	(P) 0.983	0.0074	" "	" "	320.52		
	(A) 1.017	0.0073	" "	" "	322.42	E = 322.54	EARTH
MARS	(P) 1.379	0.1396	" "	" "	339.46	F = 341.72	MARS
	(A) 1.661	0.2204	" "	" "	349.86		
ASTEROIDS	(P) 2.2	0.3424	" "	" "	363.32	$F^{\#}$ = 362.04	ASTEROIDS
	(A) 3.6	0.5563	" "	" "	393.13	G = 383.57	ASTEROIDS
Jupiter	(P) 4.95	0.6946	" "	" "	410.95	A^{b} = 406.37	JUPITER
	(A) 5.45	0.7364	" "	" "	416.33		
SATURN	(P) 9.006	0.9545	" "	" "	444.43	A = 430.54	SATURN
	(A) 10.074	1.0032	" "	" "	450.69	B^{b} = 456.14	SATURN
URANUS	(P) 18.288	1.2622	" "	" "	484.05	B = 483.26	URANUS
	(A) 20.092	1.3030	" "	" "	489.31		
Neptune	(P) 29.799	1.4742	" "	" "	511.36		
	(A) 30.341	1.4820	" "	" "	512.37	C = 512	NEPTUNE

Figure 5. The proportional range of the planets of our solar system and the equal-tempered musical system. **AB : AM :: AM : AP :: AP : AC. Mercury is to Earth as Earth is to Jupiter in the same proportion that Jupiter is to Neptune.**

Note that when all six human voices are taken together and reflect the partitioning of the musical octave as a manifold of resonant actions, there exists a specific dissonance among them which is of a higher order than the dissonance found in each voice register-shift taken individually. That is a manifold register shift of well-tempering as a system. The point of interest for this correlation between the planets and the musical system lies in the fact that here is a significant galactical dissonance inside of the solar system which involves the Sun, Mercury, Earth, and Jupiter, but other planets as well.

What is the significance of this arrangement? How do these register shifts affect each other, when they are taken thee by three? How does each voice resonance of each of the two sets of triplets Tenor-Alto-Bass and Soprano-Baritone-contralto reflect back to the seismic and tectonic activity of the Solar System as a whole? That is a question of galactic proportion.

4. WHAT IS THE PLASMA DYNAMICS CALLED HELIOSEISMOLOGY?

This investigation is part of a continued series of questions that I have been looking into since my previous report ON THE GALACTIC MIND, and which pertains to galactic axiomatic changes in the evolution of stars. I wish to report briefly, here, on a very interesting dialogue I have been having with a controversial figure of modern physics, the professional land surveyor from Colorado, Donald L. Hotson, who is a fellow-axiom-buster in the domain of modern physics. His mission is to destroy all of the false assumptions underlying the so-called Standard Model of physics, and to demonstrate the feasibility of antimatter as a new source of energy from the future.

Hotson is mostly known for three epistemologically devastating articles on ***DIRAC'S EQUATION AND THE SEA OF NEGATIVE ENERGY*****,** Infinite Energy, Issues, 43, and 44 of 2001, and Issue 86 of 2009. These papers contain many crucial insights for the study of modern science in general, but most importantly for the purpose of establishing a method of ***epistemological axiom busting*** in modern physics more generally. One particular point of interest is Hotson's return to the spirit of Kepler in the last section of his third paper, IE86, entitled THE MUSIC OF THE SPHERES.

The hypothesis that Hotson followed, in his return to Kepler Solar System Harmonics, is conceptually validated by the fact that he deals with this Keplerian harmonic matter essentially from the standpoint of the resonance of the Sun and the planetary system as a whole. This study of resonance has been established through a wide range of experiments, notably from the United States and from Ukraine, and especially by Robert B. Leighton, Robert W. Noyes, & George W. Simon, in 1962, by Richard. K. Ulrich in 1970, by J. W. Leibacher and R. F. Stein, in 1971, and by V. A. Kotov and S. Kouchmy from 1982 to 1985. Since 1974, evidence has been gathered, from observations in optical, radio, and infrared radiation ranges, of a short oscillation cycle of about 160-minutes for the Sun, and of similar types of oscillations, within the appropriate ranges of intervals among planets such as Mercury, Earth, and Jupiter. These planets display, in their respective diameters, resonances which are in correspondence with that solar cycle. More recent studies have confirmed that this new revolutionary approach, originally called helioseismology, related directly to the history of seismological events on Earth as well as seismological occurrences on Jupiter's moons.

It was Richard Ulrich, a student of Leighton, who discovered that this solar surface phenomena responded to interior eigenmodes and he also established the existence of 5-minute oscillations of acoustic waves on the surface of the Sun. (John Bahcall, ***The Five Minute Oscillations on the Solar Surface***.) As Bahcall noted, asteroseismology was born in 1970, and then, "Deubner's 1975 paper celebrated the bar mitzvah of the subject" by way of initiating precise measurements of solar sound speeds during solar neutrino experiments.

What asteroseismology leads to is a revolutionary new approach to astrophysics which is not based on the mainstream study of gravity, magnetism, or fluid dynamics, but on plasma dynamics. Since 99.9% of the cosmos is composed of cosmic radiation plasma, it became obvious to a few scientists that the general form of this new approach had to be anti-entropic in character. For example, this axiom-busting hypothesis formulated by Hotson:

> "…the Jupiter system might be responsible for the sunspot cycle. Successive conjunctions at elongation of Jupiter's three inner Galilean satellites produce explosive pulses pointed directly at the Sun, and are exactly on the harmonics of the Sun's resonant frequency. The sunspot cycle rises and falls in lockstep with these elongations, and the Sun responds with its cyclic magnetic activity. This produces not only the sunspots, but also the 160-minute pulsation. This major resonance of the Sun has been documented for 35 years by a Ukrainian team of scientists led by Dr. Valery Kotov. This pulsation amounts to a rhythmic expansion and contraction of the Sun's surface by hundreds of meters, as has been rock-solid for the 35 years of their study. Dr. Kotov reported in personal correspondence to me:
>
> > 'We measured 160-min. solar pulsations from1974 through 2008. The pulsations Po = 160.0101 (2) min. was present only during the first 9 years, from 1974 through 1982. But during the total 35-yr length of the observations, from 1974 to 2008, the other period was dominant: P1 = 159.9656 (4) min.
> >
> > Please note the P1 pulsation was absent in 1985-1986 and 1996-1997, i.e. at the very epoch of solar minima.
> >
> > Notice: the beating period of Po and P1 is equal to 399(4) days, i.e. the *synodic* period of Jupiter. The origin of this phenomenon is unknown…' " (Donald L. Hotson, ***Dirac's Equation and the Sea of Negative Energy, Part 3: Structure and Unification.*** http://blog.hasslberger.com/docs/HotsonIE86.pdf.)

What Kotov et all have measured in their study of the Sun's pulsations is a critical variance of a minimum and a maximum resonance, a vibrato which is totally coherent with Kepler's hypothesis that the solar system resonates as a whole in accordance with the classical well-tempered musical system. And it is that well-tempered resonance system originating from the galaxy which accounts for changes in the sun and the planets. What Hotson draws out from this is the crucial harmonic interaction between the Sun, Mercury, the Earth, and Jupiter. As he put it, "The orbit of the Earth is not on a node of this solar resonance, but on the intermodulation harmonic between Jupiter and the solar resonance. Thus, this magnetic harmonic resonance from the Sun should have a measurable effect on earth. And this has proven to be exact." (Hotson, Op. Cit.)

In point of fact, it has been observed that not only seismic activity increases with respect to sunspot activity, but that the length of day is also changed including the effects of the 160-minute resonance. Cycles of 160 minutes of oscillations are harmonically proportioned with the rotation of the Earth and the synodic motion of Jupiter and its moons. It has been monitored, for instance, that the Earth is affected by this resonance 9 times per day. (Indeed, 9 times 160 min. = 24 hours). In other words, the sunspot activity and this solar resonance have actually changed the length of the day. For example, the motion of the Earth was slower in 2001 and is now, eleven years later, faster in 2012.

Moreover, according to Glen F. Perry, (***Finding the Lost Chord***) depending on the position of the axis of the earth vis a vis the sun, the oscillations may also produce a spin-effect depending on whether the magnetic field of the earth is perpendicular to the axis of the sun and the location of the observation. Since magnetism always acts at right angle to an electrical field, it is easy to demonstrate, as Maurice Allais had done during the June 30, 1954 eclipse of the Sun, that the Earth's magnetic field had caused an anomaly in his observation. The Sun's electrical resonance had deflected the Paris based Foucault pendulum by a factor of 13.5 degrees, demonstrating that the magnetic field had been involved in changing the angle of rotation of the Earth. Since the eclipse was nearly at noon Paris time, and the Sun was directly overhead, this meant that the pendulum was at 90 degrees to the Sun. The result of this large factor of displacement can only be explained by the interaction between the magnetic field and the electrical field. Allais observed the same anomaly by repeating the same experiment during the solar eclipse of 1959.

It is interesting to note that the relative distances between Mercury Earth, and Jupiter also reflect a dissonant relationship characteristic of the resonant division of the well-tempered musical octave into three intervals of four major thirds. These planets not only display, in their respective diameters, vibrato resonances which are in correspondence with the Solar System's musical cycle, but they also go through tectonic perturbations as a consequence of their respective positions with respect to the Sun. However, note that it is not the distance which determines the resonance, but the resonance of a higher degree of power which determines the distance.

5. ELECTROMAGNETIC UNIPOLAR INDUCTION AND COSMIC PLASMA.

There are two fundamentally false underlying assumptions in astrophysics today. One is that only gravitational and magnetic fields are of any significance. Electrical and plasma fields are excluded as being insignificant because they have no apparent "visible" effects that are not accounted for through fudging equations in magnetism and gravitation. The irony, however, is that the universe is not held together by the so-called gravitational force, but by harmonic proportionality. It is held together by the music of electromagnetic forces in matter as well as in antimatter plasmas.

Take the Crab Nebula as a case example. The crab is a plasma gas that has, at its center, a dual pulsar, which generates 30 pulses per second. The length of each pulse flash is one millisecond. No observation from earth has yet been able to identify if there existed any antimatter associated with that CM Tauri pulsar. Why? Because scientists are looking for something that relates to gravitational matter, while they should be investigating processes of electromagnetic plasma and the question of antimatter as a cognitive matters of mind. Don't look at antimatter as a matter question. Look at it from the vantage point of epistemology, and in the manner in which a creative mind works. What is the difference?

The difference lies in the concept of negative curvature, which is a mental process rather than a sense-perception construct. Think of negative curvature as a process that opposes two contrary actions from the same principle, or two contrary principles with contrary actions. For example, think of the activity of the CM Tauri pulsar as something similar to a doubly-connected manifold; that is, a matter of

mind which involves two forms of cosmic actions that intersect each other at a 90 degree angle, as do a magnetic field and an electrical field. The combination that will result from that interaction is a surface of doubly-connected positive and negative curvature. Start looking at matter and antimatter relationship in the same way; that is, from the vantage point of a catenary curvature similar to that expressed by Brunelleschi's mind in the construction of his Florentine cupola. Don't look for the visual effect of negative curvature, but for the conceptual effect as it is expressed everywhere in living and cognitive processes.

During the observations that were made of the Crab Nebula, on April 12, 2011, NASA's Fermi Gamma-ray Space Telescope observed a "Superflare" event of a high density of Gamma Rays. The electrons of the Pulsar generated energies 100 times greater than any known experiments on Earth. An event of such importance and magnitude is extremely rare, and it lasted for a period of six days. Yet, on the same days, NASA's Chandra X-ray Observatory (**Figure 6**.) did not locate any evidence of such a Gamma-Ray outburst, and the instrument reported no X-ray effects that correlated with the "Superflare." In fact, Chandra reported nothing unusual. Why? Because, during the same physical space-time event, Chandra was observing something else that wasn't there for the Fermi observatory to see. It was as if an elephant had walked into a room filled with delicate chinaware and stampeded through it without disturbing anything during its passage. Chandra reported the chinaware to be intact as if the elephant had never gone through the room and did not even exist. Why?

That, to me, was the most important singularity of this astronomical event, since 1054, when Chinese astronomers observed the actual creation of the Crab Nebula. What sort of chinaware did Chandra observe, that would not be affected by the passing through of that elephant? Why was nothing disturbed by that Gargantuan event? I have no definite answer for you, but I have a lot of questions.

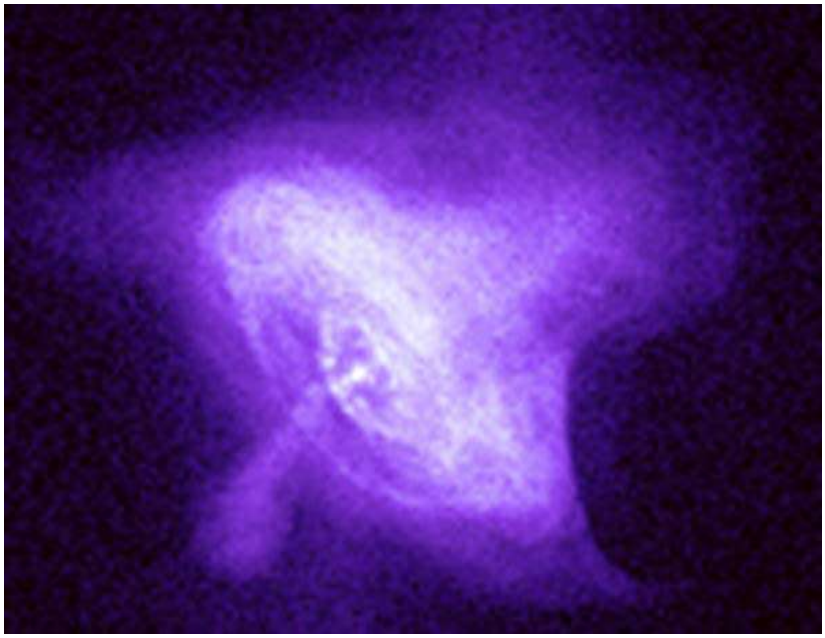


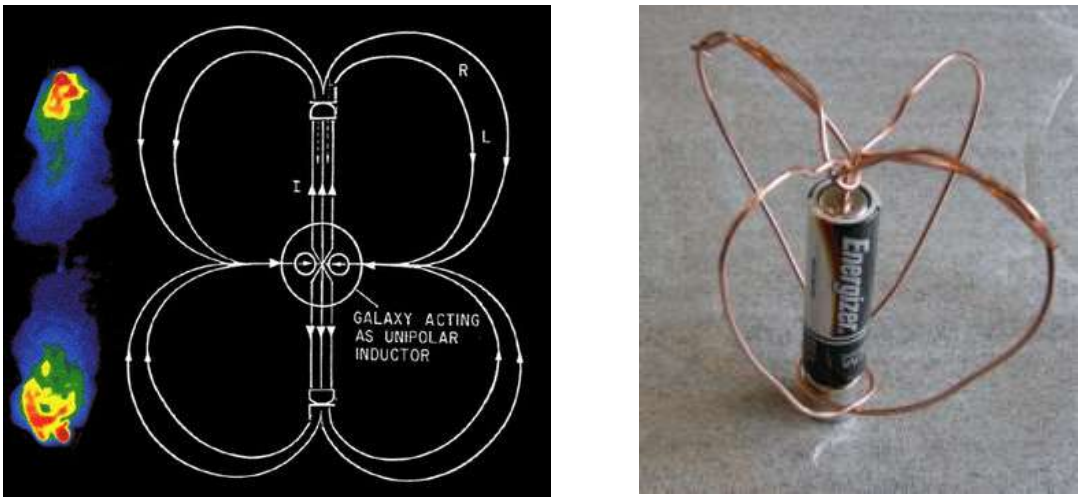
Figure 6. Chandra X-ray view of the CM Tauri Pulsar.

The problem with a lot of scientists, today, is that they dismiss this sort of anomaly as something "mysterious." Like Alice Harding of NASA's Goddard Space Flight Center in Greenbelt, Md., reported:

"These Superflares are the most intense outbursts we've seen to date, and they are all extremely puzzling events. We think they are caused by sudden rearrangements of the magnetic field not far from the neutron star, but exactly where that's happening remains a mystery." Crab Nebula.

"Where this is happening" is a diversion. The answer could be, Hollywood, for all I care. Instead of looking for a 3-D movie effect, you can break the underlying axiom of that mystery by treating the intention of the Crab Pulsar as an inferential process of creative thinking. Let us back track and have a look into the mind of one of the greatest astrophysicists of the twentieth century. In 1937, Swedish astronomer Hannes Alfvén made a most significant statement with respect to ***The Origin of Cosmic Radiation***. Physicist Maurice de Broglie reported on the findings of Alfvén as follows:

> "Since the motion of every magnetic field produces an electric field, it is probable that the same occurs with all of the stars; then, the stellar motions, and particularly the rotations of double-stars, must produce electromotor forces, which become very great as a result of the enormous dimensions of stars and of their great speed. A calculation showed that 10^{10}, 10^{11}, or even 10^{12} volts are probable. Charged particles, accelerated by these tensions, can have the same energies, and we may infer that cosmic rays and ***at least a great part of cosmic radiation are generated in this fashion."***
>
> Several mechanisms are possible. The special case where a double star is considered like a ***cosmic cyclotron*** has already been discussed. But, there are also other mechanisms which seem much more efficient. In particular, the disposition of a double star can function almost like a ***unipolar induction*** (my emphasis), producing an enormous tension and emitting positive particles in one direction and negative particles in the opposite direction. It is not unreasonable to consider currents up to 10^{10} amperes." (Reported by Maurice de Broglie in ***Comptes Rendus hebdomadaires des Séances de l'Académie des sciences***, Bachelier, Paris, 1937, Gallica Bibliothèque Numérique, p. 1180-1181)



Unipolar Inductor Homopolar Motor

Figure 7. "Galactic current circuit with the galaxy as a unipolar inductor. Radio omissions from Cygnus A (left) is attributed to synchrotron radiation caused by acceleration of electrons through the axial galactic double layers.

Source: Hannes Alfvén Keynote Address, Double Layers in Astrophysics, Proceedings, NASA Huntsville, Alabama March 17-19, 1986." Electromagnetic unipolar inductor, otherwise known as a homopolar motor. The application of the rotation of a conductor about a magnet was first discovered by Michael Faraday in 1821, and became known as the Faraday disk dynamo. The concept of Unipolar Induction was first published in an article by Wilhelm Weber in 1841. (Thomas Valone, ***The Homopolar Handbook***, Integrity Research Institute, Wash. DC., 2001, p. 3)

In 1937, Alfvén was the first astrophysicist to introduce the idea of ***unipolar induction*** with reference to a galactic magnetic field as the source of isotropic cosmic radiation. He also reported that when conductive plasma rotates through the magnetic field of the Earth's ionosphere, the ***unipolar induction*** creates Aurora Borealis:

> "Since Cosmical clouds of ionized gas are generally magnetized, their motion produces induced electric fields […] For example the motion of the magnetized interplanetary plasma produces electric fields that are essential for the production of aurora and magnetic storms." (Hannes Alfvén and Carl-Gunne Fälthammar, ***Cosmical Electrodynamics***, 2nd Edition, Oxford University Press, See sec. 1.3.1. Induced electric field in uniformly moving matter.)

It seems that this is the process that Chandra was observing in the Crab during the observation of April 2011. She was watching the higher manifold that produced "Superflares" perceived in a lower manifold. What if this anomaly were the effect of a Platonic Cave projection in which we have both the measure and the measured which we can observe separately, but which don't interfere with each other, just like the case of a 10-circle sphere and the Five Platonic Solids? In a similar context, the double layer structure of plasma, and braided Birkeland currents should also be investigated in light of such axiomatic changes in manifolds, especially from the higher manifold of antimatter to the lower manifold of matter. Fälthammar gave us an important lead on this when he reported in1986:

> "A reason why Birkeland currents are particularly interesting is that, in the plasma forced to carry them, they cause a number of plasma physical processes to occur (waves, instabilities, fine structure formation). These in turn lead to consequences such as acceleration of charged particles, both positive and negative, and element separation (such as preferential ejection of oxygen ions). Both of these classes of phenomena should have a general astrophysical interest far beyond that of understanding the space environment of our own Earth." (Carl-Gunne Fälthammar, ***Magnetospheric plasma interactions***, *Astrophysics and Space Science* (ISSN 0004-640X), vol. 214, nos. 1-2, Proceedings of the second United Nations/European Space Agency Workshop, Bogota, Colombia, 9-13 November, 1992, UN/ESA Workshops Vol. 3, p. 3-17.)

Describing those same Birkeland currents as *plasma cables*, Alfvén added:

> "Plasma cables seem to be reasonably stable formations which can be considered as structures important for the understanding of plasma phenomena. (Of course, their interior structure should be described by classical theory.) The plasma cables are either filaments or 'flattened filaments' (sheets with limited extent). They carry an electric current parallel to the magnetic field, and this is what gives them their properties. The cables are often very efficient in transferring electromagnetic power from one region to another. They are embedded in passive plasmas, which have essentially the same properties in all directions around the cables. They are

'insulated' from their surroundings by a thin cylindrical electrostatic sheath (or double layer) which reduces the interaction with its exterior. In the magnetosphere and upper ionosphere, the density in the cable is sometimes lower than the surrounding passive plasma (Block and Fälthammar, 1968). In other cases, the density in the cable may be much larger than the surroundings because ionized matter is pumped into the cable from the outside. By selectively doing so, the chemical composition in the cable may differ from that of its exterior (Marklund, 1978, 1979) (see Marklund convection). Besides the cylindrical electrostatic sheath, there are often longitudinal double layers, in which a considerable part of the power which the cable transmits may be converted into high energy particles. The double layers sometimes explode, and this produces excessively high energy particles." (Hannes Alfvén, ***Cosmic Plasma*** (1981). Astrophysics and Space Science Library, Vol. 82 (1981) Springer Verlag.)

The concept of a ***unipolar induction*** is the simplest and most elementary form of electromagnetic current that you can easily experiment with by constructing a rotating copper wire around a magnet and an alkaline neodymium battery. You can make this experiment yourself and replicate the power of generating Birkeland-like currents on your own kitchen table, and replicate the process the universe uses to generate cosmic radiation! It has been established from the probes of THEMIS (Time History of Events and Macroscale Interactions during Substorms) that auroras are generated from the Sun through Birkeland currents or flux magnetic ropes. The currents flow in a twisted manner along magnetic field lines from the Sun to the Earth's ionosphere.

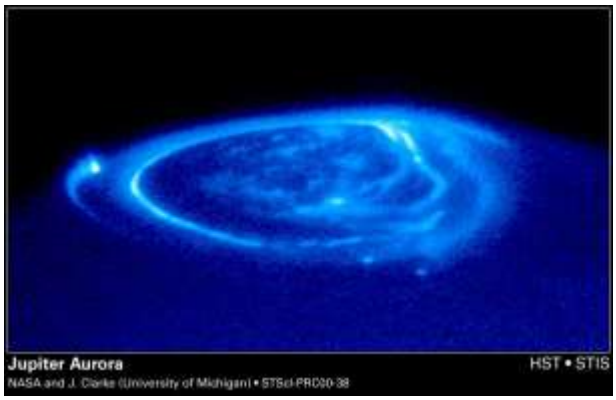


Figure 8. Braided filaments in the Aurora Borealis of Jupiter created by Birkeland currents."

This is also the type of higher manifold that is created when two opposing principles come into conflict with each other, as the creative and oligarchical principles, and one of them gets destroyed. Similar manifolds are created when two contrary actions of a same principle come together. In both cases, an irony is created in which the whole curvature of the experimental event is changed axiomatically and anti-entropic bursts of energy are created as if from out of nowhere. The result is pure laughter!

So, you see, I do not advise you to use the electrical engineering text books to find an explanation for the self-generating process of ***unipolar induction***. You will not get it there. Just to add a definite higher note of resonance in this already very charged area of controversy about the nature of ***unipolar induction***: the best explanation will be found in the intention of your own mind, and the Chandra X-ray "view" of the Crab Nebula may turn out to be the best heuristic device to understand Plato's Cave.

This is the reason why an electrical unipolar induction is a matter of mind, because "the seat of the electromotive force is in the conductor;" that is, in the intention of your mind. But, unfortunately, most people never look at their minds as the most practical tool they have to work with, and this is how British oligarchism is able to win the war of propitiation against creativity. The irony, however, is that it is the very lack of imaginative creative mentation that leads oligarchism to self-destruct.

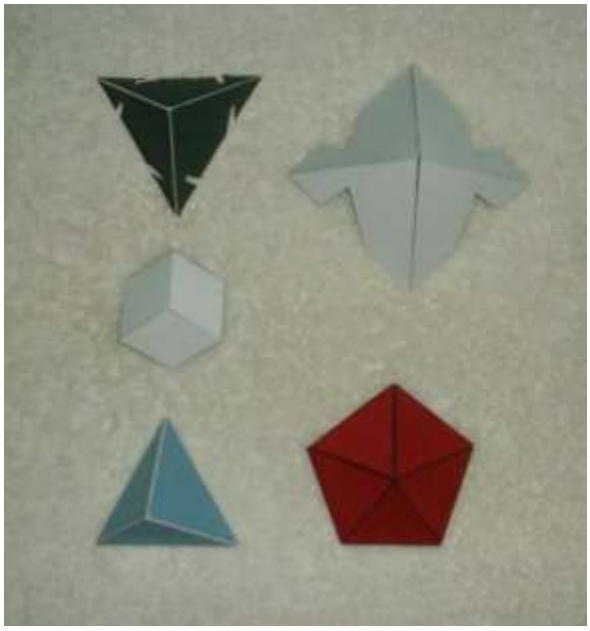


Figure 9. Vertex limits of Platonic Solids: three, four, or five polygons.

In conclusion, the point to remember is that necessity is change, and every axiomatically fixed species tends to change into the next higher species. And that is the way you want to think about the Platonic Solids as having built into them the tendency to become a sphere through the connection of their vertices. That is the limit of their intention. Similarly, every living creature tends toward the intention that has created it in the first place, but they are not equipped to succeed in reaching that intention. That is why only human beings can succeed, because their creative process is what holds the universe together by the connectivity of axiom busting proportionality. And the reason why it works is because everything in the universe is ***enfolded*** together as a matter or antimatter of mind in its highest form of simplicity. According to Cusa, this is the true form of necessity that the mind has to acquire. As Cusa wrote:

> ***"It is very worthwhile to pay careful attention to enfoldings and their unfoldings – and especially how enfoldings are images of the enfolding of infinite simplicity. They are not its unfoldings, but images which exist in the necessity of connection. Mind is the first image of the enfolding of infinite simplicity and embraces in its power the force of those enfoldings. It is also the domain or region of the necessity of connection, because the things which truly exist are separated from the changeableness of matter. They do not exist materially, but mentally – a point I think it superfluous to mention."*** (Nicholas of Cusa, ***The Layman: About Mind***, p. 73)

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