

# The Creative Vortex of the Causal Matrix

*"The fundamental cause of quantum weirdness is not that we have abandoned objective reality - it is instead our attachment to it. Once we have crossed the final frontier of physical objectivation altogether, physical reality can internalize and entirely rest within itself. In that infinite realm, where the veil of duality has finally been lifted, everything can become normal again, because the fundamental weirdness of mind itself has been abandoned"*

<http://science.trigunamedia.com/subspacevorticity>

by Frank van den Bovenkamp

date: July 12, 2013

[\(view original introduction\)](#)

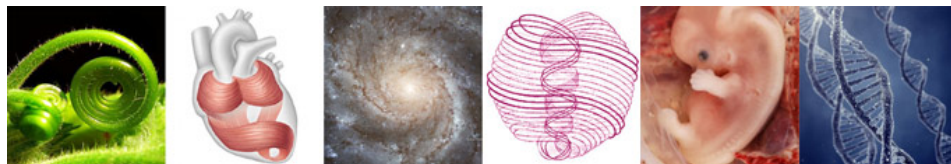
## Can creative energy be a blind force?

The idea of original physical creation out of one universal source or one singular principle must by definition be a singular approach - here is no scope for diversity and complexity. Every feeling of duality is a creation of personal projection and reflection only. For example, in cosmology, the Big Bang represents a momentous transformation in a historic, action-based time frame, not original creation. In quantum physics, the nature of the "observer" as well as the "observable" remain a subject of speculation, hence also quantum physics is not a truly causal approach.

Energy, whether crude or subtle, is by itself a blind force, and therefore it cannot possess original creative power of its own. In order to be converted, applied or even merely detected, energy requires a material shelter of some form or another. This is equally true in the atomic, macrocosmic and biological worlds. But even if a material form, with a certain degree of complexity is present, following from the second law of thermodynamics there can only be transformation, no original creation.

Therefore, in the light of a singular, universal cause, there must be a complementary factor next to energy, steering the flow of creation into physicality, while from that stage going on evolving the atomic, biological and macrocosmic worlds.

A basic idea of energy moving independently, intelligently and coherently, prior to and beyond the presence of a material body and context, has been identified in quantum physics as well as in astrophysics but has not been fully worked out yet. The conscious biological mind, in the form of coherent experience, behaviour and subtler expressions, could be viewed as a combination of both however is still barely understood in physics.



## The inner vortex of the Causal Matrix

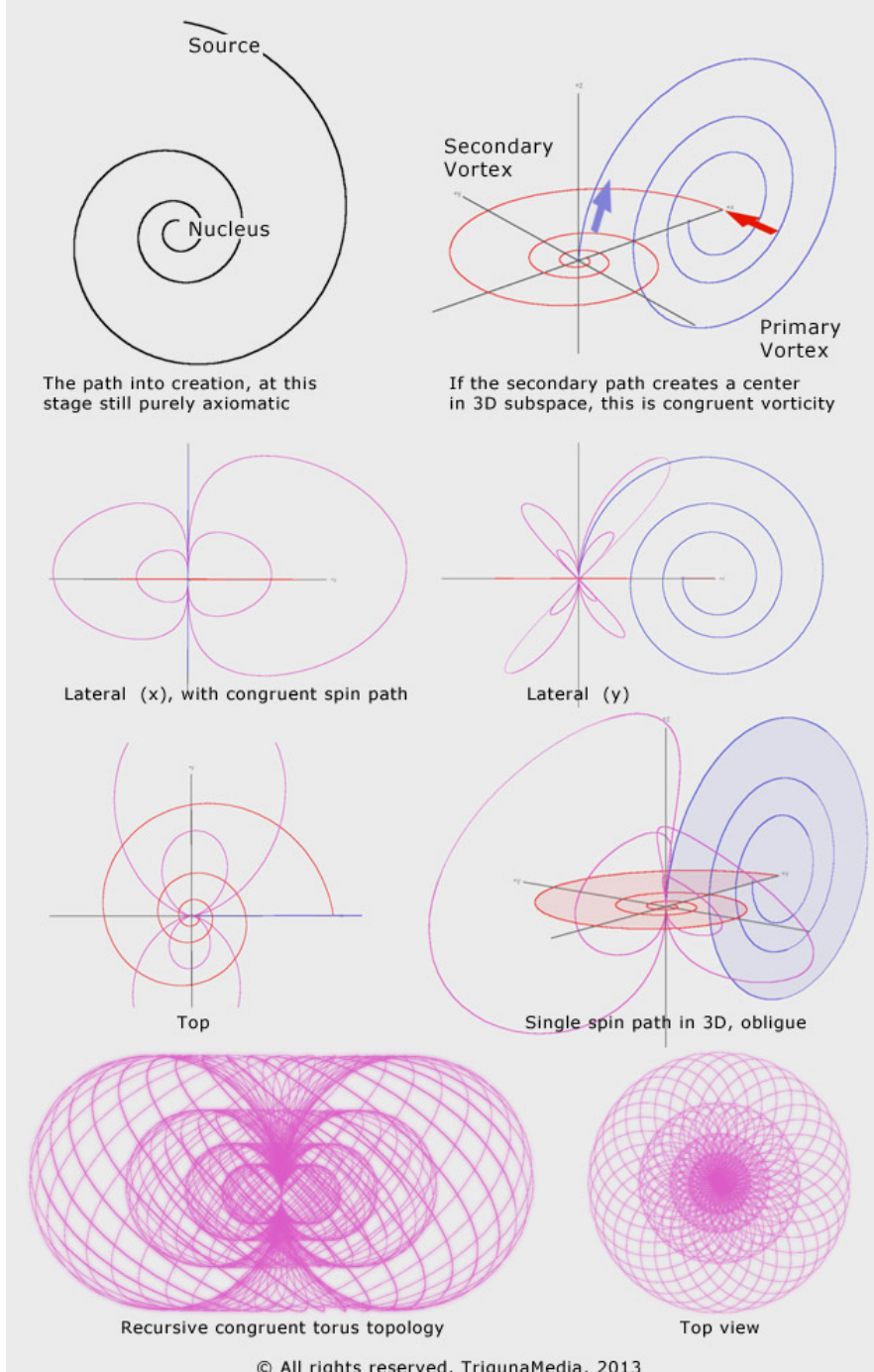
The original transformation from one infinite source into objective reality creates and at the same time itself constitutes a single nucleus. In physics, this can be an elementary particle or atom, in astrophysics it is a star or a galaxy, and in biology it is individual mind. As original creation by definition can not be of thermodynamic origin, energy is bound to be steered onto a path into physical reality *intelligently*. Only this way, from macrocosmic it becomes microcosmic. The created entity can be referred to as the *Causal Nucleus*, carrying the full memory, and verily constituting a living epitome of its original state.

That unique and truly sacred path into creation, while turning from axiom into actuality, could be visualized as evolving from a linear, into a curved and finally a wave-like or circular momentum, gravitating into an observable nucleus. In terms of a causal wave matrix, the flow of creation converts from the purely harmonic sphere (waves acting as one), into thermodynamics (waves combatting for energy).

In three dimensions pertaining to our physical world, the sum total creational flow can be viewed as a *topology* constituting the aforesaid phases. It will be shown that geometrically, this can be conceived as a *spiral-generated torus* and physically as *congruent vorticity*. Unlike a common cyclic torus, this approach is not only deeply intuitive, but can also help evolve new perspectives on certain principles in quantum physics which remained unexplained. It is the way how the universe creates, remembers and ultimately dissolves all physical shape.

*The inner vortex of the Causal Matrix possesses intrinsic vector ("action in space") and scalar ("space in action") attributes. Conscious experience is the art of making these potentials explicit, creating matter and force particles in time and space.*

## Congruent Subspace Vorticity as the Physical Cause of Spin

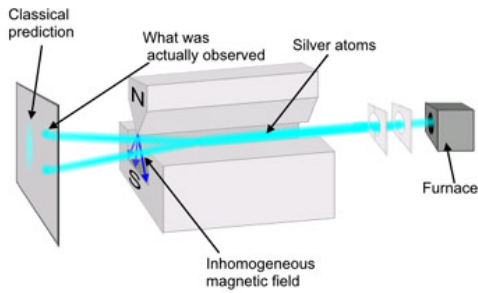


### Quantum physics and the discovery of particle spin

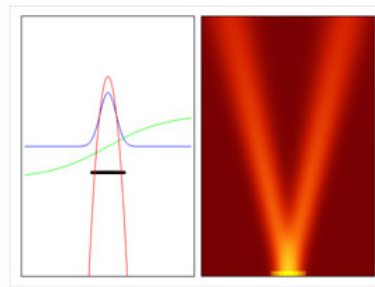
Around the turn of the 19th. century, the famous physicist Max Planck stumbled upon the fact that the spectrum emitted by glowing hot matter (so called black body radiation) could only be explained if energy would be emitted as discrete packets, which he called *quanta*. In other words, energy is not a continuous flow. This way, Planck became the founding father of quantum mechanics in a time where many, including himself, were not even convinced of the existence of atoms. A short while later, it was Albert Einstein who expanded the concept of quantization to light itself, when he introduced the light particle ( $h\nu$ ), later called "*photon*". The era of quantum physics was born.

Around that time, the *electron* had just been discovered, initially referred to as "cathode ray particle". Its mass and electric charge were fairly well established. Another, somewhat more peculiar property of the electron was determined later, as part of an integral quantum state description of electron shells in an atom, by Wolfgang Pauli in 1924. A year later, this property was physically postulated as "*spin*" and related to a measurable *magnetic dipole moment* by the Dutch physicists Samuel Goudsmit and George Uhlenbeck.

As a matter of fact, a few years earlier electron spin had already been discovered by Otto Stern and Walter Gerlach in an historic experiment in which they sent silver atoms through a non-uniform magnetic field, to test some other effect. When the deflection of the atom beam was detected on a photo screen, it did not produce the expected more or less continuous pattern, but *resulted in only 2 lines*. In other words, the silver atoms were either deflected upward or downward. This result was initially wrongly interpreted but was later thought to relate to intrinsic electron spin, with the understanding that there are *only two observable spin orientations*. Thus the Stern-Gerlach experiment was the first so called quantum-superposition experiment in history. It is still popular today for its importance and relative simplicity.



[http://en.wikipedia.org/wiki/File:Stern-Gerlach\\_experiment.PNG](http://en.wikipedia.org/wiki/File:Stern-Gerlach_experiment.PNG)



<http://demonstrations.wolfram.com/TheCausalInterpretationOfTheSternGerlachExperiment/>

## Congruent subspace vorticity as a functional interpretation of intrinsic spin

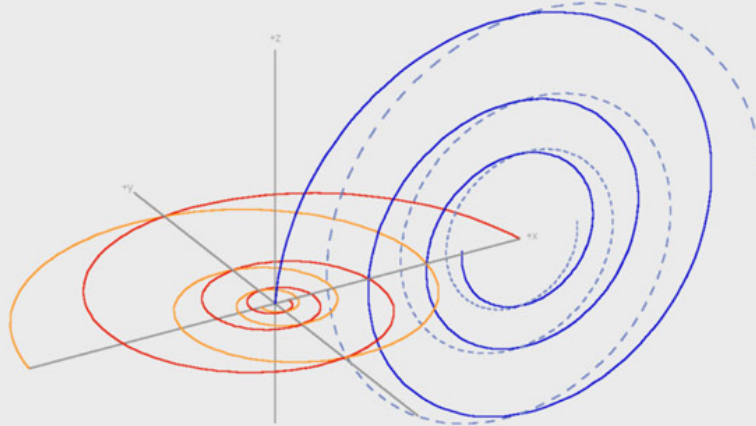
As simple as a demonstration of particle spin may appear, the actual physical nature of spin remains unexplained. In quantum physics it is referred to as *quantum intrinsic angular momentum*, but it remains just a name for a quantum state to which the so called *Pauli exclusion principle* can be applied - which itself happens to be a mystery as well. The fact that the earlier Stern-Gerlach experiment, set up to detect semi-classical *orbital* spin (electrons spinning around the nucleus), caused an observation somehow related to Pauli exclusion, may in fact have prompted the idea that there could just as well be something like "intrinsic spin".

In reality there is no physical relationship between the observed magnetic dipole moment and something which is actually "spinning", other than a certain correction factor to (quote-to-quote) distinguish it from a classical rotating charged sphere. If this postulate is abandoned, *the concept of "intrinsic spin" reduces to a purely heuristical means of correlating Pauli exclusion with observable phenomena*. After all the principle observed in the Stern-Gerlach experiment simply relates to the superposition of quantized magnetic dipole moments - it does not by itself prove intrinsic particle spin, as often suggested.

If Pauli exclusion can relate to observables in a more direct sense, there is no need to postulate a spinning particle - in fact, there is no need of a physical particle in the first place. In quantum physics this could become problematic, as it would mean that Pauli exclusion itself has to be explained. This is not the case - as for yet it is a purely mathematical axiom, applied to certain quantum states including a hypothetical "spinning particle" the existence of which has itself never been proven. The relativistic wave equation of theoretical physicist Paul Dirac of 1928 generically produces a "spin" component, but also does not explain what spin really is in a physical sense.

Resolving potential limitations of the current intrinsic spin hypothesis requires a genuine approach of that which it de facto represents: *a specific functional connection between Pauli exclusion and observable reality*. It will be shown that the creative vortex of the Causal Matrix, prior to (or beyond) the presence of a material body or context, can fulfill both of these functions, that is, Pauli exclusion as well as the observer principles, applied to electrons, photons and other elementary particles.

### Causal- and observer bifurcation in quantum physics and in congruent subspace vorticity



In quantum physics, two fermions (matter constituents) cannot be in the same physical location (e.g. orbit) and in the same quantum state (spin) simultaneously. This is known as "**Pauli exclusion**". The moment a fermion is **observed**, it's spin gets it's actual value (plus or minus).

In subspace vorticity, one primary vortex and its geometric counterpart together form a singularity. As **both primary vortices are congruent** with the secondary, they would cancel each other out.

The secondary vortex and its counterpart likewise form a singularity, but in this case **only one is congruent** with the primary, so they don't cancel each other out. The phase difference between the primary and secondary singularity determines which secondary vortex is congruent, and thus determines the spin polarity.

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The intrinsic property of electrons, photons and almost all other elementary particles which by way of physical analogy is referred to as "spin", is mathematically represented by a so called *spinor*. The spinor notation immediately shows that quantum intrinsic angular spin is not even remotely analogous to for example a spinning charged sphere. As a matter of fact, the spinor is not representative for anything which can exist in the real world.

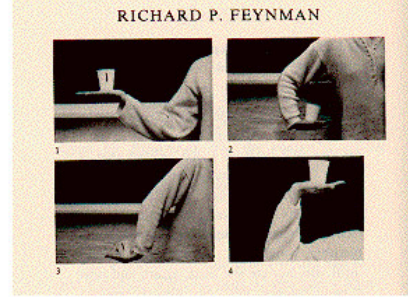
Elementary particles which, like the electron, are matter constituents are called *fermions*. Force carrying particles like the photon are *bosons*. In quantum physics, all types of fermions have half-integer intrinsic spin values, e.g.  $-1/2$  or  $+1/2$ . Bosons have integer spin values, including zero. Fermion spin is usually associated with rotational momentum or rotational degrees of freedom. In real life, any object which is rotated around its axis, returns back into the same position after a full  $360^\circ$  rotation. Fermion spin, that is, the plus or minus spin  $1/2$  spinor, turns back into its original state not after one, but *after two full rotations, that is,  $720^\circ$* . Of course, there exists no physical object with this property, or a physical analogy which truly makes sense. Several analogies which obviously don't make sense, are used:



<http://galileospendulum.org/2012/02/07/spinning-electron-got-to-go-round/>



<https://www.youtube.com/watch?v=XFLdq44aQvI>



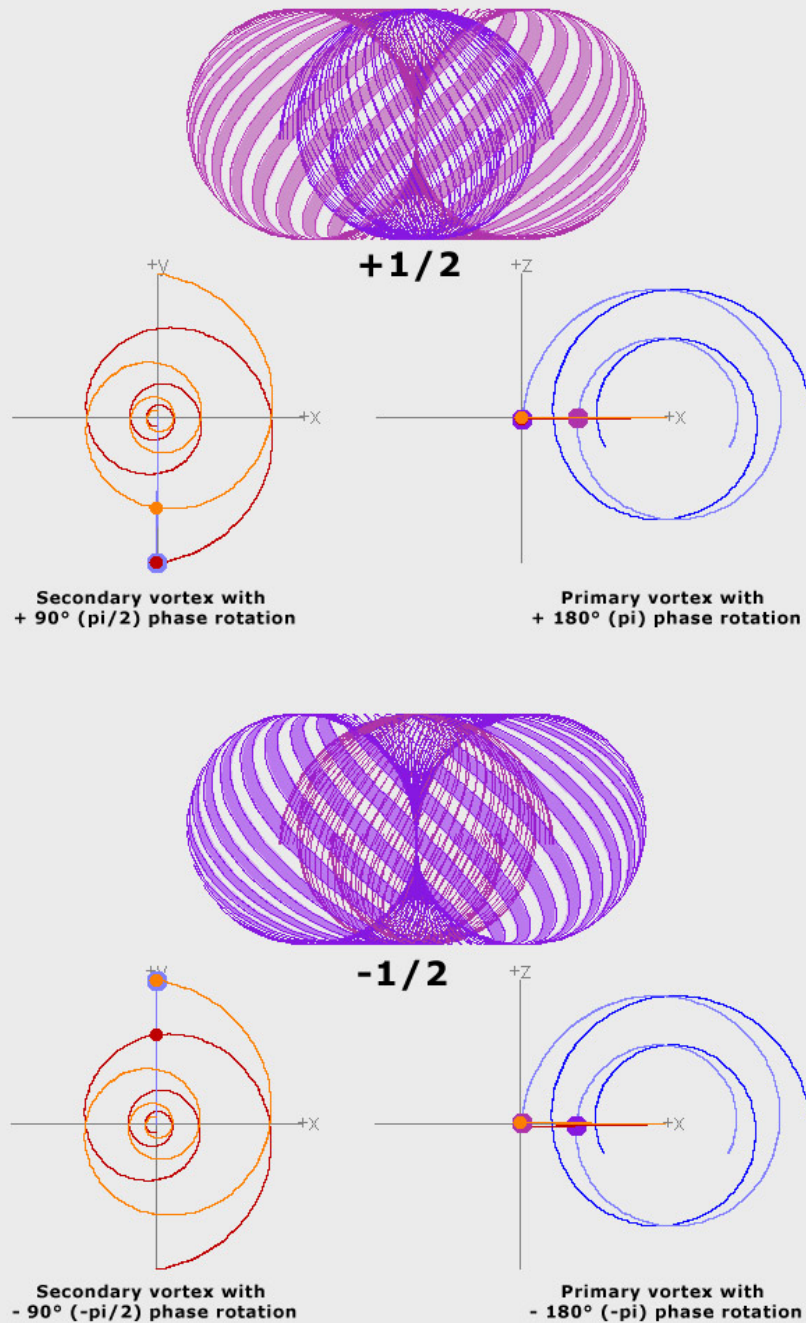
RICHARD P. FEYNMAN

Spinor tricks - click to watch

Clearly, these examples are by no means representative for a true physics of "intrinsic spin". A new approach based on congruent subspace vorticity not only produces a *far more credulous analogy*, but may also explain actual physical properties as well as provide a more *realistic explanation for certain quantum physics problems*:

## Subspace vortex sliding between spin 1/2 polarizations

Only the phase-locked or congruent pair forms a 3D-nucleus



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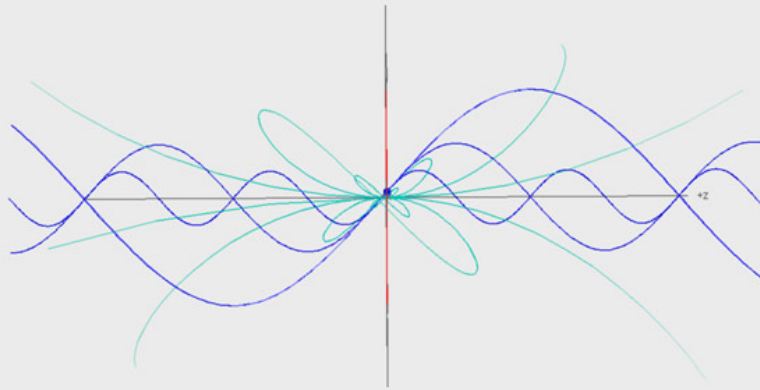
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### Subspace vorticity, mass and force

In the physical world all matter constituents (fermions) are known through their force interactions. That is, through their charge, mediated by photons, and their mass, now known to be mediated by the *Higgs boson*. In the somewhat theoretical state of zero physical interaction, the photon and Higgs boson are not active and the inner vortex of the Causal Matrix remains unknown.

Photon spin refers to a linear degree of freedom or translational momentum in normal time and space, and this is called *helicity*. The toroidal momentum of the creative vortex is still functional, though not in the form of actual toroidal spin but as linear propagation. In other words, the "spin 1" attribute of photons refers to an *extrinsic angular aspect* alone. Extrinsic angular spin and helicity constitute relative degrees of freedom in terms of external interaction and connectedness, but at the price of confinement inside the *relative matrix of time and space*, that is, subjected to limitedness and temporality.

### Vector space representation of subspace vorticity



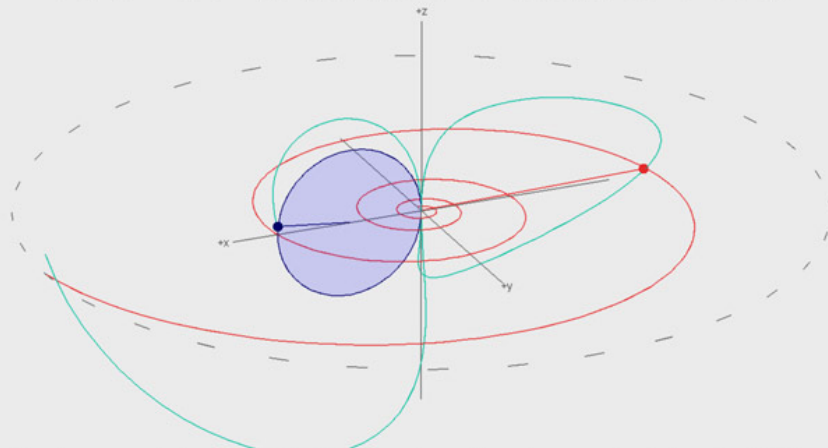
The observer principle in vector space transforms the primary vortex in helicity. This is a photon, mediator of the electromagnetic force.

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Reciprocally, if the toroidal aspect is externalized, it takes the form of a concrete nucleus through *spherical compression*. This constitutes a state of universal connectedness in the uniform *spacetime matrix*, but therefore there is no scope for individual expression. This is the *zero-spin state*, in quantum physics known as the Higgs boson. Obviously, being pin-pointed in spacetime works out as a mass- or inertial effect in normal time and space.

### Scalar field representation of subspace vorticity



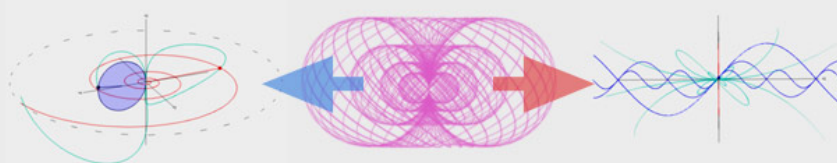
The observer principle in a scalar field transforms the primary vortex into a toroidal flux. This is the Higgs boson, mediator of the mass of observed particles.

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### The inner vortex of the Causal Matrix and its field interactions

The interaction of subspace vorticity with the geometries of the scalar field and of normal space cause respectively mass and electromagnetic force effects.



**HIGGS**  
Scalar boson

"Space in action"

Creation

**PHOTON**  
Vector boson

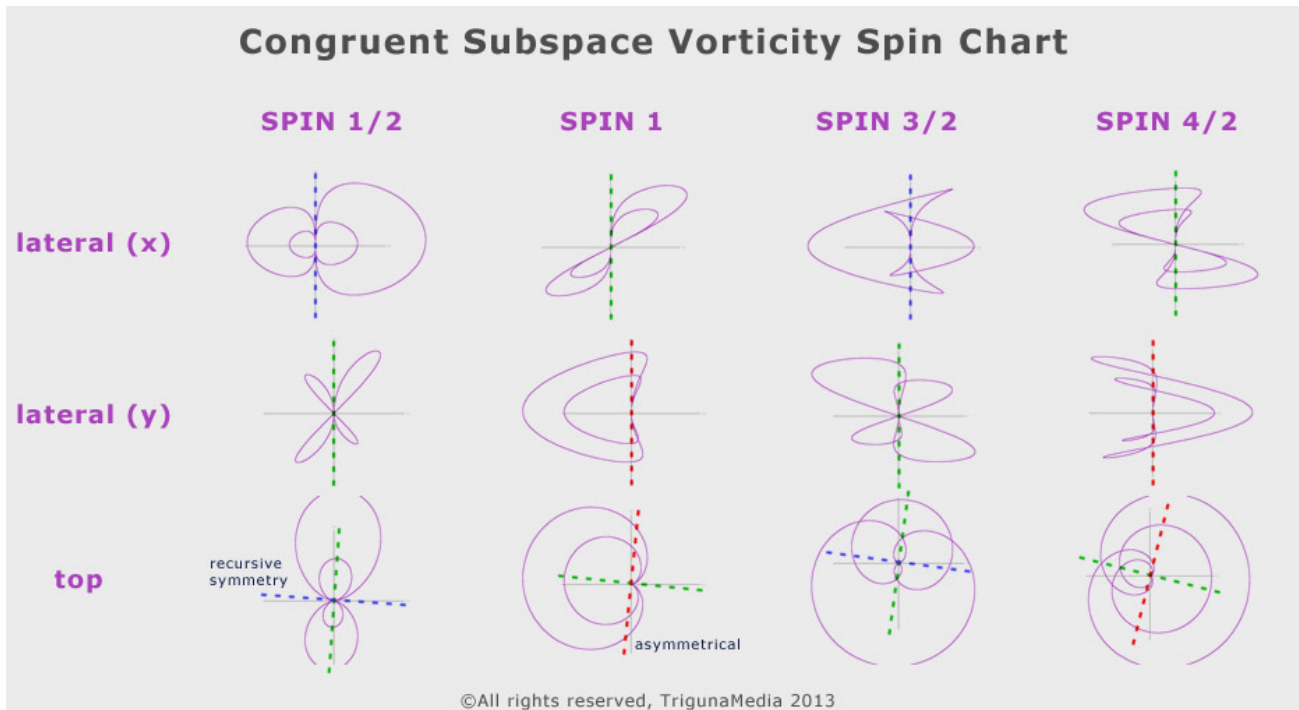
"Action in space"

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## Congruent vortex of elementary and composed particles with greater spin values

To be able to form a nucleus, the inner vortex of the Causal Matrix must be congruent. This naturally produces the dimensionless half-integer (1/2, 3/2, 5/2, etc..) spin numbers for individual fermions as well as for particles composed of quarks, like baryons (incl. protons and neutrons) and mesons. In terms of the created spiral-torus geometry, *higher spin numbers correspond to higher angular- vs. toroidal ratio's*. Integer spin numbers by the same definition of congruent subspace vorticity do not create the proper (recursive) symmetry to form an extrinsic rotational centre and therefore remain imperceptible in terms of mass and force.

In below chart, the intrinsic integer spin numbers do *not* represent bosons, only theoretically congruent vorticity. In quantum physics, actual boson spin numbers are defined by their *extrinsic* toroidal or angular spin and not based on internal vorticity. As they exist outside the immediate causal sphere, Pauli exclusion does not apply to bosons.



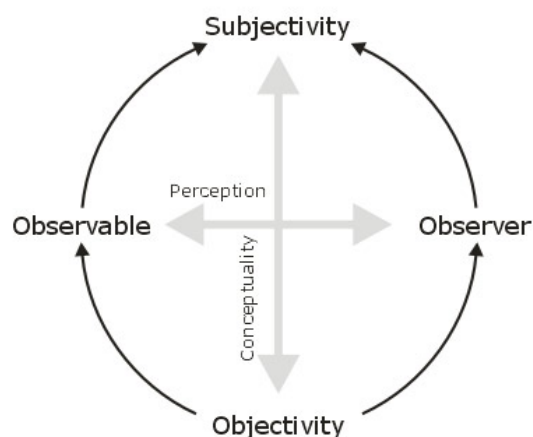
## The Causal Matrix of conscious experience

Perception, whether biological or technical by itself is a blind process. Any instrument, from a magnifying glass to a space telescope, is a mere extension of a person's natural perceptual organs. It does not enhance a person's conceptual capacities. Therefore, *conceptuality*, and not perception per sé is the hallmark of conscious experience.

The degree to which we are able to make functional assumptions about the world we live in is a measure of our *individual conceptual powers*. In physics, the term "quantum" refers to something we can perceive, but for which there exists no known cause - it is causeless. If a single Causal Matrix is viewed as the one ultimate source, the quantum principle applies to everything - there are no external causes. As the supreme attractor of, and guide for increasing our conceptual powers, it is by the Causal Matrix alone that the mind evolves through all sorts of experiences, so that individual awareness grows in subtlety and magnitude.

The mind's perceptual and conceptual powers together create conscious experience:

### The Causal Matrix of conscious experience



*"..The fundamental aspect of your experience, therefore, is this living consciousness, which has no features of its own. Everything arises as an object to this living consciousness through a **spontaneous process of perception and conception**". - Adi Da Samraj*

Thus the evolution of the rudimental, the biological and the human stages of mind is not the least a matter of perceptual prodigiousness, but of increasingly accomplished levels of conceptuality. This is referred to as *subjective synthesis*. In terms of how the Causal Matrix restores its original, purely symmetrical state, synthesis is the counterpart or *counter phase* of subspace vorticity, and is referred to as *subspace geometrization*. Therefore, the evolution of conscious experience is a process of *geometric synthesis*.

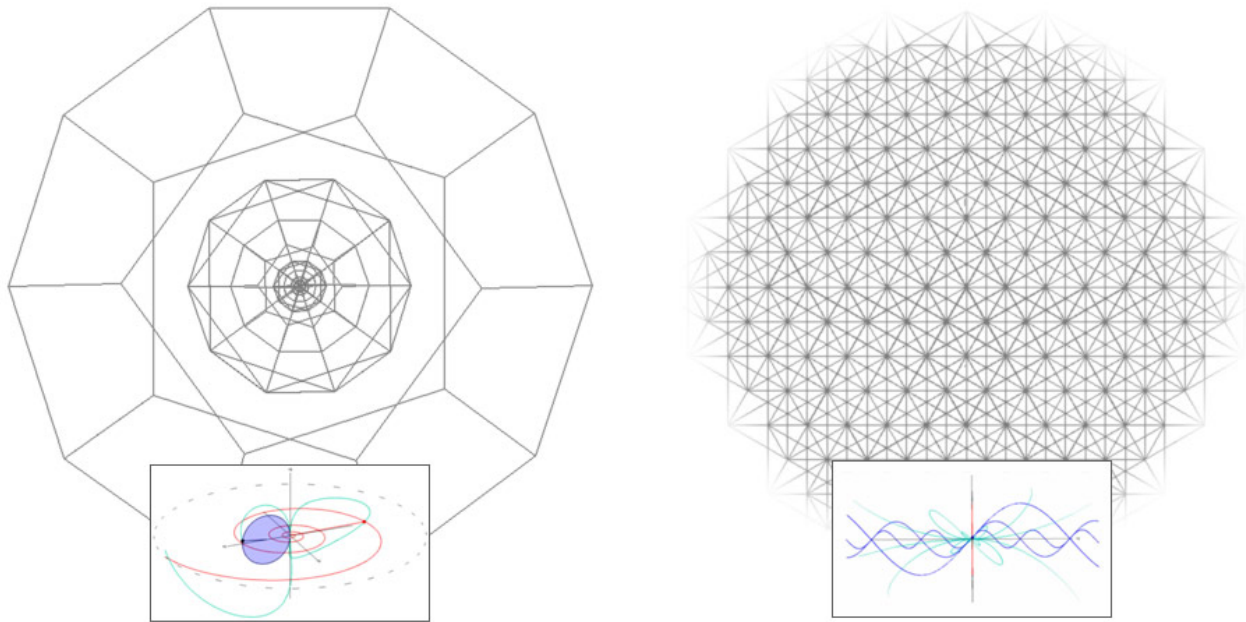
The intrinsic scalar and vector attributes of the inner vortex are *gauged* by sentient, generative templates of corresponding subspace geometries, or *geometric singularities*. The type of gauging geometry related to scalar bosons is different from that for vector bosons. At the "observer" side, vector gauging geometry constitutes the template of normal, linear space through which the vector boson, i.e. the photon traverses as a wave. *This is how stuff is known*. At the "observable" side, scalar gauging geometry generates a scalar field in which the scalar aspect of the creative vortex can manifest. *This determines what stuff is*.

As for the Causal Matrix everything is internal, it can only create something by means of *self-reference*. This is its inner *operative principle* or *effective cause*. The Causal Matrix itself remains the *material cause*. In the projective phase, the operative principle takes the form of *recursive vorticity* in the toroidal as well as rotational dimensions.

Following the same principle, but in opposite direction, the sentient gauging templates of the synthesis phases are generated through *geometric recursion*. In the case of a scalar field, a boson is gauged by *spherical geometrization through platonic stellation*, leading to *spherical compression* and *hierarchical recurrence*. In vector space the boson (photon) is gauged by *linear geometrization through platonic distribution* causing a sense of normal space and *sequential recurrence*. "Time" applies to and connects both as the psychic measurement of action.

Thus, the requirements of scalar- and vector gauging, plus self-reference through recursion together define the self-synthesizing geometric templates of the appropriate gauge fields. Below geometric identities represent the idealized, harmonic wave matrix geometries in *heterodyne (frequency-harmonic) synthesis*, as well as the complete Causal Matrix:

### Subspace gauging geometries for scalar and vector bosons

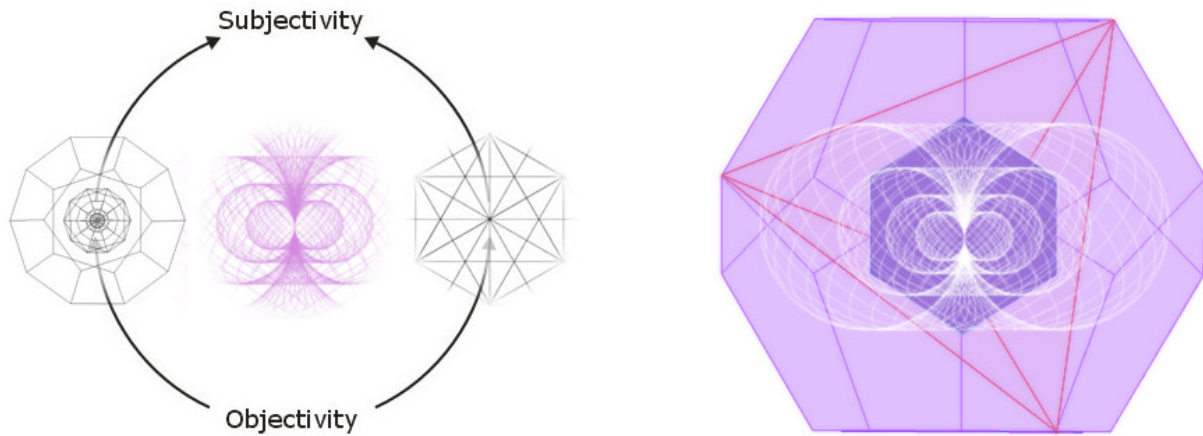


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# Subspace vorticity and geometric synthesis of the Causal Matrix

Functional and principal representation



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Note: "subjectivity" and "objectivity" in a purely philosophical sense, i.e. the subjective and objective portions of the mind (as used by Sarkar), not psychological

The ultimate singularity of creation and its sentient, geometric principles are reflected in our perceptions of the natural world. The principle of geometric compression is seen in the self-similarity of all sorts of shapes and hierarchical structure and generally *fractality*. The sequential force manifests in the form of natural cycles, from light waves, to biological rhythms and astrophysical rotations. *In other words, the entire natural order is a reflection of the sum total bifurcations, the projective vortex and the scalar and vector synthesis of the Causal Matrix. Physical "objectivity" and "subjectivity" are the self-conceived context of what we feel when we are getting in touch with the vortex of creation.*

## Philosophical discussion

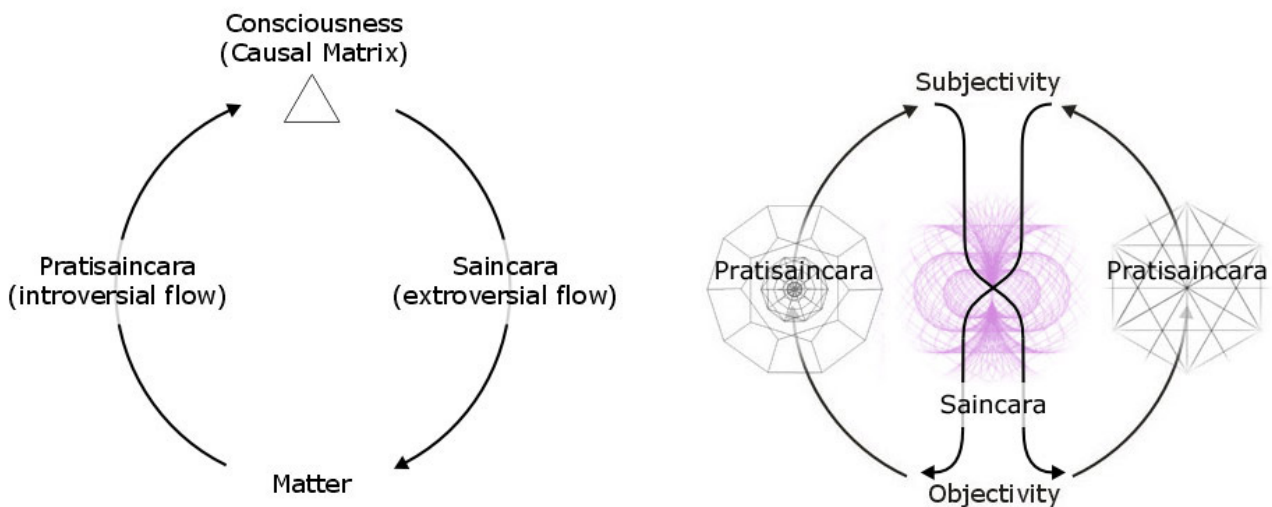
A singular and thus purely causal approach to creation would necessarily be either axiomatic, or dualistic (or, in a scientific style: "dual"). In terms of classical philosophy one could say, a purely ontological approach would be *axiomatic*, while epistemology introduces *duality*.

In spiritual philosophy and spirituality this is not a problem per sé, provided that a researcher or spiritual practitioner reaches the point that their understanding becomes *intuitional*, rather than merely intellectual or sentimental. In the personal sphere, this reconciles the central axiom of creation with our dualistic thinking and feeling, dissolving both in a spirit of wisdom, truth and bliss. This is mysticism. It provides no "solutions" or answers in any traditional sense, rather ends all misconception, dogma and belief system. This is called the *liberation of intellect*, or simply, liberation. Various philosophical schools offer different approaches. A few creation philosophies will be discussed in the light of a causal approach.

**Empirical: The Cycle of Creation** (part I of Ananda Sutram, spiritual treatise in sutra form; P.R. Sarkar).

The central axiom implies that consciousness in pure form ("Brahma") is somehow different from consciousness ("Shiva") in relation to its inner creative force ("Shakti"). The duality lies in the fact that this differentiation does not explain something about consciousness itself, but is only concerned with its expression or non-expression. Hence, the concept of the activated Shakti relates to expression as such (in the form of the Cycle of Creation), not to the original axiom. The causal approach is that the differentiation between Shiva and Brahma is and remains purely axiomatic, and that this central axiom is creatively resolved in the form of mind.

## Cycle of Creation and subspace vorticity



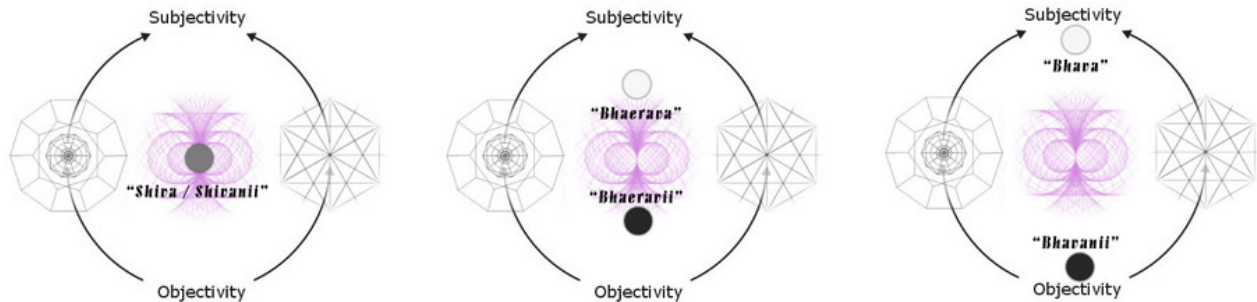
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Note: "subjectivity" and "objectivity" in a purely philosophical sense, i.e. the

**Conceptual: Theory of Creation** (part IV of Ananda Sutram, spiritual treatise in sutra form; P.R. Sarkar).

The central axiom implies that the "guna's" (creative forces: sentient, mutative, static, together forming the *operative principle* or "Prakriti") do exist but are undiscernible in their original, unbound form. The duality lies in the fact that discernibility does not explain anything about the guna's themselves, but is only concerned with their binding or non-binding. Hence, the concept of binding relates to expression as such (in the form of waves or "kala"), not to the original axiom. The causal approach is that the guna's remain purely axiomatic, and that this central axiom is creatively resolved in the form of mind.

**Theory of Creation and subspace vorticity**



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In comparison, both philosophies present a *causal axiom* and its *creative resolution*. In one case, the causal axiom is introduced on the level of consciousness, and the creation is a single, universal empirical wave (that is, the Cycle of Creation). In the other, the causal axiom is introduced in terms of the operative principle, and the creation exists in the form of local, conceptual waves. Both approaches have in common, that *the fundamental expression is mind itself*.

From studying Sarkar's philosophies it follows that the general causal approach is not to say that either consciousness or its operative principle becomes "self-referring", but instead that *the creational axiom exists in the form of, and is resolved through self-reference, and that this self-reference is what constitutes the experiencing mind*. Applied to classical philosophy it means that the ontological principle is fundamentally axiomatic and that its epistemology is self-reference.

This puts the concept of "consciousness" and its mystical inner force out of the equation, ending a lot of dispute and opening a window to scientific understanding and application, while at the same time honouring personal (spiritual) values. Precisely this was done by Sarkar himself while introducing the completely new *theory of microvita*.

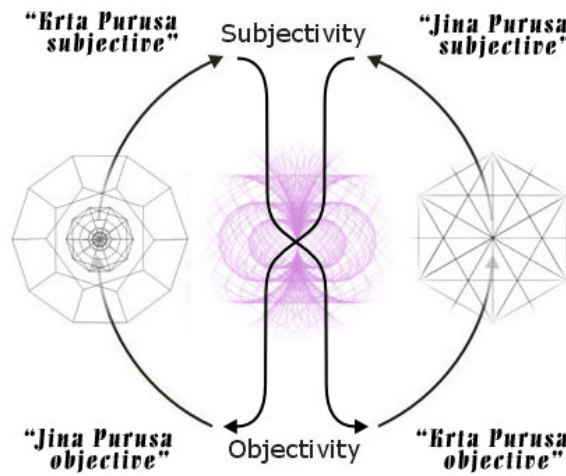
**Microvita theory: from "dualistic axiom solving", to a whole new paradigm based on life**

Humans, animals and in fact all biological minds share the same set of mental propensities (approximately, emotions). In all cases, the source of propensities is the same. Also, in all cases propensities are not just flowing blindly - they have the support of intelligence behind them and also this controlling faculty is the same in all cases. It has the same source. The difference is that, depending on the degree of individual development, the control of mental propensities functions on the mass level, on the species level, on the group level, or on the individual level. Yet, in either case, and in any psychic plane, the principle is the same.

The point here is that the intelligent flow of mental propensities constitutes the basic paradigm of mind. Hence, microvita theory anticipates any creational axiom by providing a *generic, creational paradigm centered on life*, rather than on "consciousness" and its "operative principle". Life in Latin is "vita", and hence the ultimate particle in this approach is called "micro-vita". The approach is also non-dual, because it does not imply to solve a central axiom because there is none in the first place.

P.R. Sarkar's Microvita theory is designed to open the door to a scientific approach and applications. This is substantiated by its close connection to, if not straightforward interchangeability with subspace geometrization, and therefore also with certain principles of quantum physics. With microvita theory, Sarkar introduced a "prophylactic" solution as it were, of the creational axiom, by distinguishing between the flow of energy and its subtle controlling faculty. This is called *bifurcation* (forking, splitting in two), and this concept is neither known in classical and spiritual philosophy, nor in modern physics. *Subspace bifurcation* provides the context in which the creational axiom is evaluated through subspace geometrization. *Following Sarkar's approach, bifurcation generates the subjective and objective faculties, which, through geometric projection (vorticity) and geometric synthesis develop the psychic faculties of the experiencing mind:*

## Microvita theory and subspace vorticity



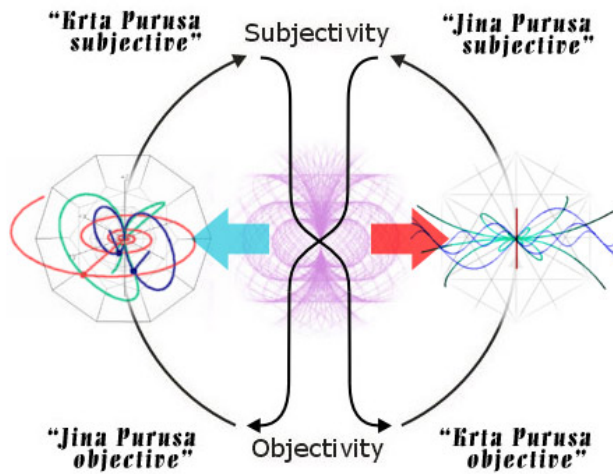
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The connection with quantum physics is now obvious:

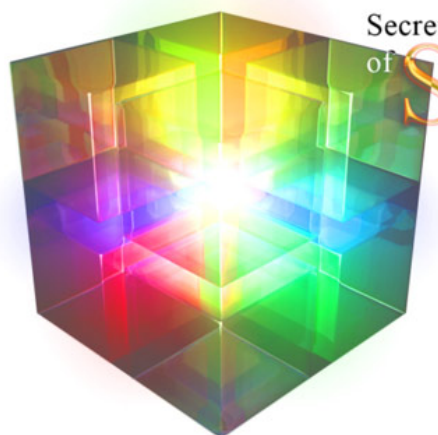
## Microvita theory and subspace vorticity

*Geometric gauging of scalar and vector bosons causes subjective synthesis*



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**Sankyakarika (Sankhya philosophy of Maharishi Kapilla): a purely intellectual approach, axiomatic by definition**



Secret  
of

# Sankhya

by G. Srinivasan

## *Acme of Scientific Unification*

Sankhya is the most astounding scientific theory derived merely through intellectual deduction based on axioms. It derives and defines all phenomena logically, mathematically, accurately and completely using just one principle: the three modes of variation of time in any cyclic activity. Despite its purely intellectual foundation it is more accurate and comprehensive than modern Physics and Cosmology. Sankhya has succeeded because it defines and describes space as being substantial and perpetually dynamic, unlike the current concept in Physics that space is a void in a vacuous state.

"Scientists should be truly intrigued to learn that Sankhya is a complete unified theory based on axioms, unlike any other scientific theory today. Further, every numerical parameter, defining a stable state, like nuclear particle or even a galaxy, are derived from fundamentals without any external inputs of any kind. Even more extraordinary is the fact Sankhyan algorithms solve the anomalistic puzzles mathematically, in Physics and Cosmology, as the parapsychological and dark spectrum manifestations. Finally, it is a theory that completely removes the concept of anthropomorphic dependence to explain the existence of any Universe. Sankhyan algorithms confirm with proof that any sea of elemental components will self organise through axiomatic processes to create the phenomena of manifestation always and it cannot be stopped. A major question posed by most scientists "can a numerical axiom based derivation, accurately predict all aspects of manifestation"? The proof is already there in computer software binary language where a simple state identified as "one" turns to "not one", which has shown the capability of solving problems however complex. The same is true in reality where a "one" is "not one" due to a basic or axiomatic functioning of time in nature creating the principle of simultaneity along with its corollary of self-similarity and scale invariance. The intellectual excellence of Sankhya lies in its austere logic that has identified the precise numerical value that keeps "one plus one equals one" under certain natural circumstances which proves axioms do rule manifestation processes. ?The foregoing should surely create the climate of intense curiosity that is needed to motivate intellectuals in science to make a paradigm shift towards an error free scientific knowledge. This box gives a short preview and has been inserted at the specific request of Physicists visiting this site". [Read more](#) >

#### Brief comment:

Some obvious parallels with subspace geometrization and microvita theory (SG/MVT) have been underlined in above excerpt and will not further be discussed at this point. The "removal of anthropomorphic dependence" (meaning, the theory does not depend on an individual stance, like it does in most classical and spiritual philosophy and even in physics) in Shankya philosophy / theory seems similar to the removal of duality (dualism). However, SG/MVT *does not put the individual mind out of the equation*. Microvita theory is based on the intrinsic, intelligent control of mental propensities and is essentially a causal approach of bio-psychology. Subspace geometrization follows the same line, but with less emphasis on the individual mind. Neither SG, nor MVT however aim to provide "conclusive answers" - they are practical approaches based on a deepened causal paradigm. Sankhya philosophy / theory on the other hand explicitly claims to have the "answers to everything", moreover, an intellectual answer based on axioms. For example:

#### **"Intellectual Verification**

4. Verification of reality through axiomatic proof. Siddhi or conclusive holistic proof is arrived at by a process of logical and theoretical analysis of information from observations, inferences and axiomatic principles. When such holistic conclusions are further condensed by using the threefold analytical process with appropriate rationale and theory, it is established as a conclusive axiomatic theorem.

5. Process of verification of detectable phenomenon. With reference to persistent continuous sensory perception of phenomenon, there are three aspects of information with characteristics like (positive) detectable, (negative) undetectable, (neutral) original characteristics that can be measured, analysed and interpreted to establish an axiomatic theorem or principle.

6. Process of holistic derivation of proof is Siddhi. And in the case of phenomenon that is imperceptible, mobile, expansive and hence undetectable, inferential method using holistic, deductive, logical, verification technique to mentally experience phenomenon, is known as Siddhi (perfect resonance)".

This means that Shankhya philosophy / theory essentially claims that everything is intellectually explainable, in other words, that outside that which is intellectually explainable, there is nothing. This is excellent for a scientific approach and possible practical applications, however it is incompatible with personal devotional, spiritual and mystical realities.

P.R. Sarkar himself comments extensively on Sankhya philosophy. In below excerpts he compares Shankya with bhakti (devotional) cult, oriented on *Vraja Krs'n'a* [devotional Krishna]:

"In Sa'm'khyā philosophy, for practical purposes recognition was given to God as *Janya lishvara*. But the main role of director of the universal drama in the flow of creation was assigned to *Prakṛti* [the Operative Principle], and thus She was given another name as well – *Pradhāna* [Foremost]. The presence of *Puruṣ'a* [Consciousness] is like that of a catalytic agent".

"Thus the chief contention of Sa'm'khyā philosophy is that there are many puruṣ'as but only one Prakṛti"

"The significance of human existence does not lie in philosophy or in argument, but in racing after *Parama Puruṣ'a*. This beautiful notion will not be found anywhere except in *Vraja Krs'n'a*. There is not even a passing reference to it in any scripture or philosophical text".

"*Vraja Krs'n'a* is the collection of all the divine qualities and occult powers, whereas the *Janya lishvara* of Sa'm'khyā is almost a static entity whose presence matters very little to the created beings".

"There is no mention of and no scope for bhakti in Sa'm'khyā philosophy".

[source: *Vraja Krs'n'a* and Sa'm'khyā Philosophy, series of discourses, published in **Ananda Marga Philosophy in a Nutshell** Part 7 [a compilation] and *Nama'mi Krs'n'asundaram*; **Ananda Marga Publications**]

In comparison, Sarkar's microvita theory and also subspace geometrization leave spiritual issues open altogether. There is no attempt to demystify the secrets of Creation because they do not claim to be universal philosophies, having answers to all questions. They are *psycho-physiological approaches of original creation, not intellectual solutions in the form of a creational axiom*. Nevertheless, it might be worthwhile to concentrate on how SG/MVT and Sankhya theory could strengthen one another, for deepening our understanding and for practical uses, rather than focusing on their differences, which appear to be of spiritual, and less of practical nature.

#### Quantum physics discussion: *the spin catastrophe*

The fundamental shift in thinking in subspace geometrization is that elementary particles are being considered having a natural context, instead of being isolated from it in order to probe them. *It is an approach based on synthesis, rather than on analysis*. The ultimate implication is that there is no need for objective particles at all. It is all about transformations in the dynamic, creational substratum itself, causing local effects, and these transformations are geometrically defined.

Bosons (force carriers) have been described in terms of gauging effects, so the respective natural gauging-symmetries or -singularities are their natural context and substrate. This principle is not unfamiliar in quantum physics, as for example the Higgs boson is defined as "*the smallest perturbation of the Higgs field*".

In the case of the electron (a fermion, i.e. matter constituent), subspace geometrization has far deeper implications. The property which became known as the electron's *intrinsic angular momentum* is part of the integral quantum state of an orbiting electron. It was originally introduced by Pauli as *the fourth quantum number* in 1924, to explain the hyperfine structure on the quantum level. In order to find a physical explanation, in 1925 Dutch physicists Uhlenbeck and Goudsmid postulated that the fourth quantum number is the cause of the *quantum magnetic moment* of the electron, which had already been detected in 1922 in the Stern Gerlach experiment. They consequently interpreted the fourth quantum number as an "intrinsic angular momentum". This is mistaken for several reasons:

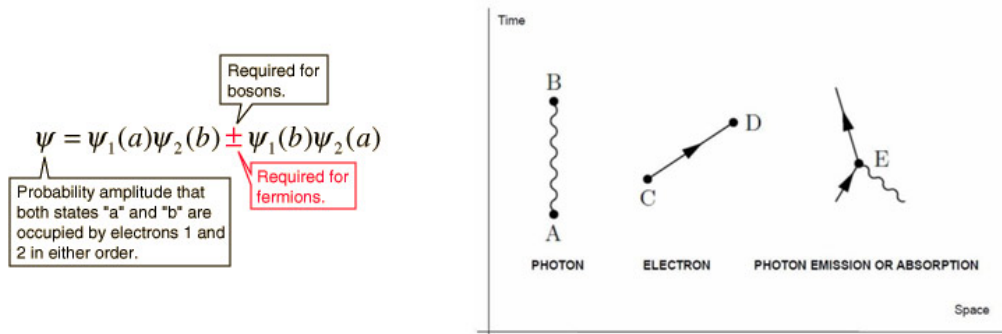
- A. Although by classical analogy, intrinsic spin seems a logical cause for the magnetic moment, this was never proven
- B. Intrinsic spin as a physical explanation for the magnetic moment does not necessarily imply a physical explanation for intrinsic spin itself
- C. The magnetic moment of free electrons was never measured
- D. Intrinsic spin of free (i.e. not orbiting) electrons was never measured
- E. Intrinsic electron spin was in fact never measured at all

In other words, the only two things actually measured were the hyperfine spectrum lines associated with the fourth quantum number, and the magnetic moment of bound electrons. These were then one to one connected through the concept of intrinsic spin. This created an extremely strange situation. Firstly, intrinsic spin, or whatever it may represent, is obviously not falsifiable. This is by definition problematic, but in this case even more so because *electron spin alone requires an entire physical paradigm*. Incidentally, this does not mean that the fourth quantum number is not falsifiable. It is, through the atomic superfine spectra. But these spectra do not prove intrinsic spin.

As far as a physical paradigm is concerned, postulating intrinsic spin, and in fact any intrinsic property, automatically implies *postulating an objective particle* in the first place. Even when it is, like the electron, point-like and without internal structure. There is a fundamental difference between an objective particle, and for example a wave or field phenomenon with the same effect, and that is the causality of the phenomenon. *That is why introducing intrinsic spin, introduced an entire physical paradigm.*

The entire atomic structure or electron matrix is upheld by two complementary, fundamental principles. These are the *energy levels* and the *Pauli exclusion principle* (1925; not to confuse with Pauli's fourth quantum number). Pauli exclusion means that no two electrons (identical fermions) can occupy the same quantum state simultaneously. Energy binds the atom together, while Pauli exclusion prevents the structure from collapsing by sorting the structural quantum numbers. This is what generates the electron shells and subshells. The energy levels with respect to the nucleus are mediated by (virtual) photons, and when an electron switches between levels, an actual photon of a specific wavelength is emitted or absorbed. This process is explained in Quantum Electro Dynamics (QED). Pauli exclusion is purely conceptual. QED is based on boson interactions, and essentially constitutes the dynamics of the observer principle.

### Pauli Exclusion, Quantum Electro Dynamics



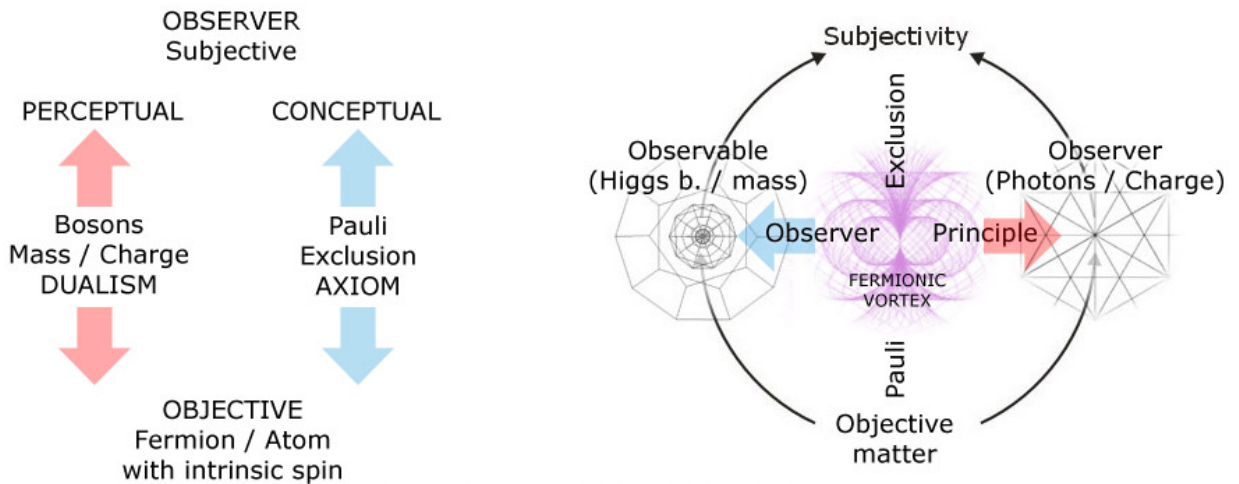
Now the moment the electron was postulated as an *objective particle on which Pauli exclusion and QED act "externally"*, this led to the consequence that Pauli exclusion remained purely *axiomatic*, and QED, and thus the observer principle, had to become *dualistic*. This is the status of quantum physics today and this is why "probability" and its philosophical "Copenhagen Interpretation" were needed. *As a result, quantum physics is ultimately a philosophy, based on the dualistic resolution of a central axiom. Wave-particle duality is the obvious result of it.*

The situation today is that *the postulating of intrinsic spin, which necessarily implied an "objective particle", has prevented seeking physical explanations* for Pauli exclusion as well as for the observer principle. As a result, quantum physics lacks an integral causal paradigm. It is illuminating to know that Wolfgang Pauli, who was known to be an intuitional genius rather than a mathematician, initially fiercely disputed the idea of intrinsic spin. Maybe for lack of a proper philosophical framework, he was unable to formulate his concerns.

With a causal approach, the "electron" is not an objective particle externally interacting with bosons and controlled by Pauli exclusion, but is itself *the combined effect of boson gauging and Pauli exclusion*. This is not as strange as it may seem, as the quantum electron is already solely defined by its charge and its mass (bosonic effects) and its "fermionic spin", to which Pauli exclusion applies directly. There is nothing more to an electron than that. A new physical paradigm of *original fermion generation* through bosonic / geometric gauging of a universal fermionic vortex is proposed by means of subspace geometrization:

## Quantum Physics vs. Causal Matrix

If the objective fermion with intrinsic spin is replaced by congruent vorticity, the axioma and dualism of quantum physics are unified in a singular Causal Matrix



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A "universal" exclusion principle now refers to a generic state as a whole, rather than acting upon an observed electron:

### The exclusion principle of subspace vorticity

primary primitives a, b

secondary primitives A, B

Primary primitives: a, b	Primary singularity: a & b
Secondary primitives: A, B	Secondary singularity: A & B

Identities (for a given 0° / 0°, 360° / 180° etc. phase-difference between the singularities):

Congruent: spin +: aA spin -: bA	Non-congruent (trivial) aB bB
--	-------------------------------------

Pair selection rules (id.):

aA & aA = aA a(A) & b(A) = 0	merging annihilation through primary
---------------------------------	---

Internal phase rotation: B > B'  
spin -: aB'  
spin +: bB'

Two identities (i.e. electrons), in order to be non-merged, must have different, phase-rotated secondaries (A, B') as per the first selection rule and, to have the same spin, must have different primaries (a, b), giving: aA & bB'. However the primaries will cancel out as per the 2nd. selection rule. Two opposite spin entities would be aA, aB', which is permitted.

Hence:

**SAME SPIN EXCLUSION IN SUBSPACE VORTICITY: aA & bB'**  
**OPPOSITE SPIN PAIR: aA & aB'**

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The strangeness of current quantum physics is that the unfounded, and unfalsifiable objectivation of the electron has prevented that the phenomenon of intrinsic spin can be measured, or that it's measurement could even be conjectured, whereas with the causal approach of subspace vorticity, spin, that is, the fermionic vortex, is in fact the *only* thing which can be measured.

On a somewhat philosophical note, the necessity to introduce "intrinsic spin" reflects the dire need to keep thinking in terms of objective "particles" one way or another. It is the inheritance of thinking in terms of material realities - a mental clinging to the last straw of objectivation in a quantum universe which seems weird enough already. In truth, *the fundamental cause of quantum weirdness is not that we have abandoned objective reality - it is instead our attachment to it. Once we have crossed the final frontier of physical objectivation altogether, physical reality can internalize and entirely rest within itself. In that infinite realm, where the veil of duality has finally been lifted, everything can become normal again, because the fundamental weirdness of mind itself has been abandoned.*

Wolfgang Pauli, in his [Nobel lecture](#), 1945:

*"Already in my original paper I stressed the circumstance that I was unable to give a logical reason for the exclusion principle or to deduce it from more general assumptions. I had always the feeling and I still have it today, that this is a deficiency. ... The impression that the shadow of some incompleteness [falls] here on the bright light of success of the new quantum mechanics seems to me unavoidable".*

Richard Feynman said in 1963:

*It [Pauli exclusion] appears to be one of the few places in physics where there is a rule which can be stated very simply, but for which no one has found a simple and easy explanation. (...) This probably means that we do not have a complete understanding of the fundamental principle involved. For the moment, you will just have to take it as one of the rules of the world".* - ( [R. Feynman, Feynman Lectures of Physics, 3rd Vol., Chap. 4, Addison-Wesley, Reading, Massachusetts, 1963](#) )



## SUBSPACE VORTICITY AND -GEOMETRIZATION BACKGROUNDS, EVIDENCE, APPLICATIONS

P.R. Sarkar - Microvita and Cosmology

### Subjective

*(B) Doing principle or supra-mundane seed of the actional principle, ready for being sprouted. (Microvita of different characters, either of positive or negative nature, collectively maintaining the balance of the actional universe creating initial forms of carbon atoms that help macro- and micro-propensities in having their pure physical auxiliary media with mass and wnts.) [Kṛta Purusa, Actional Principle]*

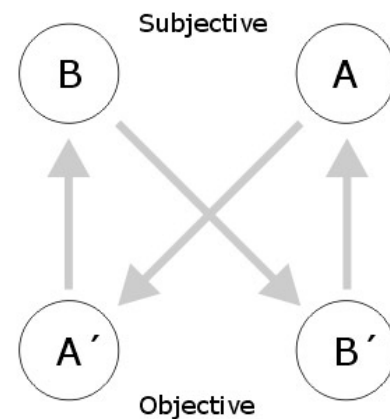
*(A) Planes of microcosmic and Macrocosmic propensities (Different strata of mind: conscious, subconscious, physico-psychic, psycho-physical and psycho-spiritual.) [Objective Jina Purusa]*

*(A) Knowing principle or supra-mundane knowledge. (Expressed energies of different characters – indestructible, interchangeable and intertransmutable.) [Jina Purusa, Knowing Principle]*

*(B) Planes of universal Macrocosmic inferences and their reflected or refracted inferences. (Planes of inferences which are being activated, accelerated and stimulated by (A) subjective.) [Objective Kṛta P.]*

### Objective

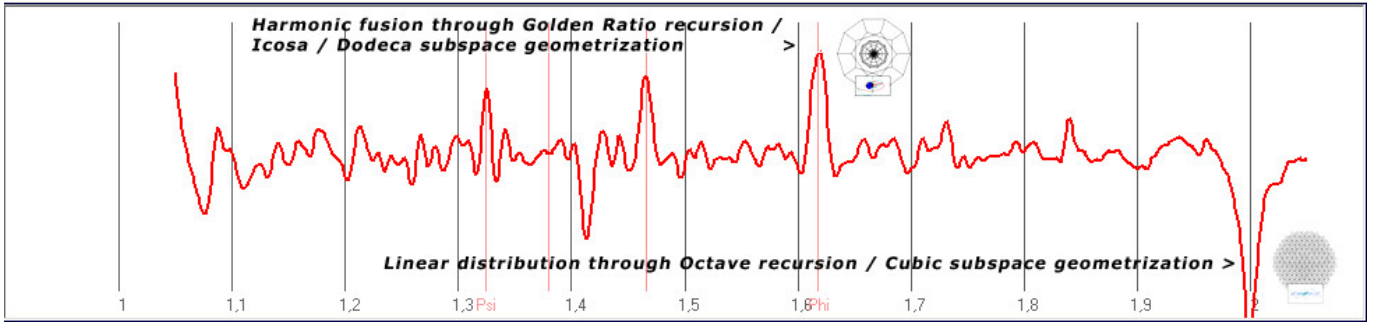
*(A) subjective relates to and controls (B) objective and (B) subjective relates to and controls (A) objective. (A) subjective is the field of psycho-spiritual laboratory research and (B) objective is the field of external laboratory research. In the case of (A) subjective, results cannot come within external laboratory tests.*



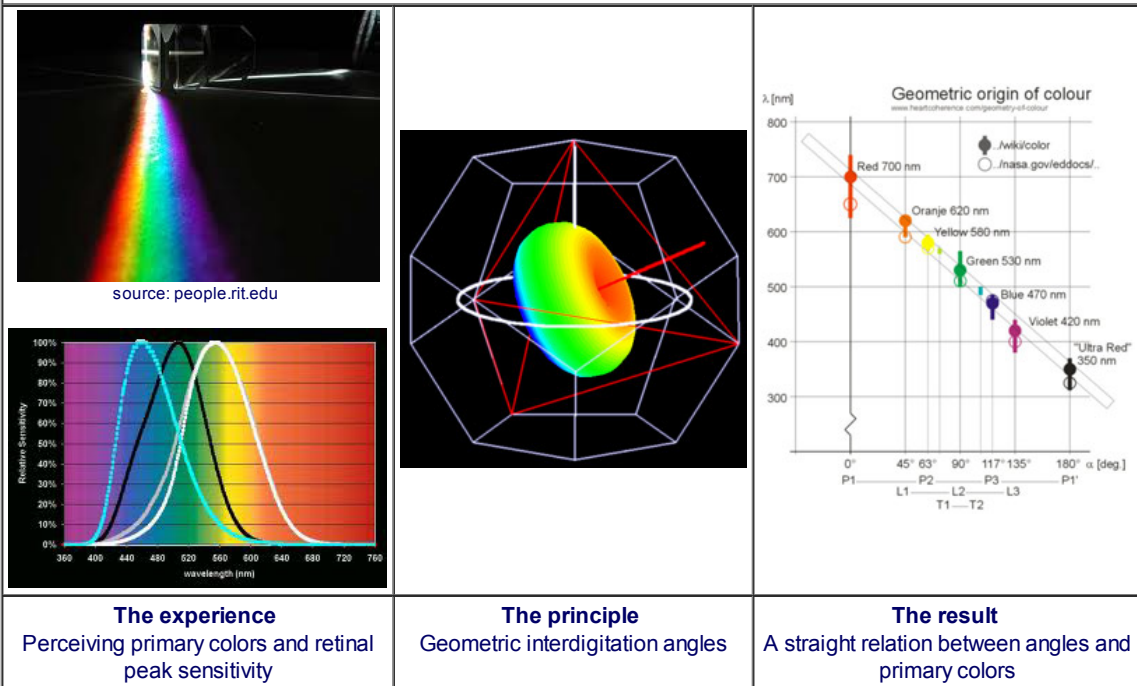
# Fractal Synthesizer

Numerical analysis of heterodyne synthesis

science.trigonamedia.com/fractalsynth

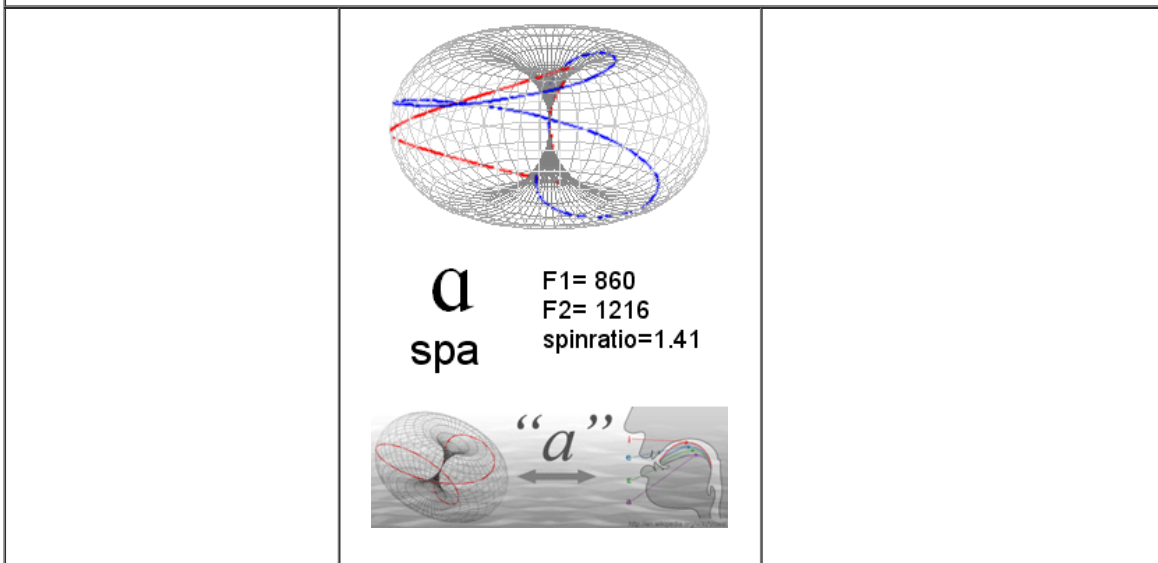


## The geometric origin of selective color empathy



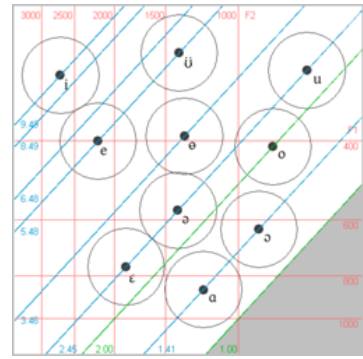
Click on any of the images to see the main article with animations

## The geometric origin of sound





ɪ spa	ə fur
ɔ bore	ɐ bird (Aus.)
o row	ü euforia
u boot	e play (N. Am.)
ɛ bed	i free



**The experience**  
Perceiving distinct acoustic spectra as vowels

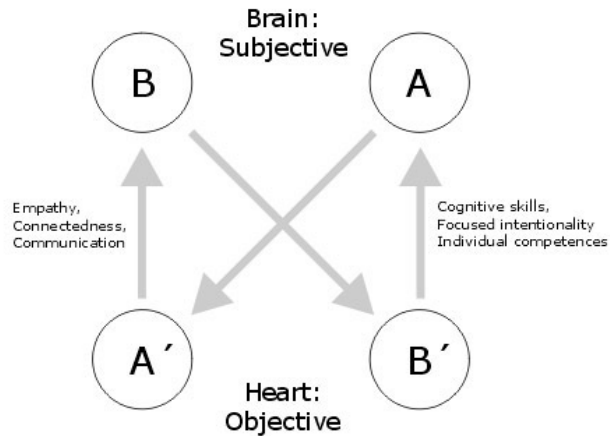
**The principle**  
Stable resonance pairs in universal medium

**The result**  
Stable resonance pairs forming the formant pairs of the vowels

Click on any of the images to see the main article with animations

### Heart and Brain Coherence: The measurable and entrainable "Gauging Fields" of psycho-physiology

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The "Tree of Life" - subspace geometrization in the human heart beat  
"Depending on your emotional and mental state, your heart beats differently "



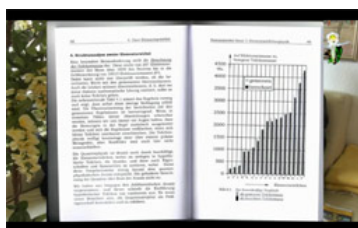
[www.trigunamedia.com](http://www.trigunamedia.com)

**Prof. Konstantin Meyl on  
potential vortex, scalar waves & alternative energy**  
*[referring to how Heaviside reduced Maxwell's equations] "We only accept  
what we have proved, that is, the electromagnetic [vector] action wave, and all  
the rest we put to zero"; 12:26*

*"Today, these particles are all postulated, because quantum physics is  
not able to say where they are coming from, they are not able to derive it  
from something else.. and now to make it work, they try to postulate  
what they have postulated.."; 20:30*

*"If the Schrödinger equation is derivable from this extended [Maxwellian] field  
theory then all the particles which it is describing, have to be vortices"; 1:35:50*

Prof. Konstantin Meyl the New Tesla



*Konstantin Meyl's accurate particle calculation  
based on vortex architecture; 1:41:00 - click to enlarge*

**Prof. William Tiller on vacuum energy**

*"The issue is, we are perturbing this [vacuum state] with consciousness,  
we are able, with directed intention, to change things at the vacuum level  
which then allows us to enter a new level of physics"*



### Perception - the reality beyond matter

*"All these facts bring us face to face with a very significant question: if the thing we acknowledge to be the physical world is really comprised of perceptions given to our soul, then what is the source of these perceptions"?*

Perception - The reality beyond matter



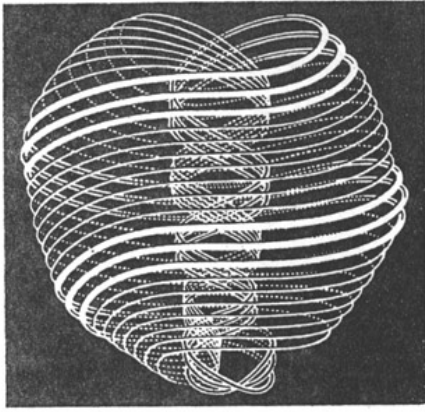
### The Afterlife Dysfunction

*"..The underlying patterns of our consciousness define our entire perception of reality.. Some of the most reality-shattering discoveries of the past century haven't even been absorbed in mainstream culture yet, and what we have found in only the past decades is starting to point at an understanding of consciousness that will change the way we look at life and death"*

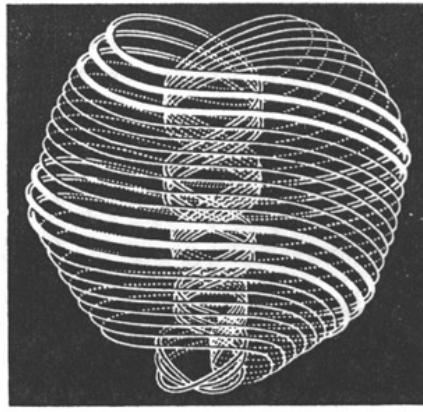
The Afterlife Dysfunction



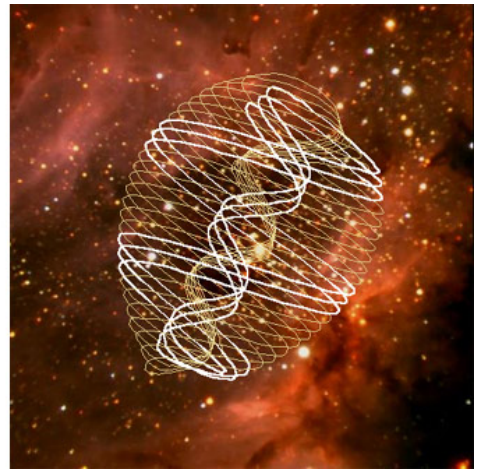
Examples of earlier intuitional research



POSITIVE



NEGATIVE

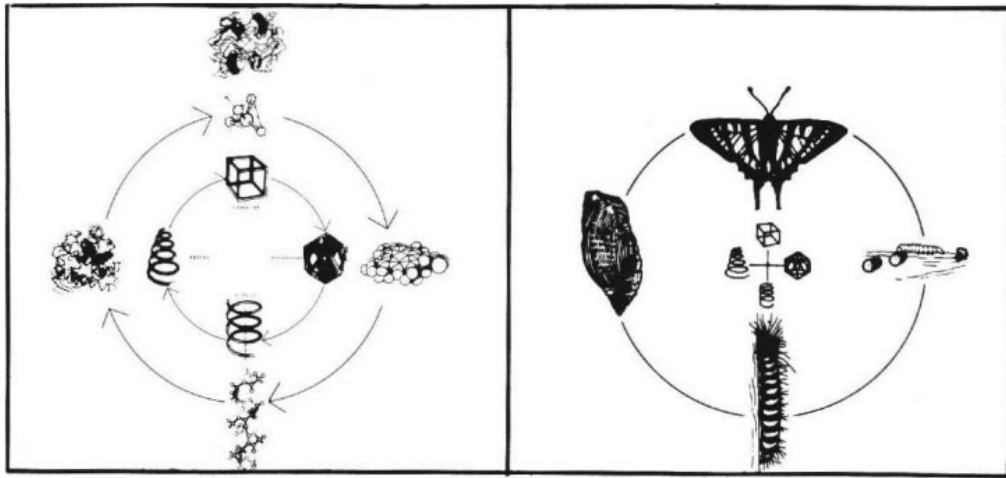


Channel 26 META-SCIENCE: GROWTH, FORM AND STRUCTURE

## Geometric Extensions of Consciousness

excerpts from Anne Griswold Tyng's article

This was first printed in *Zodiac 19*—a review of contemporary architecture.



Early intuitional research by Anne Griswold Tyng  
[http://www.radicalsoftware.org/volume2nr1/pdf/VOLUME2NR1\\_art08.pdf](http://www.radicalsoftware.org/volume2nr1/pdf/VOLUME2NR1_art08.pdf)

