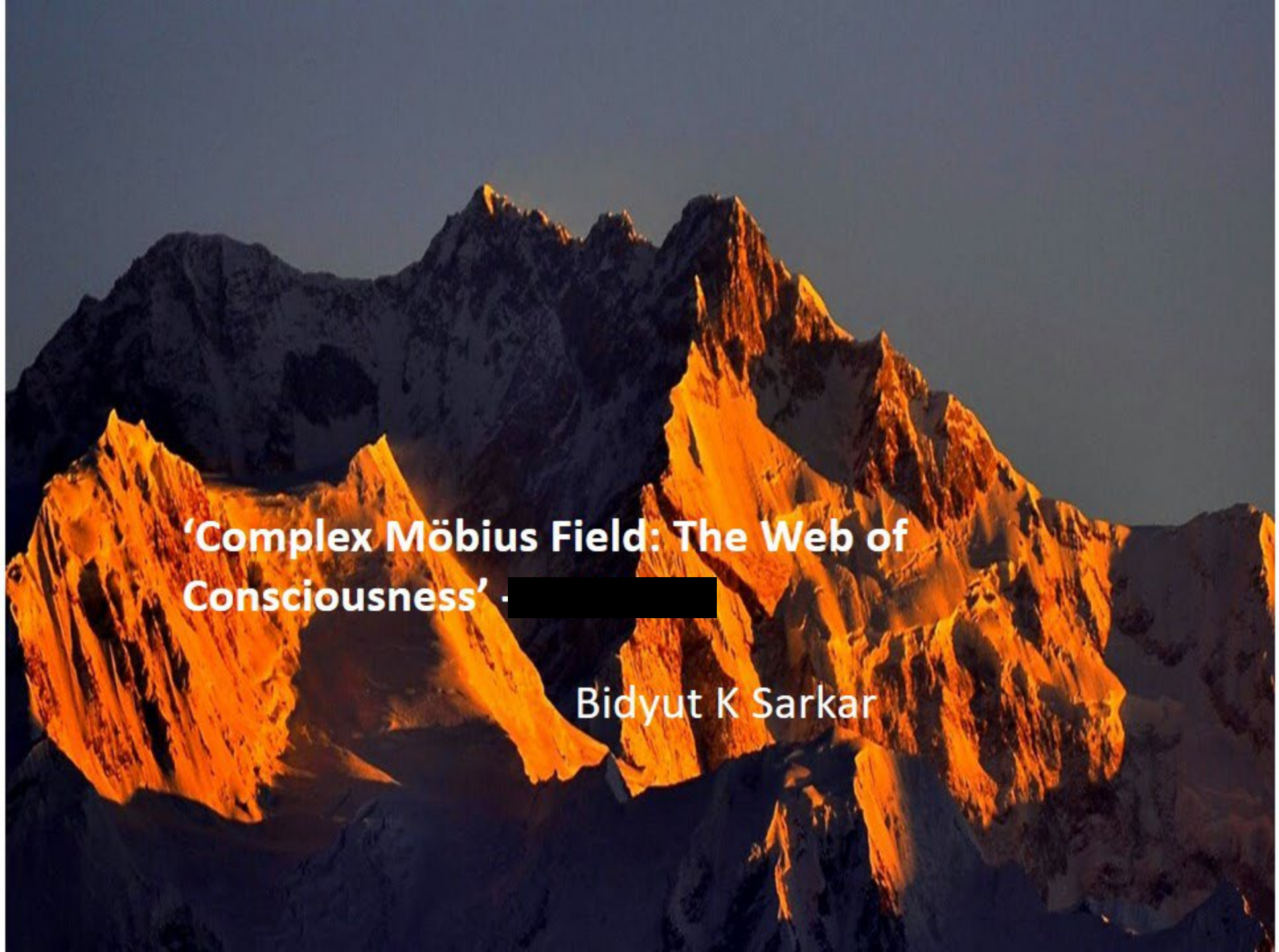
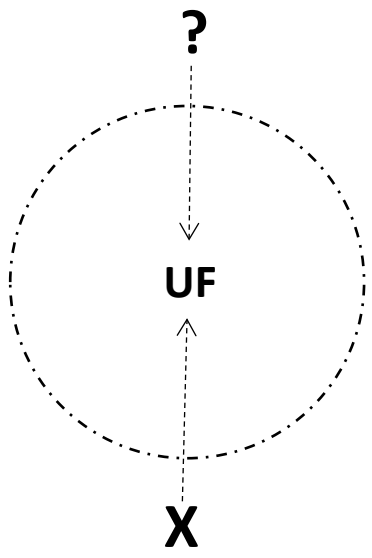

‘Complex Möbius Field: The Web of Consciousness’ ·
Bidyut K Sarkar



- ? Source of Unified Field (UF) – an everlasting question.
- ? No-question solution of this open Paradox.
- Here, unknown X (algebra) → Null Field.
- No value: either Zero or Infinite or Both is an absolute – finite operator values of rest 4 fields may be assigned only from diffeomorphic finite periphery.

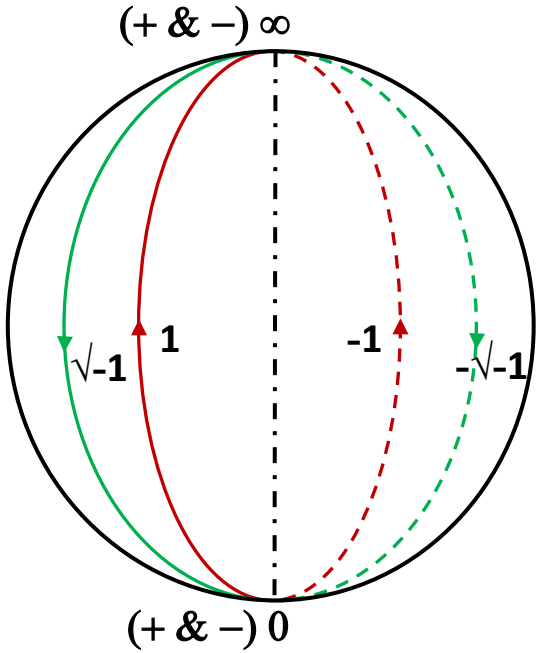
- Center to periphery (c) or inside-out and periphery to Center (p) or outside-in.

- On Relativity-viewpoint: There may be a stationary point or unbending trajectories with infinite speed – May be the basis of Newton's 1st Law.

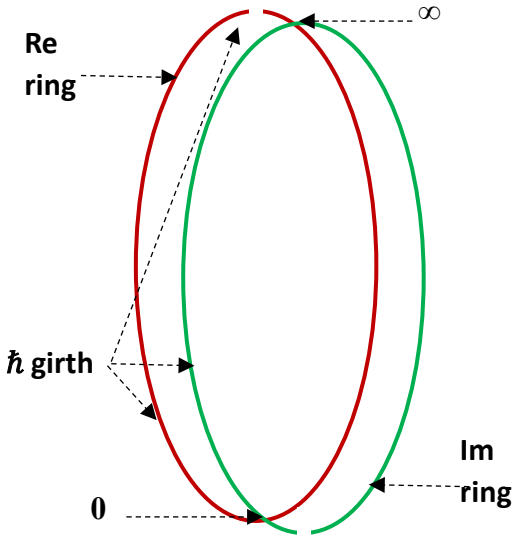
- We do not encounter these absolutes in our vicinity except in the axioms of linear or Euclidean geometry where we find a point (0-dimension) and infinitely stretched straight (absolutely unbend/unbiased) lines.

- In number system: '0' and '∞', two absolutes. The two may unify into one in Euclidean topology.

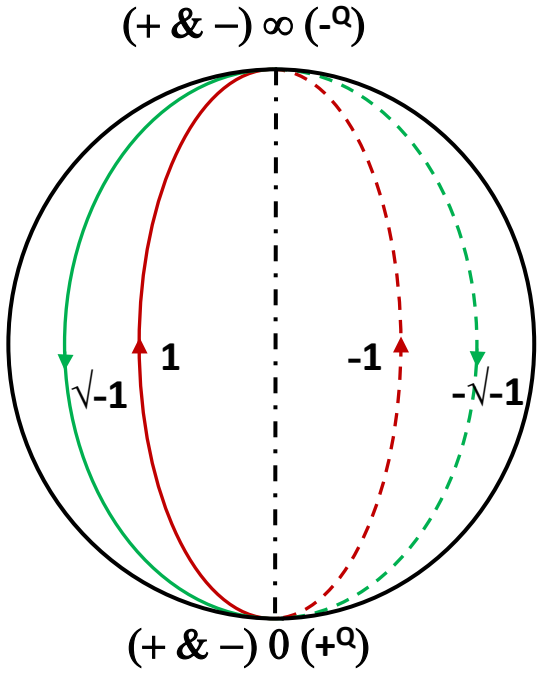
- From '0' infinite trajectories diverge in infinite directions (∞ dimensions) where ultimately they meet at '∞'.



- Real numbers (Re) ascends upward and forward (fwd) from 0 to ∞ in ± (both) ways.
- Imaginary numbers (Im) ascends downward and backward (bwd) from ∞ to 0 in both ways.

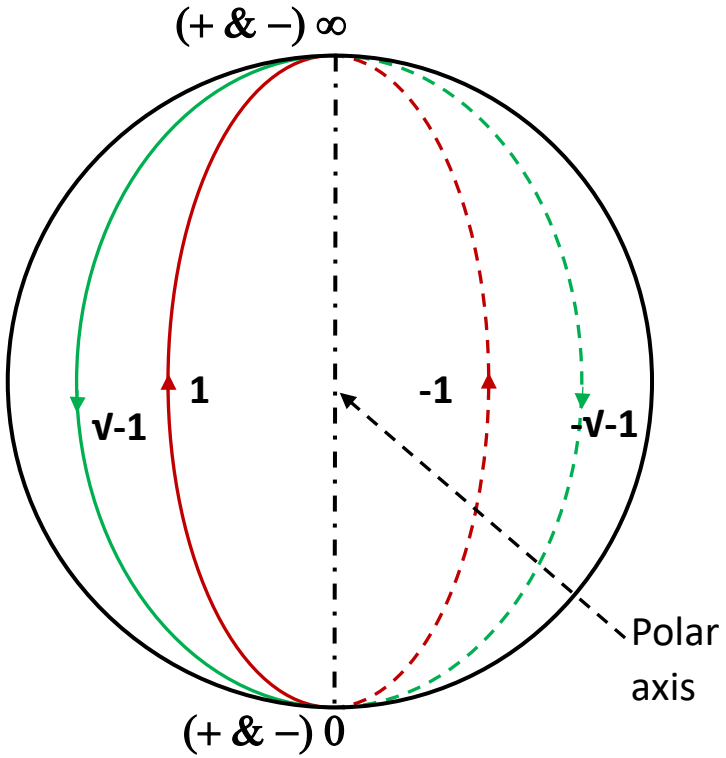


- Re-Im counter-complimentary rings with complimentary polar slits of $\hbar$ girth.
- Can fit with each other only orthogonally.



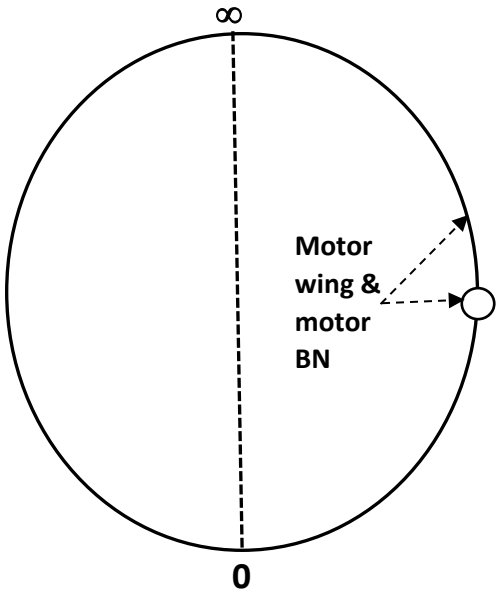
- Trinary existence: Re (Principal), Im (Auxiliary) and Polar axis (Central Null Space) as central witness {centrality or unitarity (c) vs polarity or duality (p)}.
- In finite peripheral perspective, Re may be replaced suitably by position ($\mathbf{p}$) and Im by momentum ($\mathbf{m}$).
- North pole holds infinite mentalism or objectivism and south pole infinite physicalism or subjectivism.

- Position, + (Re); point, ^{Q}, ($+^{Q}$ in singularity) in south pole where momentum or velocity is infinitely diffuse within (a state simulates superconductivity).
- Momentum, - (Im); point, ^{Q}, ($-^{Q}$ in singularity) in north pole where position is infinitely diffuse without (a state simulates superposition).



Trajectories topologically may reduce in 2D-spherical surface : '0-∞ Conjugate'

- '0' is at South pole – an internal point (Self-organization → Outer null or EDS fulcrum).
- '∞' is at North pole – an external point (Self-organization → Inner null or GDS fulcrum): Fulcrum is the inflexion point
- Polar axis is Pure back-back entity (c) has the strength to reach and add two absolute points Re|Im topologically. Two approaching extremals (±) at two poles are mixed entities - Null derivatives: diffuse and consolidated. Former is related with Im polar axis and later with Re equatorial axis that conforms orbital finites on incorporating infinites equatorially.



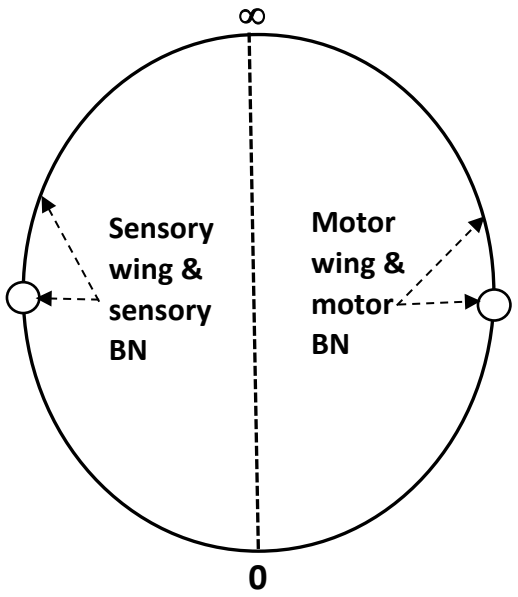
- ‘0-∞ conjugate’ is ‘Static Euclidean Field’ that supports additive group action (p) where polar axis shrinks. Indeed it doesn’t suffice to support life and our universe.

- ∞-position at north pole antagonise spinor because it is on infinite but 0-position at south pole supports spinor, clockwise spin (c), orthogonally at Bosonic Null (BN) in the equator.

- Here, ∞ position at north pole rather supports unspinor (anticlockwise spin).

- Or, neutralises torque and spin within polar axis and BN where 0-spin is ensured.

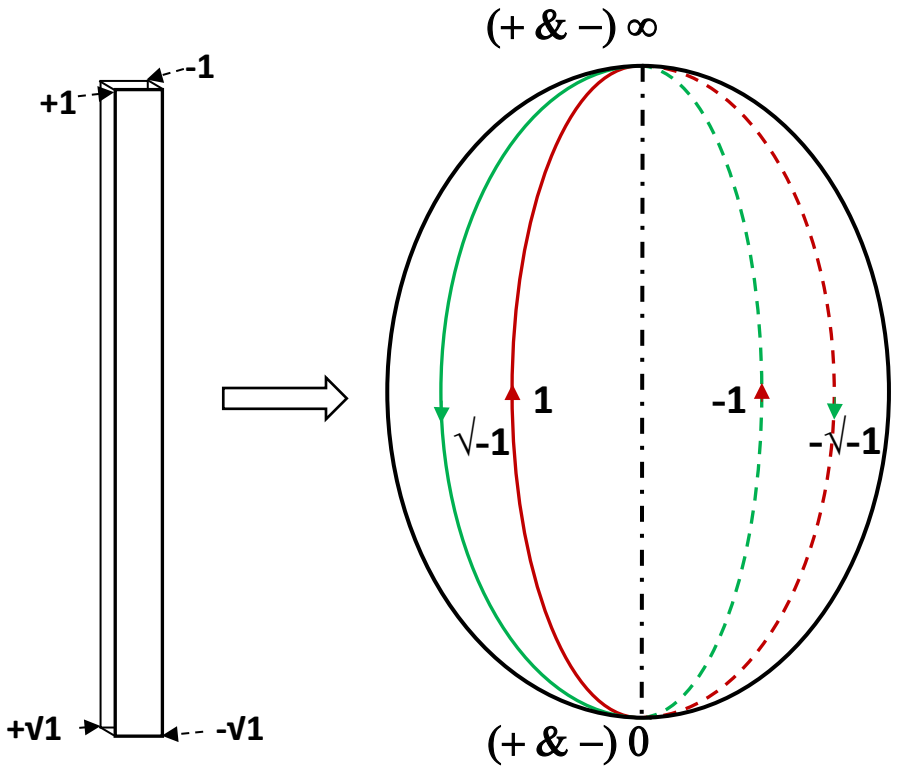
- Spins support multiplicative group action where polar axis stretch out.



- Infinite spin clockwise and anticlockwise simultaneously at absolute motor BN is equivalent to 0-torque and 0-spin (additive) right at center → validate infinite potential discrete Euclidean spaces (multiplicative; absolute unbiased Pure Randomness) that has no parameter.

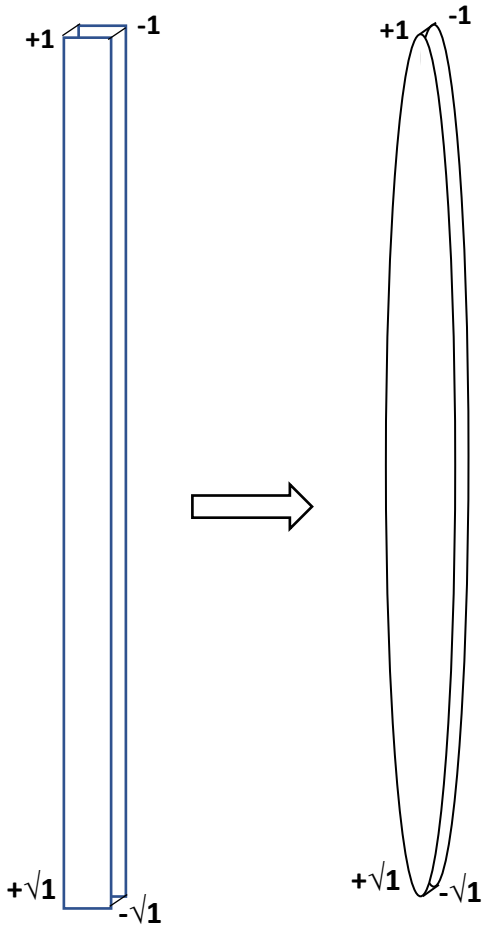
- Thus absolute motor wing and polar axis are equivalent that belong to no space-time and additive in nature (p). It represent a potential dynamic Euclidean field or Null field.

- Sensory association space can exist only on rotational invariance i.e., finite spin lead finite clockwise and anticlockwise rotation alternatively (not simultaneously except tiny Central Null Space or trivial Null in between) supported by absolute motor wing. Here two complimentary systems (1 & 2) play an inertial game: Clockwise multiplication attain extreme status (1) - complimentary slowing (2) – pure addition (2) - anticlockwise multiplication attain extreme status (2) - complimentary slowing (1) – pure addition off the center incites negative feedback (1) - cycle continues indefinitely.



Topological Equivalency

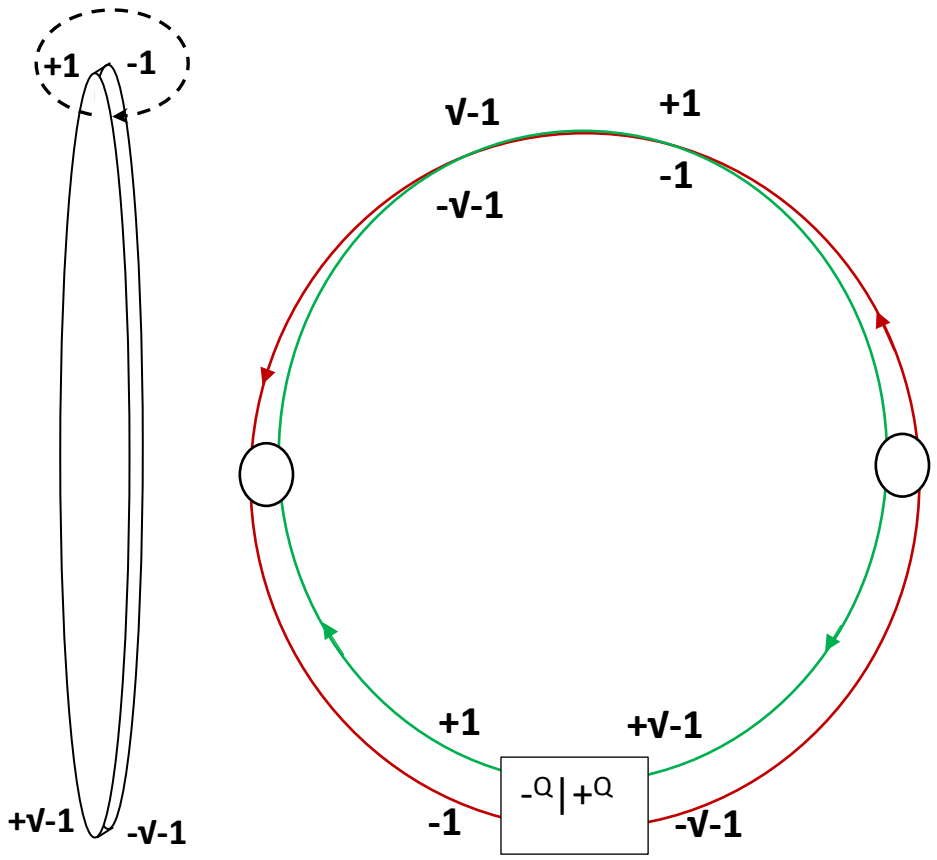
- Flat strip of paper may be projected topologically as sphere.
- Top and bottom edges correspond to polar regions.
- Two hemispherical 2D-surfaces enclose central null space.
- But self-organization demands point ended strip, pivots at one end, on $-^{Q}$, in configuring manifold Möbius strip.



- Pointed ends designate common beginning (Big bang or ON - Ontogenic Null at Im end) and common end (Big crunch or FN – Fermionic Null at Re end). Strip in between supports infinite individual journey, ever possible.

- Even spin at one end and alignment of ends always fail to enclose media (or here, paper substance) in between. This favors structureless initial vertical disposition with even dimensions at two disconnected ends i.e., relaxed flat vertical strip or Even ED (Even Elementary Dimensionality).

- Odd spin at one end and alignment of ends not only enclose media within convex and concave surfaces that allow rotation either way or both ways except at Bosonic Null but also simultaneously entrap bosonic space (BS) within 3D fold as a transform of central null space (CNS) .

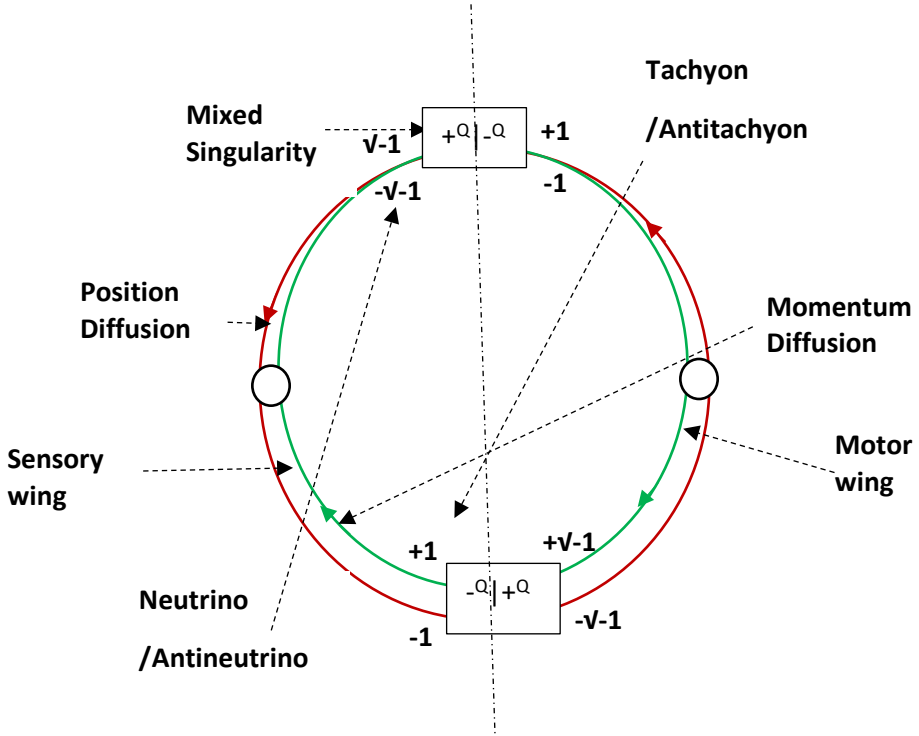


Lt. untwist and alignment - Group Untwist. Self-organization on Re end pivot

- Conventionally in Complex Möbius Field (CMF) ∓1, Re systemic untwistor/twistor, are clockwise operators and ∓√-1, Im systemic untwistor/twistor, are anticlockwise operators.

- But active odd untwist involves operation on Re end with Lt. hand while static Im end in Rt. hand supports passive twist operation during alignment. This executes crystal solid outcome (f_3) in opposite flavour out of diffuse information (f_4). 180^0 turn is 1D raise. This operation creates two fulcrums on zero curvature 360^0 apart, after odd alignment.

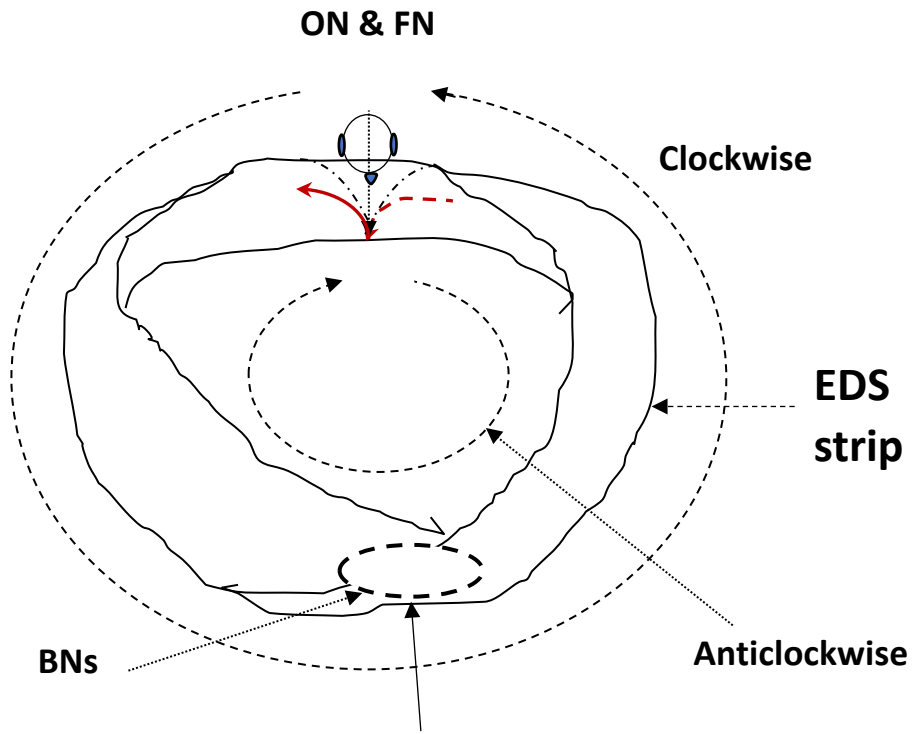
- In reality self-organisation is executed from equator, not by manipulation at polar ends.



- Joint group untwist operation has two components : odd untwist at one end is multiplicative inverse operation and additive inverse operation align ends in one pole.

- So, operative ends belong to same fulcrum (mixed singularity) i.e., the interface between active segment (sensory wing) and passive segment (motor wing), here, at south pole.

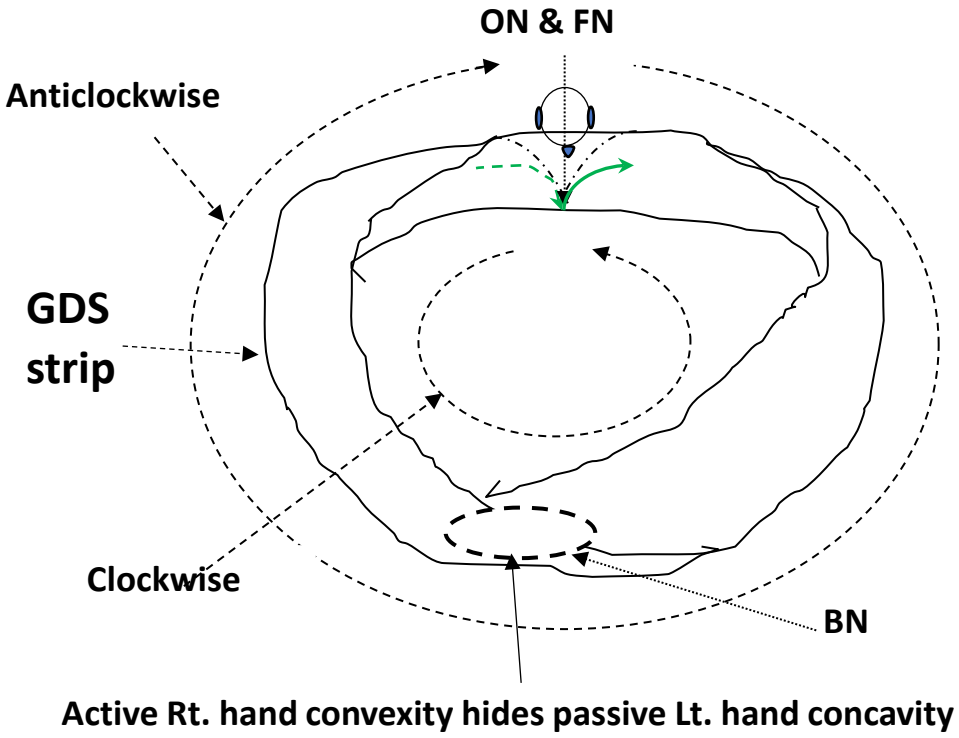
- In this self-organization complimentary interface between active and passive segments is generated symmetrically at north pole that stabilizes (bistability) fulcrum of complimentary system. At polar ends, in reference to its own fulcrum, central or multiplicative operator or orbital twistors and peripheral or additive or orbital untwistors are created. Equatorial sensory BN represents peripheral discrete CNS.



- This self-organization creates four absolute nulls: two in poles (Ontogenic, ON, $+^{Q}$ and Fermionic, FN, $-^{Q}$) and two in equators (Bosonic: sensory and motor).

- Self-organization, in EDS, executes distoproximal untwisting at FN in inversed finite sensory wing and proximodistal twisting at ON in absolute motor wing. In complimentary system null reverses.

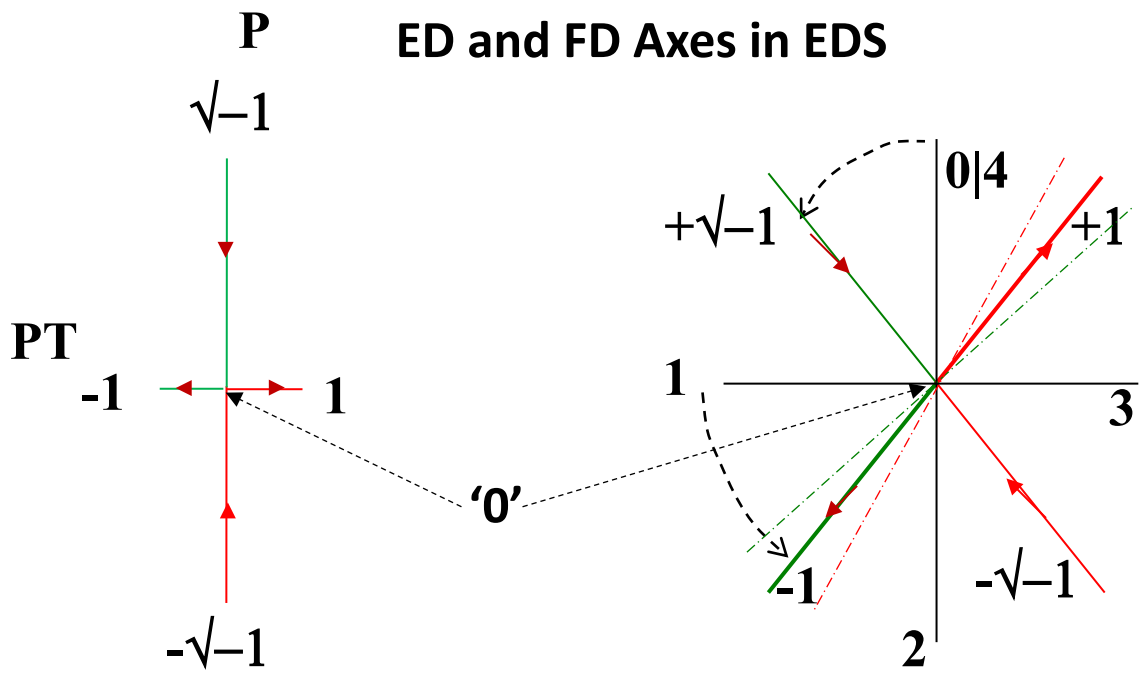
- Odd turn discriminates active end from passive one. Thus Lt. hand active untwist (on Re end, FN, $-^{Q}$) and Rt. hand passive twist (Im end, ON, $+^{Q}$) fabricates EDS (Energy Dynamical System) strip where information orbit clockwise or forward. Structurization is organized only in finite sensory wing. Absolute motor wing is structureless-formless.



- And, active Rt. hand untwist (on Im end, $+^{Q}$) and passive Lt. hand twist (on Re end, $-^{Q}$) fabricates GDS (Gravity Dynamical System) strip where information orbit anticlockwise. But in reality odd GDS strip doesn't exist. Here, Im (Rt. hand) rides on convexity; hides Re.

- Even spin is vertically free , never interferes with polar freedom. Here vertical strips, simultaneously created, nullify. So, they are structureless and formless.

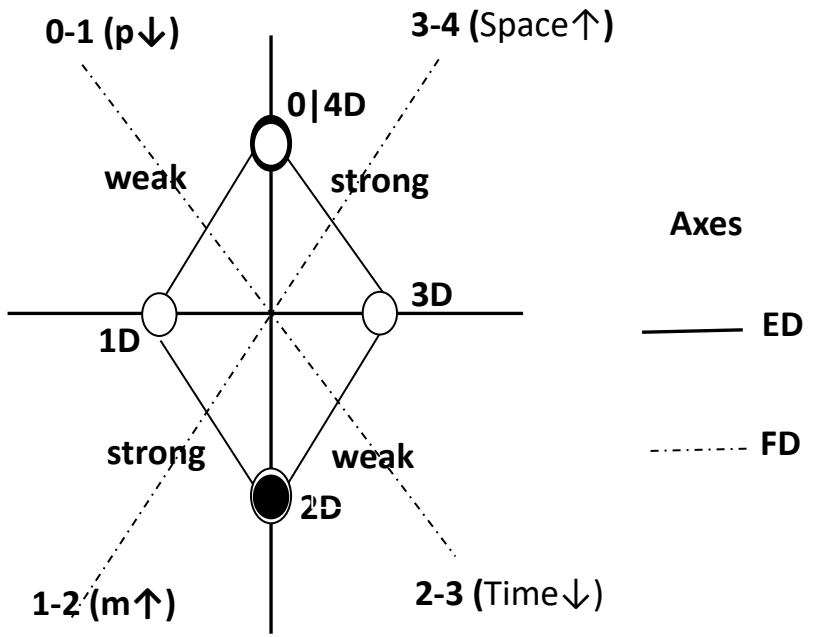
- In odd spin only EDS-strip exists where EDS, primarily belong to convexity, runs clockwise and GDS has to compromise, primarily belong to concavity, runs anticlockwise (backward). GDS fulcrum belong to north pole. Odd spin restricts polar freedom due to incorporation of gravity bosonic space in 3D.



- Elementary operators in Elementary Dimensionality (ED) in the dynamical systems are extremals of the central cruciate structure or saddle solution (Odd ED). ±1 strong axes represent asymptotes both in ED and FD. Fractal dimensionality begins and ends at FD or diagonal axes.

- The EDS (system-1) case is shown in sensory perspective on complementary saddle point (in motor perspective, directions reverses - '0'→'∞'). For GDS (system-2) the signs, direction, and color reverse. Odd ED emerges from even ED where ED accepts FD diagonally. Wing or system untwistors (+√-1|-1) and twistors (-√-1|+1) in EDS transfer information within wings of that system {Orbital untwistors (+√-1|+1) and twistors (-1|-√-1) transfer information between systems (GDS↔EDS) by inversion of FD axes}.

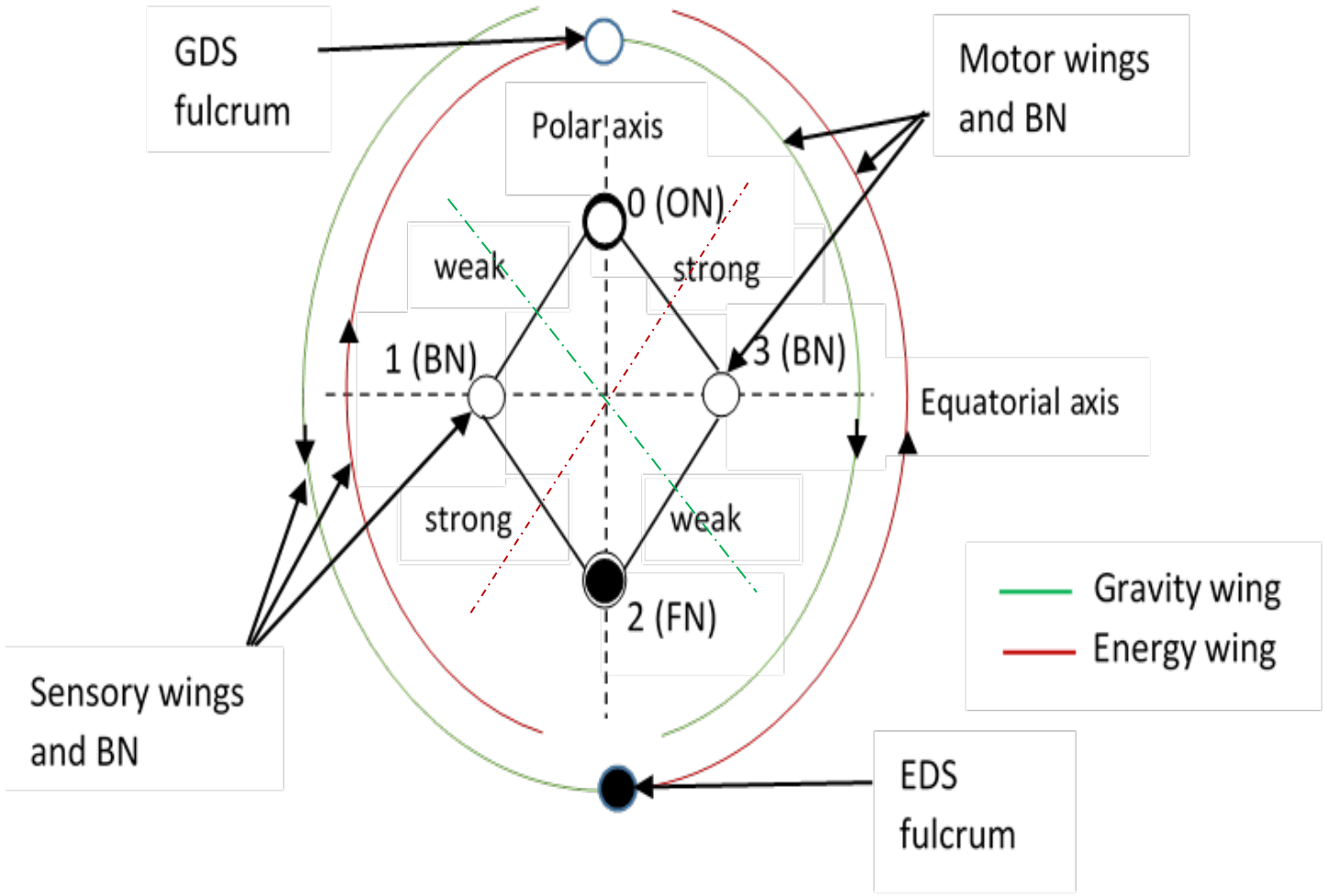
Equator-Orbit Complementation



- CMF satisfy spin-rotation complementation. FD-windlasses, straights between untwistor and twistor, are the self-organizors. With each ½ spin turn (active Lt. untwist) i.e., one step (180^0 rotation) followed by alignment of ends, elementary dimension increases by one unit.

- So, at 1st step (1D-½ spin) gravitons (spin-2, conventional or weak gravity) and abstract fermions (without motor wings) are created.

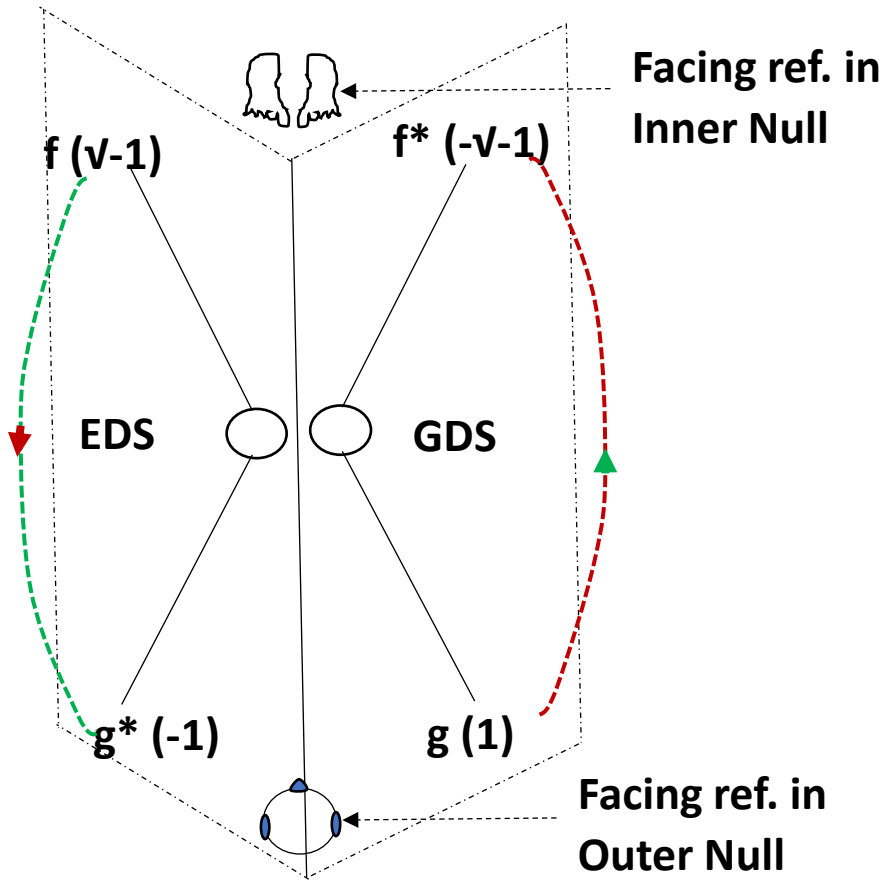
- At 2nd step (2D-1 spin) gauze bosons are created. 3rd step (3D-3/2 spin) complete oddity on unstable fermions with incorporation of bosonic space (fermion-boson structurization). At final 4th step (4D-2 spin) gravitons (strong gravity) and equatorially stable fermions culminate on completion of full (720^0) rotation.



Circle of circumference h (Planck's constant) at poles hide beginning and end problems

- Inverted shorter finite sensory wing, build structure and form under untwist operation in sensory association space only when supported by structureless and formless longer absolute motor wing at its fulcrum.

- Gravity wing (green; -1|+√-1) belong to Lt. hand operation (motor BN on '0') and energy wing (red; -√-1|+1) belong to Rt. hand operation (motor BN on '∞'). In sensory wing **m** envelops **p**. In motor wing situation is reverse.



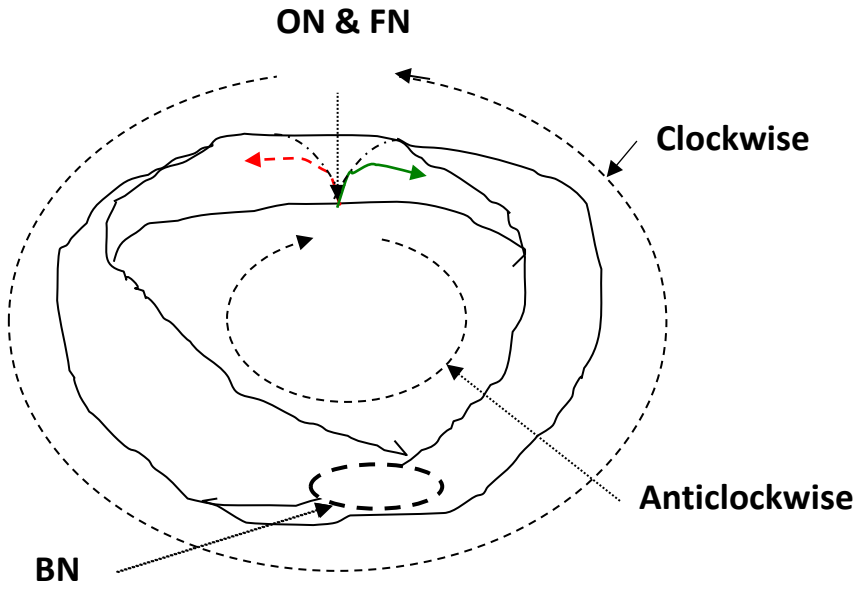
Multiplicative FD-phase but BNs are phase linked in ED-relation in highest equatorial spin.

- Disposition of operators within sensory wings in EDS and GDS, are shown here, under dual mode in ED (open book). Unimodal FD is the case of closed book, oddity out of evenness.

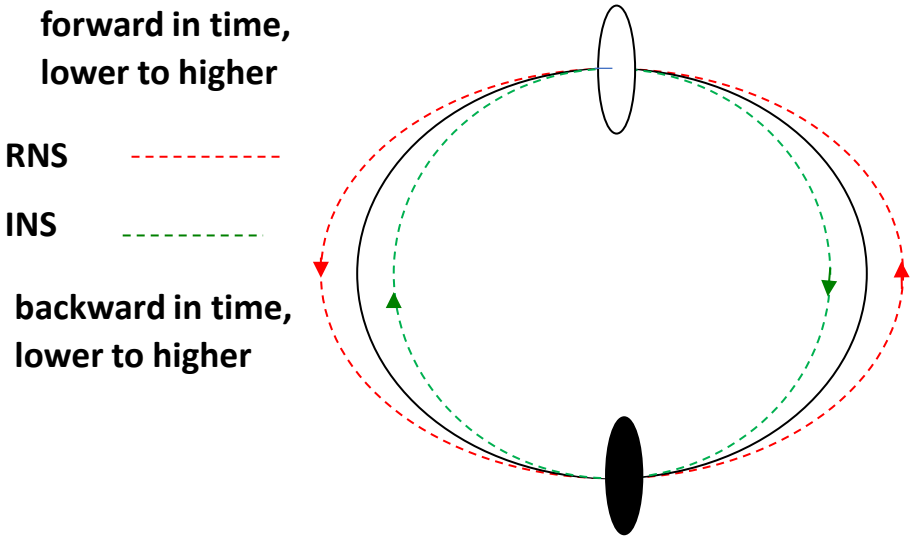
- ED mode is bimodal because here absolute rotations follow same in dual perspective. Here, rotations are in same direction when witnesses are in crossed-face-lie in two poles.

- FD mode is unimodal because here finite opposite rotations (**p**|**m**) follow opposite surfaces in same perspective. Or, face-face-lie from fulcrums validate peripheral witness hold at BN-BN along equatorial axis where Re open individual cosmos hiding rest others' in Im.

- Evolution of rational (RNS) and irrational (INS) number systems in 1st order fast/>c 1D (c.f. mixed and 2nd order slow/=c 3D) out of Real-Imaginary number systems happens by π-chopping (180^0) under joint group untwist operation in odd D.

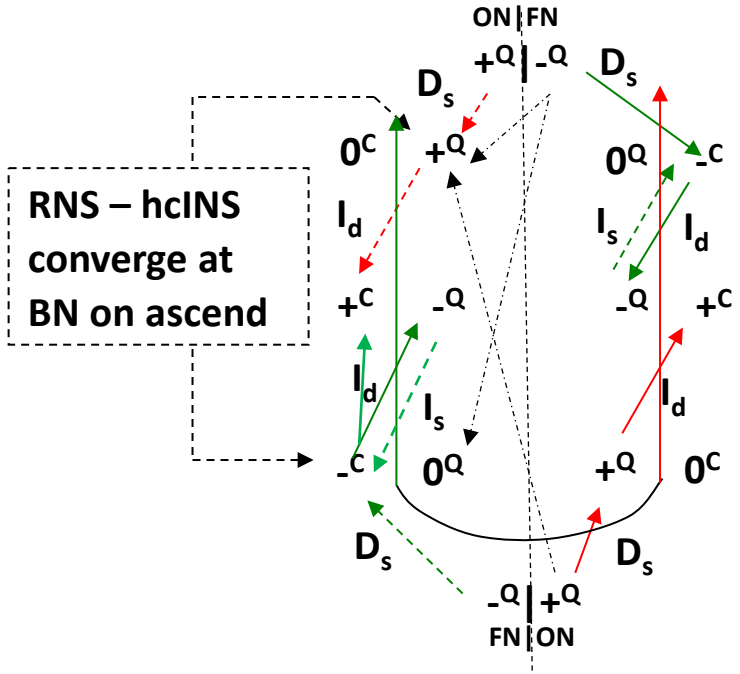


1D Model



$\hbar$ (h/2π) complementation of RNS and INS bridges even any gap in singularities.

- At BN in 1D, system trajectories tend to change surface-path but PT-symmetry reverse them readily. So RNS always run along convexity clockwise while INS along concavity anticlockwise. This oddity is 1st step exclusion. 3D holds 2nd step exclusion.



In 3D: Classico-quantum worlds

I ≡ Increase; D ≡ Decrease; s ≡ solidarity; d ≡ diffusion of position (red) or momenta (green) in EDS.

Number system in π-chopping in 3D

INS^C / Re^C >| RNS^Q / Im^Q

- $+^Q$ and $-^Q$ points of '0-∞ conjugate' transcend to inversed sensory polar antennae ($+^Q$ & $-^C$) on D_s with equatorial split of gravity by π-chopping or group untwist operation.

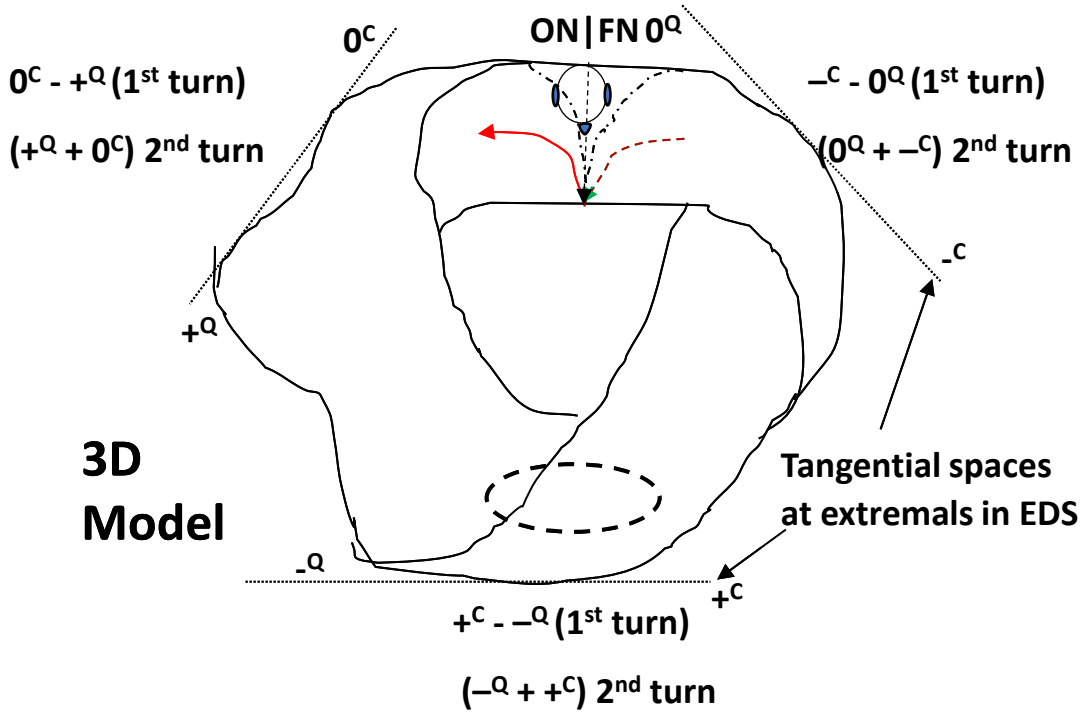
- INS has two components : Finite or head (hc) and infinite or tail (tc) components. Decider (Back-Back/B-B) hcINS of singularity on D_s unites with tcINS ($-^Q$) at polar region at FN end to form hybrid (PT-symmetry) irrational, $-^C$ (INS).

- Polar RNS and hcINS ascend and converge at equator in simultaneity to configure finite primes and antiprimes on the background of current Infinite Prime ($+^C$, 2^{nd} order Re) or local space. All tcINSs collectively determine Infinite Antiprime or local time ($-^Q$, 2^{nd} order Im). Nontrivial '0' of Classico-quantum measurement ($-^Q0+^C$) is discrete Euclidean space (mult.) in BN is of 2^{nd} order.

In Null order-‘0-∞ conjugate’ diffuse Re|Im create infinite polar freedom vertically. Null Field ensure absolute equatorial freedom of 2nd order Re|Im horizontally. In 3D finite processing of information, **p**|**m** with consolidated beginning are suitable replacements of Re|Im.

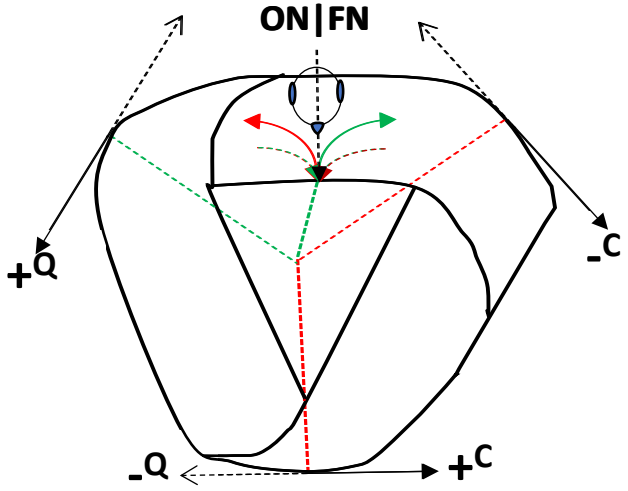
Entrapped Gravity bosonic space, in 3D, restricts polar freedom by warping translation space (Note: Gravity abhors absolute churn; plays in between in rotational space). Hence, Null order Re|Im are transformed into absolutely consolidated p point ($+^{Q}$) in ON| m point ($-^{Q}$) in FN respectively (Mixed Singularity). Alternate **p**|**m** vectors start closer to poles are consolidated mixed orders: RNS ($+^{Q}$)|INS ($-^{C}$). They orbitally ascend on diffusion; connect null derivatives (pseudovectors) of the beginning and end; thus, advance towards polar points periodically.

Incorporated gauze bosonic space restricts equatorial freedom. Optimally diffused $+^{Q}$s|$-^{C}$s in incompressibility at BNs ascend diffuse towards infinite 2nd order Re|Im, P↑ ($+^{C}$)|AP↑ ($-^{Q}$) of BNm (Prime scalar|pseudoscalar: p|m). hcINS is the decider (free Gödel - incompleteness) behind ^{C}|^{Q} attributes. In 1D RNS/convexity/+ is partitioned from INS/concavity/- by PT-/hcINS; hence, can never mix and match but in 3D they can form mixed and 2nd order sub-elements.

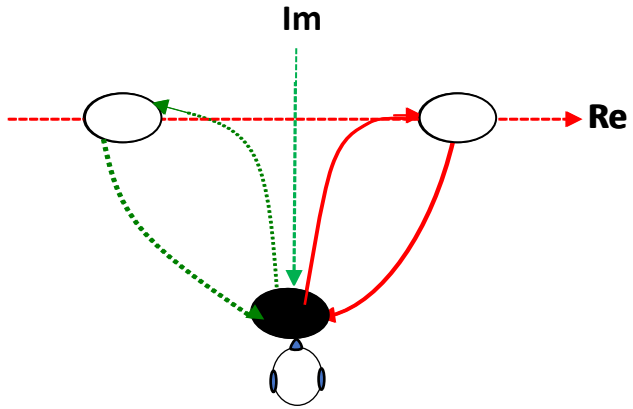


- Basic element of 3D M-strip are trinary codon (input-media-output). The two sub-elements as two hands spread towards surfaces add classical (convexity or exposed) or quantum (concavity or hidden) attributes. In case of energy wing, inputs are quantum and outputs are classical. Reverse happens in case of gravity wing. Here, contrary to 1D-case, rational are hidden and irrationals are exposed.

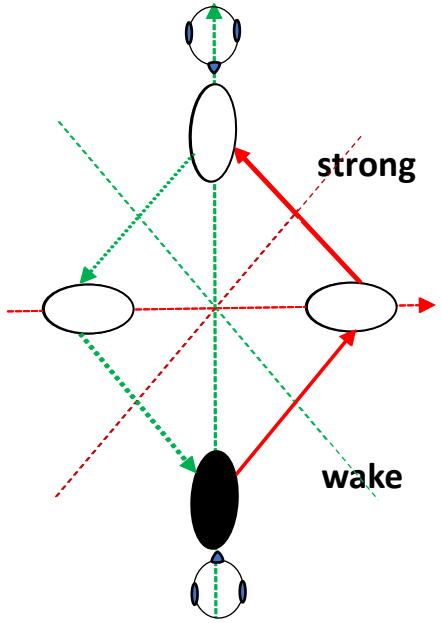
- Bases are tensors and media are twistor/untwistor and spinor/unspinor; e.g., + in tensor designate : “position,” “visionary,” “objective,” or “entropy” whereas + in media designate diffusive $\mathbf{p}\uparrow$ or entropy (clockwise or fwd). In case of ‘-’, all reverse. Twistor conserves the untwisting both in function and in direction at system fulcrum.



a. Real Strip (2D)



b. Twined EDS (unstable fermion in 3D)



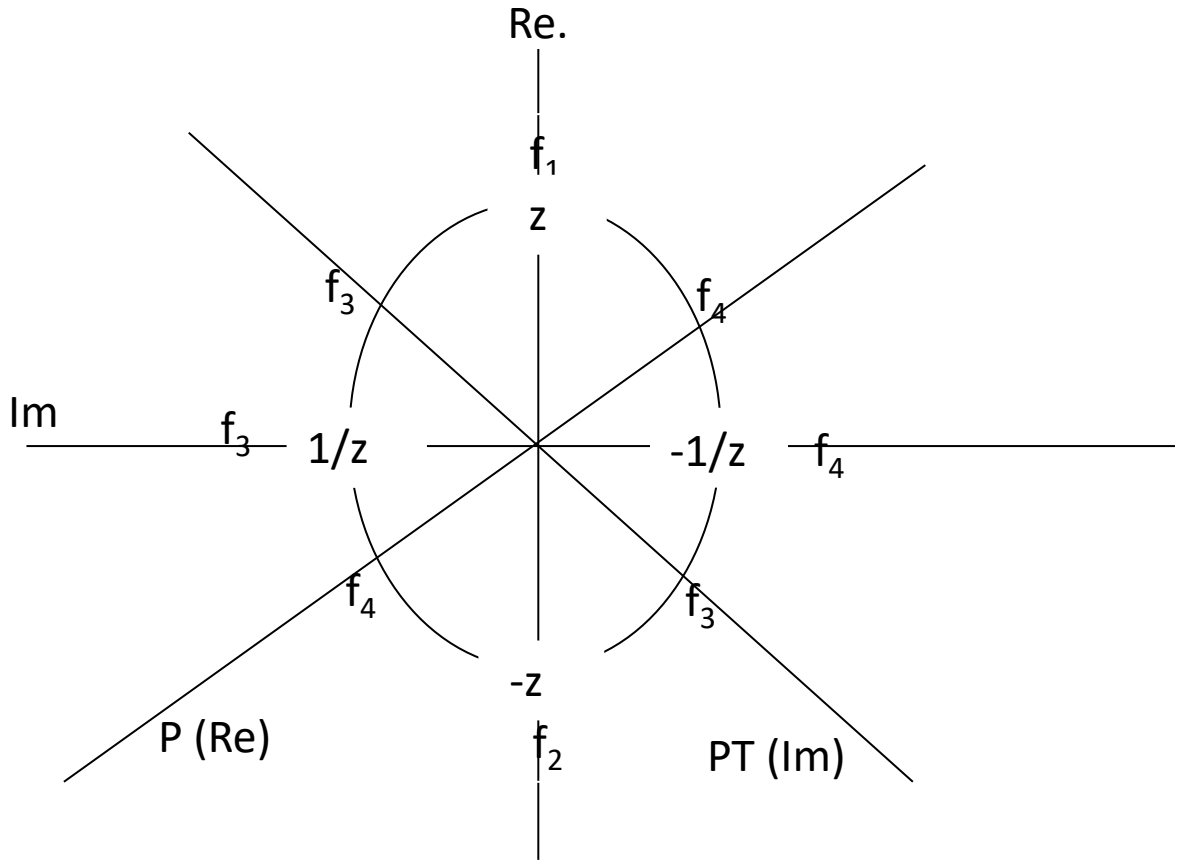
c. Untwined EDS (4D)

Dispositions open up in Complex Möbius Field

(shown in self with hand references)

- a. i) Basic natural form ii) Support basis vectors of Geometric Algebra.
- b. i) FD-phases ii) Homologous to Lorenz attractor and electronic field.
- c. i) Complex Möbius Functions ii) Equivalency with quaternion space.

Möbius group of complex functions of uncompromised GDS in GDS strip (polar execution: Re / f_1-f_2)

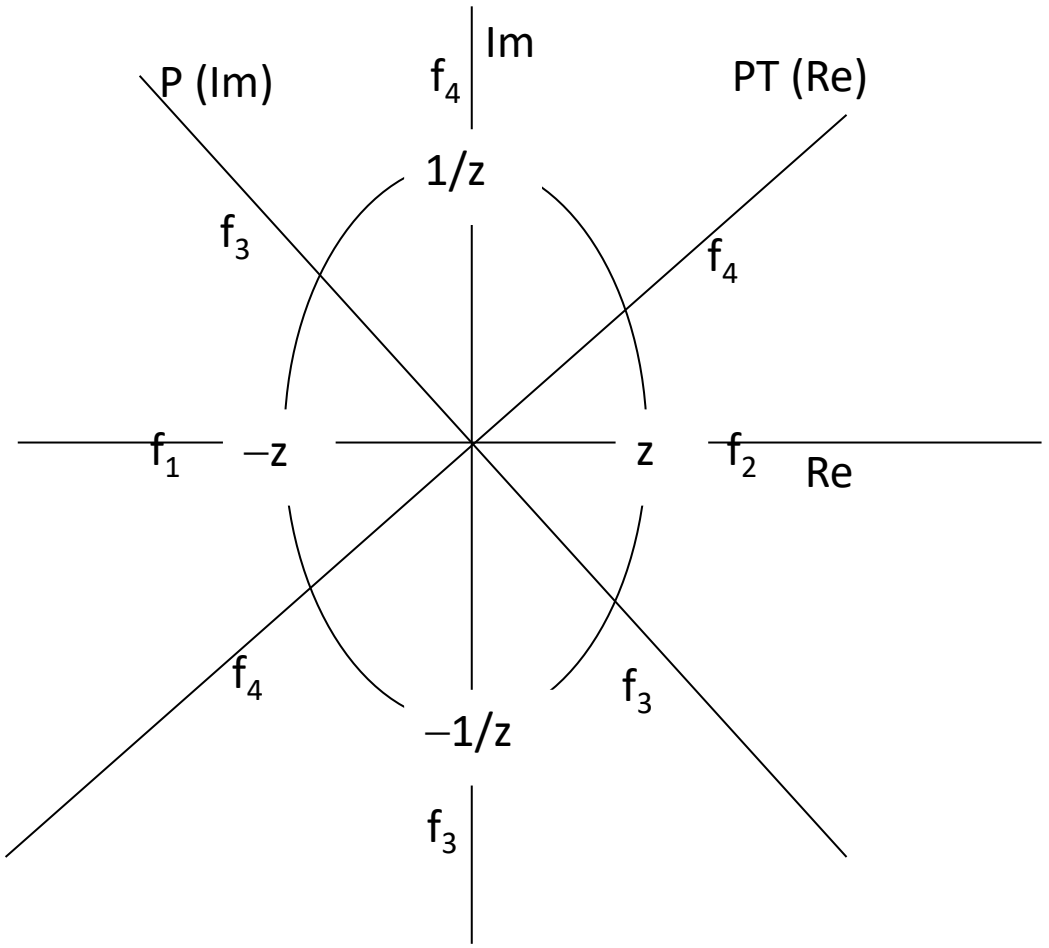


0	f_1	f_2	f_3	f_4
f_1	f_1	f_2	f_3	f_4
f_2	f_2	f_1	f_4	f_3
f_3	f_3	f_4	f_1	f_2
f_4	f_4	f_3	f_2	f_1

Table-1. Composition table in GDS. o indicates a group addition or multiplication operation.

$f_1(z) = z$, $f_2(z) = -z$, $f_3(z) = 1/z$, $f_4(z) = -1/z$ … $f_1(z) = z$ is the identity element.

Möbius group of complex functions of EDS in EDS strip.

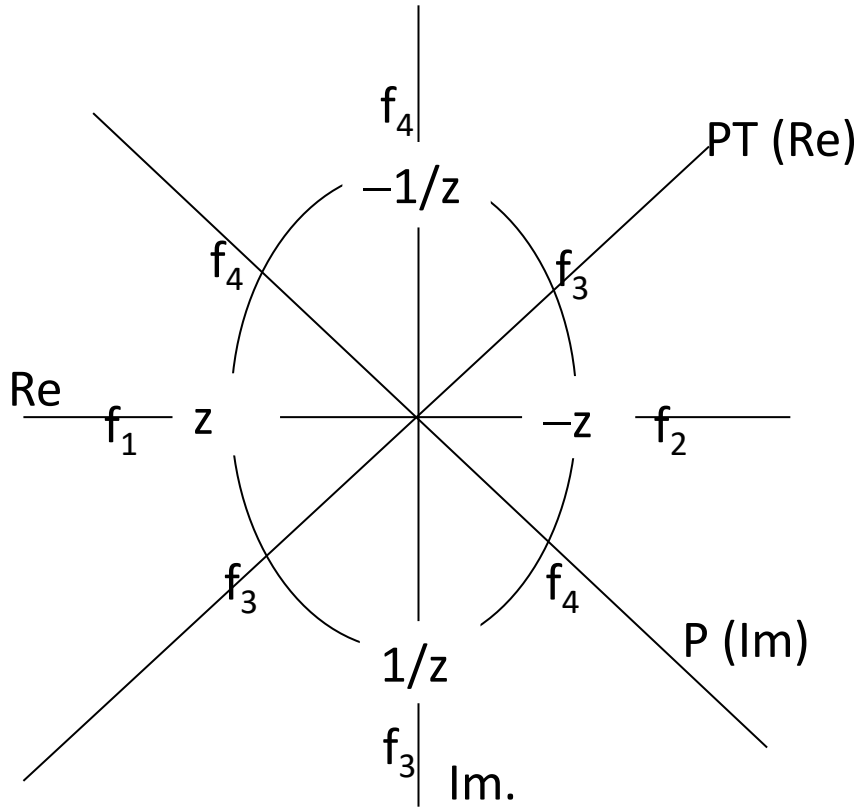


f_0	f_1	f_2	f_3	f_4
f_1	f_2	f_1	f_4	f_3
f_2	f_1	f_2	f_3	f_4
f_3	f_4	f_3	f_2	f_1
f_4	f_3	f_4	f_1	f_2

Table-2. Composition table in EDS. $f_2(z) = z$ is the identity element.

$f_1(z) = -z$, $f_2(z) = z$, $f_3(z) = -1/z$, $f_4(z) = 1/z$ ... ED accepts FD diagonally.

Möbius group of complex functions of compromised GDS in EDS strip



$f_1(z) = z, \quad f_2(z) = -z, \quad f_3(z) = 1/z, \quad f_4(z) = -1/z$

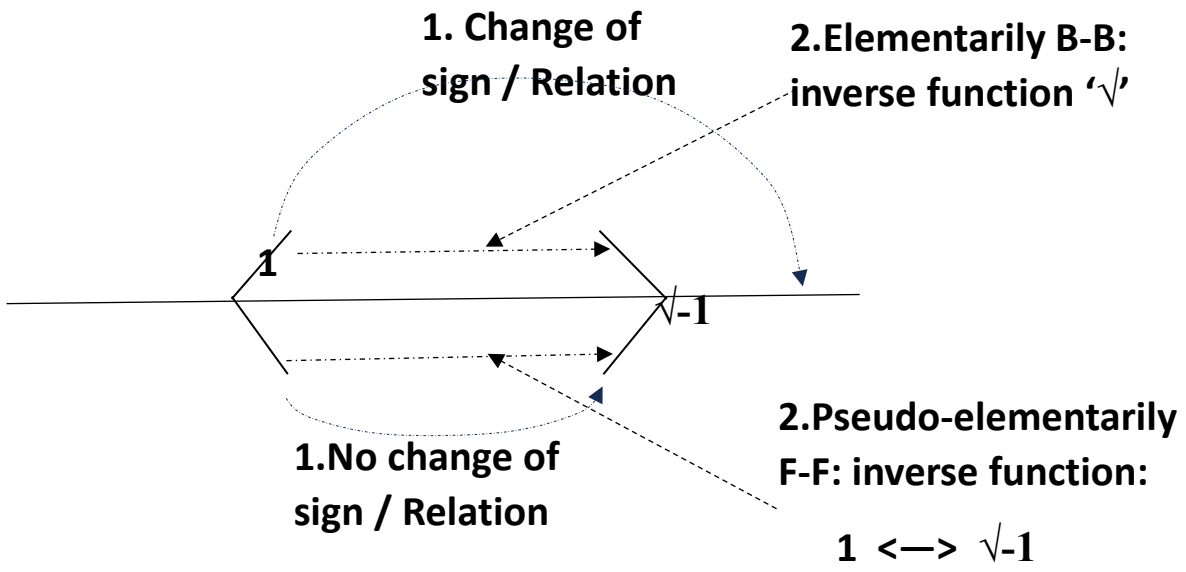
- 540^0 or 3D anticlockwise rotation of uncompromised GDS frame axes-wise fully compliment (c.f. 1D) within EDS strip where PT-axis must be Re one. So, 3D is the ideal dimension for self-organising Bio-evolute where duality is the outer modalities of central unitarity.

- Pseudo-elementary (FD) rule: In GDS inverse Möbius function f_3 or $1/z$ designate transformation of Re (±1) to Im (± √-1) or vice versa where signs aren't changed i.e., commuting or F-F (change of sign occurs in case of f_4 or $-1/z$).

- But in case of normalization of unitary function, z represent 1 (Re unit) and its inversion (1/z) define the transformation of 1 to + √-1 (Im unit) or vice versa where there is change of sign as well as imposition of transformation function i.e., 'root over function' (anticommuting or B-B: order of operation '-', '√' on '±1'; cannot be reversed) – Elementary (ED) rule.

- So, when one goes to normalize such basic units of elements, it also becomes self-evident that, here, the complex inverse function in CMF is simply a 'root-over function.'

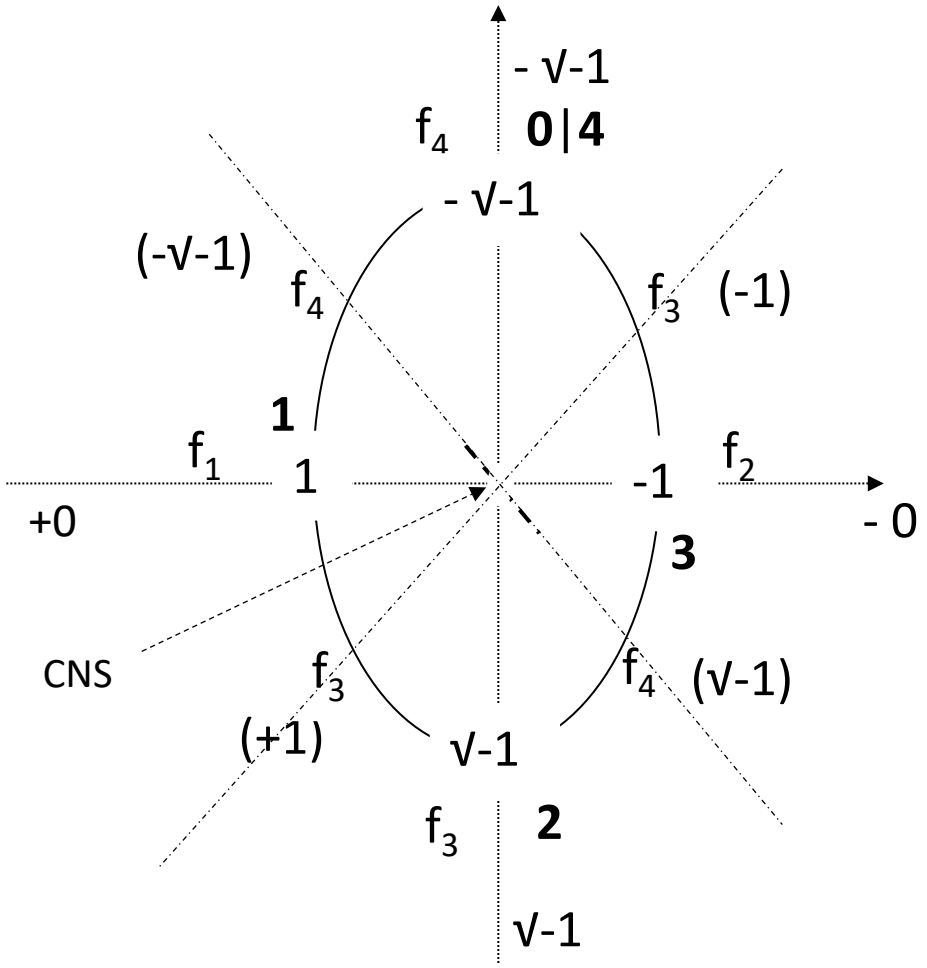
- Thus, elementarily or unitarily in GDS f_3 inverts the function with change of sign i.e., sleep or strong or PT symmetry (B-B) whereas f_4 inverts only the function i.e., wake or weak or P symmetry (Face-Face, F-F). In contrast, in case of EDS f_3 is weak symmetry and f_4 is strong one. √1 = ±1 (PT) label ±1 axes as strong one.



Definition of F-F and B-B relation between 1 and √-1 in CMF under Elementary and Pseudo-elementary perspective

- Functionally F-F relation is additive and B-B is multiplicative. These relate more distinctively in perspectives: elementary (ED) and pseudoelmentary (FD). Here, they belong to opposite group is clearly evident. What appears additive in FD- turns multiplicative in ED-. Note: FD program handle two phases: FD - orbital (vectors – **p**|**m**) and ED – equatorial (scalars – p|m)

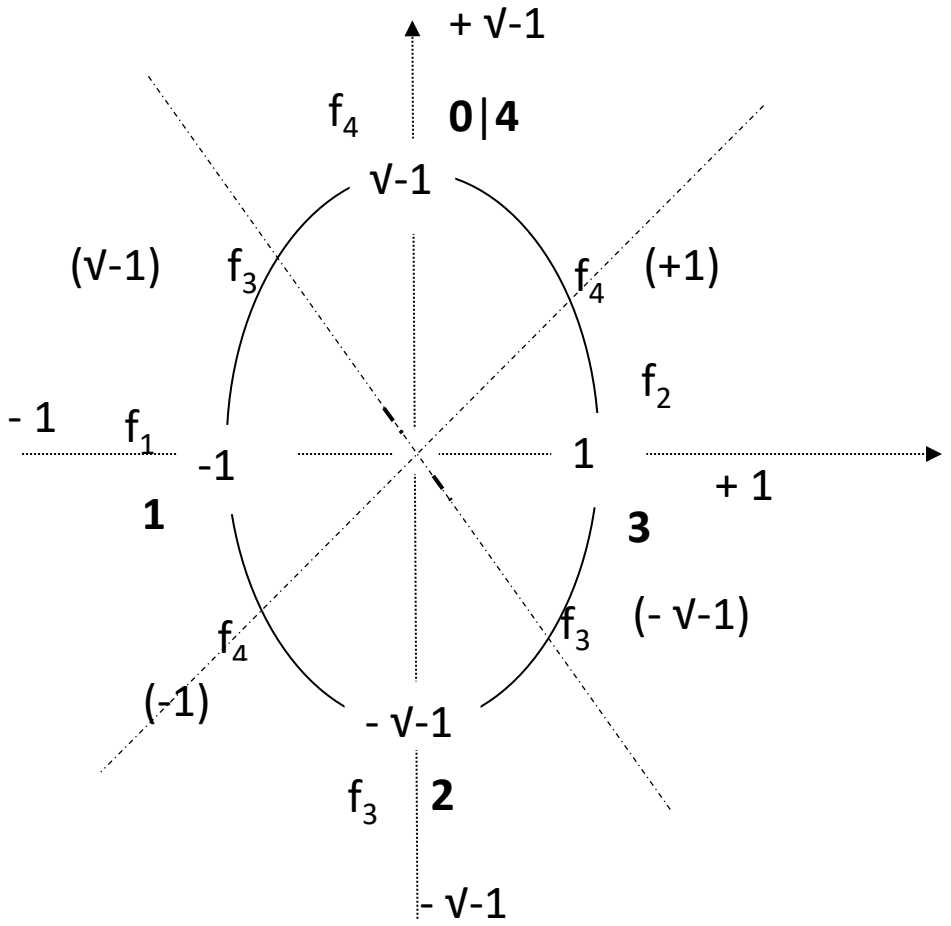
- Hence, these relations behave in CMF as complex collage. It is conventional that relation between operators in sensory wing should be considered in FD perspective whereas in motor wing they should be assigned in ED or unitary perspective. Nevertheless ED relation is fundamentally independent in comparison to FD one.



Compromised GDS supported on odd ED

(at CNS '∞' faces front & '0' hides back)

- The GDS fulcrum is on 0D|4D-null or levity null (0|∞ or ON|FN) and EDS fulcrum is on 2D|2D null or gravity null (∞|0 or FN|ON). They are mixed singularities on 0-curvature.
- GDS (INS input at f_3 2D; INS output f_4 2D) continue in periodic ascending cycle (720^0) anticlockwise towards highest diffused momentum or unknown past (f_4 or 0^C or Im) along both wings: sensory and next, motor.
- This negentropic path $\mathbf{m}\uparrow$ runs as ascending linear momentum (mv) that may be considered as partial derivative of kinetic energy ($\frac{1}{2}\mathrm{mv}^2$).



EDS supported on odd ED.
(at CNS '0' faces front & '∞' hides back)

- Complimentarily, EDS (RNS input at f_3 0D; RNS output f_4 4D) continue along position diffusion clockwise (720^0) in periodic ascending cycle towards highest diffused or unknown future along both wings: sensory and motor.

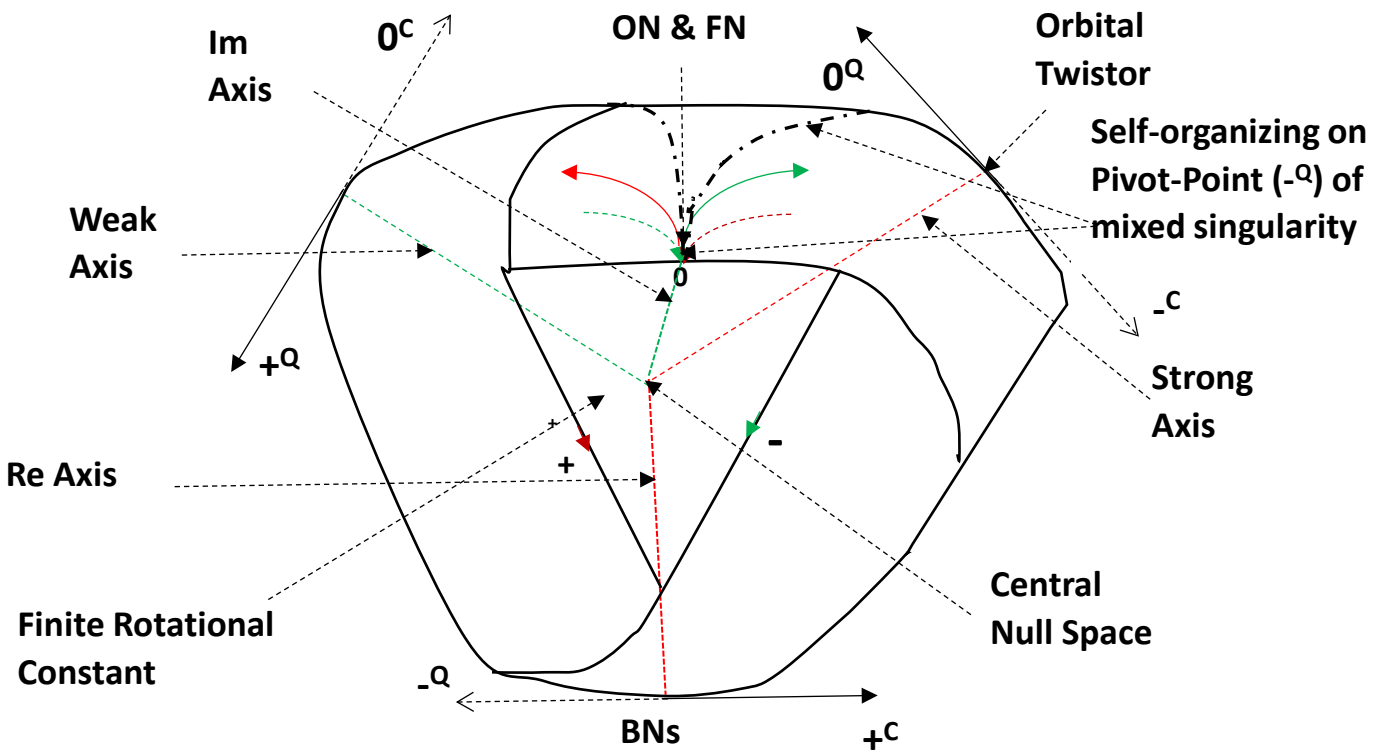
- Its entropic $\mathbf{p}\uparrow$ (position vector) follows real drag of tachyon towards highest RNS (f_4 or 0^Q or Re).

- In group untwisting, the motor FN hides behind sensory ON in levity (North) pole and motor ON hides behind sensory FN in gravity (South) pole.

- ED axes (fixed in both systems: i) Polar, bimodal, B-B, even subconsciousness inclusive all valid probabilities ever possible (deterministic), Im axis between $f_{4,}$ m-point & $f_{3,}$ p-point as translational space define K and ii) Equatorial, unimodal, F-F, odd consciousness, exclusive truncated probabilities (stochastic), Re axis between f_1 & f_2 ($0 \leftrightarrow \infty$) as (un-)spinor space, define V. ED axes support mixed FD axes (unfixed: $f_3 \leftrightarrow f_4$ in GDS $\leftrightarrow$ EDS) diagonally. Hence, derived Re and Im FD axes out of ED axes are basically complex in nature. They hold both components of null derivatives: diffuse ($f_4/0^C/0^Q$ or ∞^Q) and consolidated ($f_3/+^Q/-^C$).

- Complex Möbius functions are orbital vectors pendulate both ways rotationally invariant (neutralising complementarily), clockwise fwd and anticlockwise bwd. Null derivatives are the beginning and end in both cases: **p**: $(0^C) +^Q f_3$ 0D → $(0^Q) f_4$ 4D, PE↑ - diverging spiral outside towards '∞' ... & … **m**: $(0^Q) -^C f_3$ 2D → $(0^C) f_4$ 2D, KE ↑ - converging spiral inside towards '0 → heavy momentum' in rotational space; they inch towards mixed singularities.

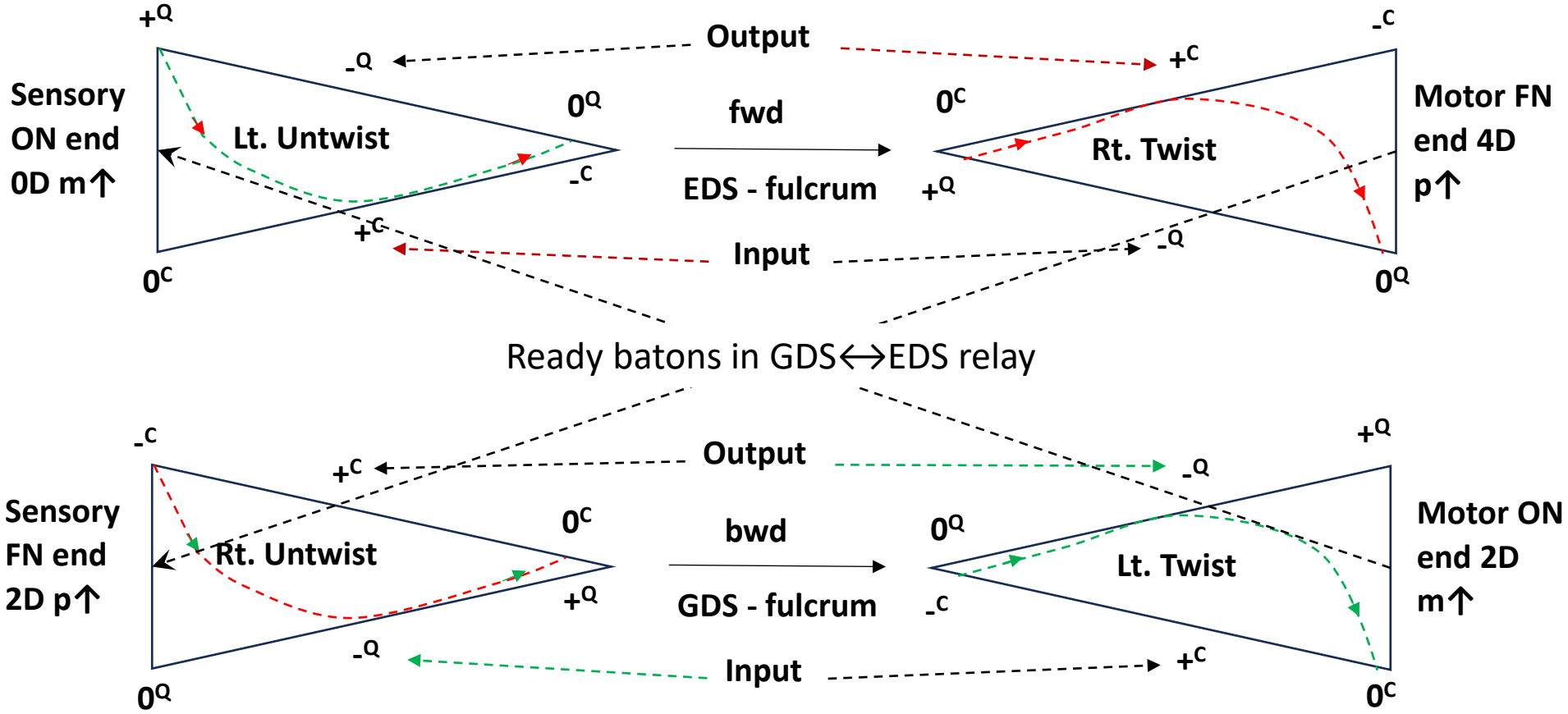
- In CMF complex inverse functions, f_3/f_4, are root over functions - '√' that normalise Re (equatorial/horizontal) and Im (polar/vertical) unitarily in swirling topology of Möbius strip.



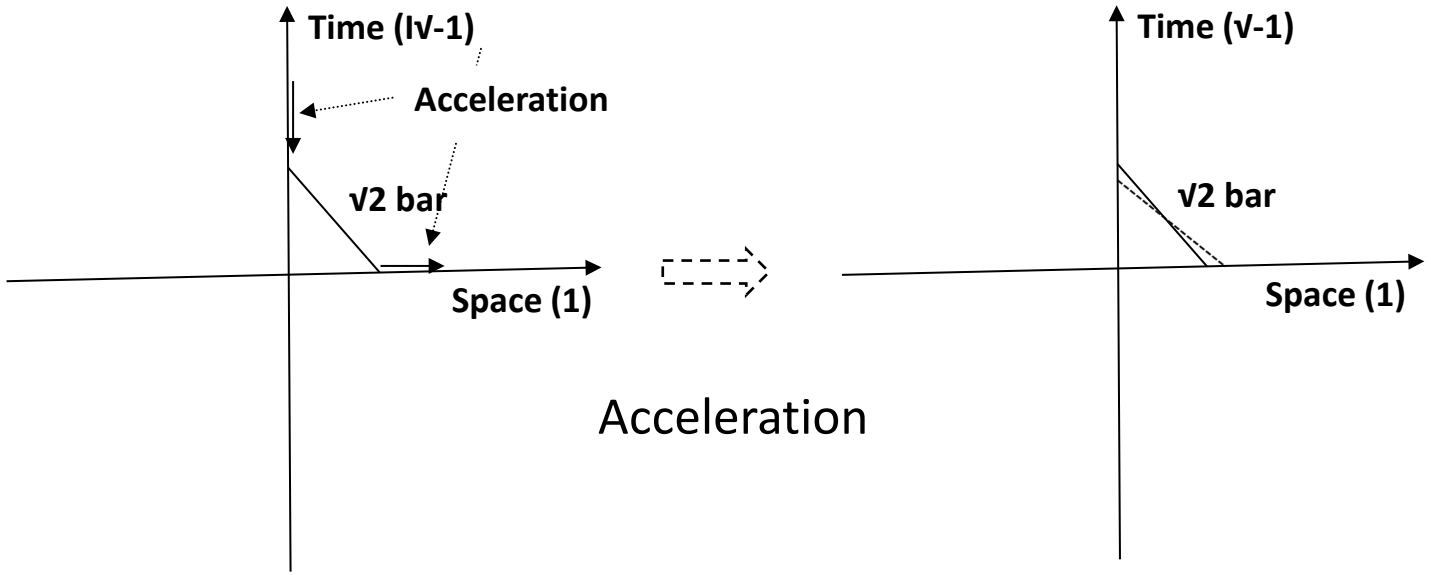
Self-organized EDS strip in Real disposition

- 3D basic elements, 'codons', having three sub-elements. Complex Möbius functions continually get transformed conserving symmetry. They gather, process, and release information depending upon the media, middle sub-element: the twistor / untwistor or spinor / unspinor and tensors. Continually codon disposes itself orthogonal to the plane of paper.

- Medium always remains within the paper thickness. Polar media are twistor/untwistor; equatorial media are spinor/unspinor. Other two sub-elements are metric tensors are shown: in external side classical (convexity or exposed extremals) and in internal side quantum (concavity or hidden extremals) of tangential axes; expressed in superscripts.

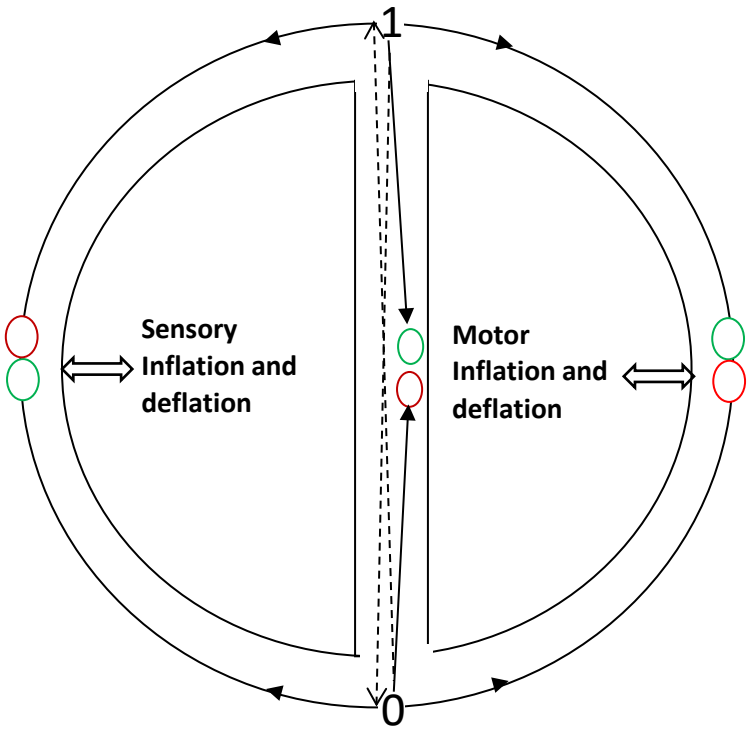


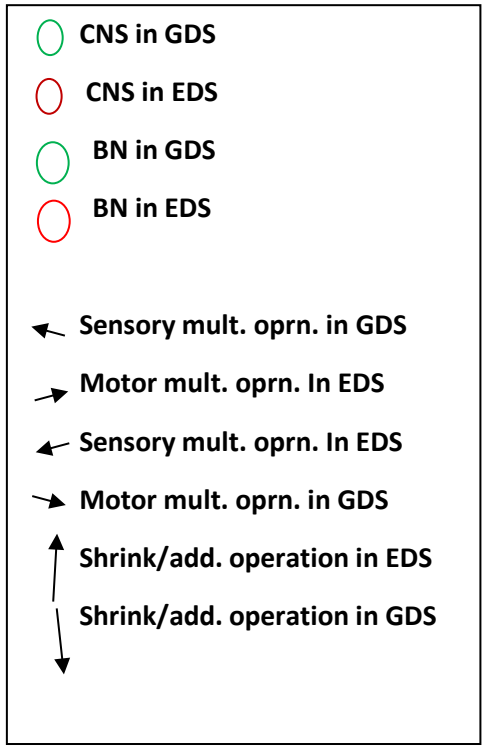
- Processing of Cl-q inputs and outputs by distoproxymal untwistor and proximodistal twistor along Möbius winding topology pass baton in GDS↔EDS relay



- Both infinities of Re and Im axes are normalized with unities of the same magnitude. So, these two are essentially orthonormal functions.

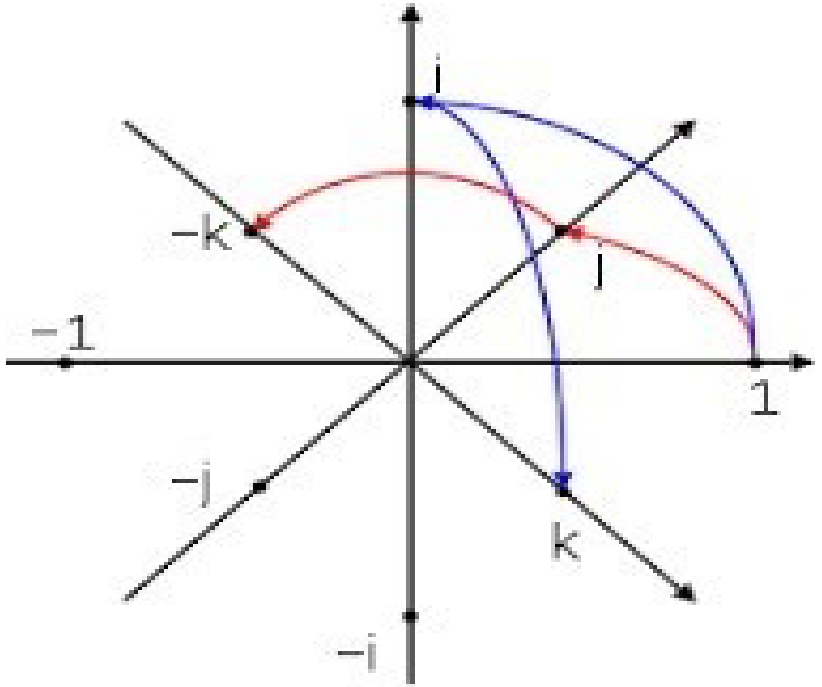
- Acceleration invokes decreased slant (and deceleration brings about increased slant) of √2 bar. Normalisation of this changed status with unities of same magnitude involves length contraction and time dilation in case of acceleration. This shows that the unitary relationship between space and time under acceleration also conserves ‘root over normalization’.

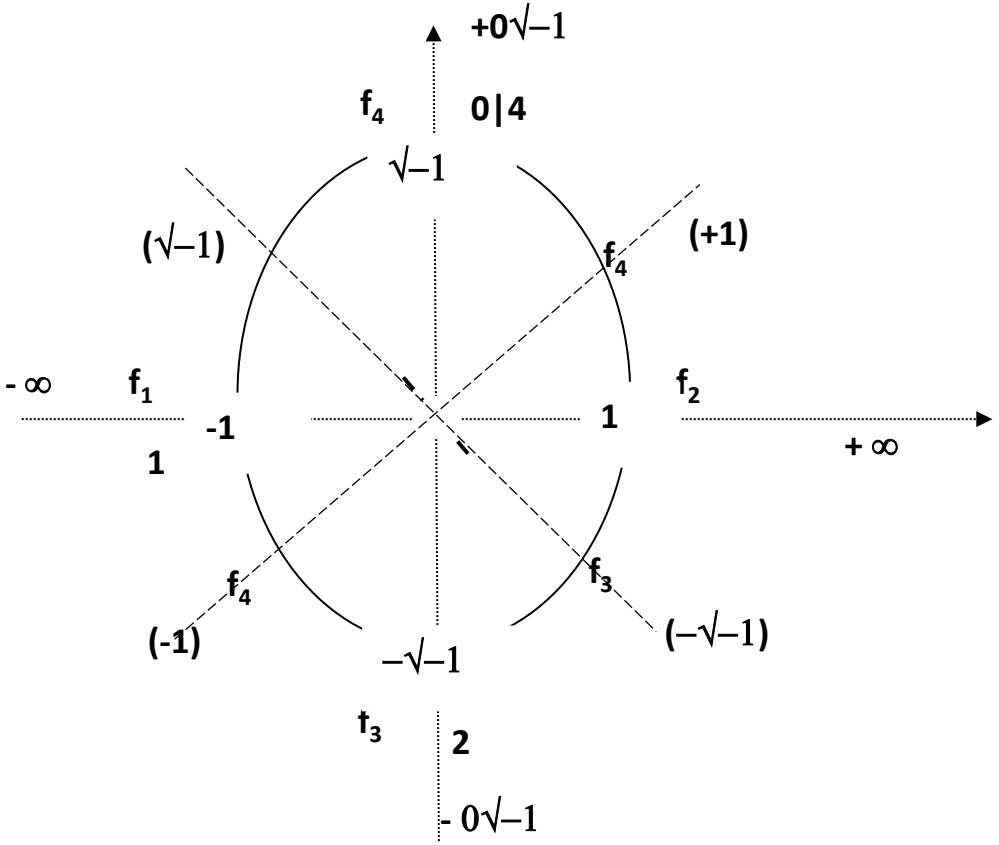




- Inertial game of stretching and shrinking of polar axis or CNS happens with multiplication and addition respectively along evolutionary journey in EDS and GDS.
- Here identity elements (IEs) are conserved as multiplication on addition in negative feedback loop.

- ….. EDS stretch clockwise (f_4) to maximum (IE-1) ….. slowing clockwise rotation (f_3) in successive GDS addition (IE-1) with shrink ….. GDS stretch anticlockwise (f_4) to maximum (IE-0) ….. slowing anticlockwise rotation (f_3) in successive EDS addition (IE-0) with shrink ….. Continue … … Orbitally IEs in EDS ($\mathbf{p}\uparrow$) and in GDS ($\mathbf{m}\uparrow$) function in bimodal ED are as: $\mathbf{p} * 1 = \mathbf{p}$; $\mathbf{m} + 1 = \mathbf{m}$; and $\mathbf{m} * 0 = \mathbf{m}$; $\mathbf{p} + 0 = \mathbf{p}$.





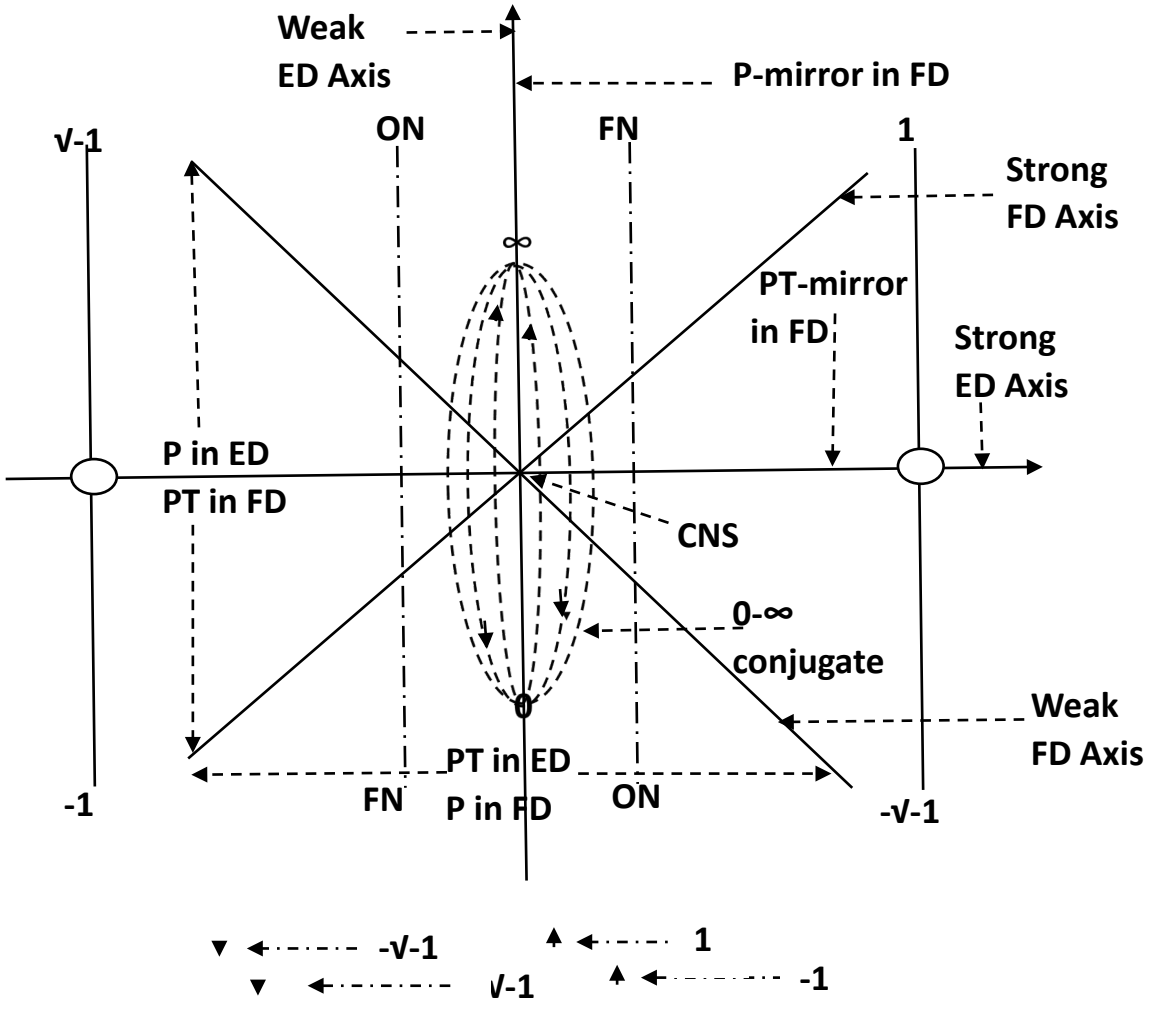
ij=k, ji=-k, ij=-ji, ik=-j, jk=i and $\mathbf{i}^2 = \mathbf{j}^2 = \mathbf{k}^2 = \mathbf{ijk} = -1$.
(valid in CMF in clockwise multiplication; in anticlockwise one sign is to be changed on the final product)

Equivalency between quaternion space and complex Möbius space

- Present evolutionary journey and volitional journey are encoded as further add-on-memory-over the previous cumulative inversions of windlasses (±**j** and ±**k**) with reducing lag on mixed singularities as hysteresis. It is noteworthy that quaternion format is universal i.e., refractory to multiplication and addition operations.

- Sensory wing enforces finite containment ($0<n<1$) and never allow the functions to reach motor absoluteness ($0\leq n\leq\infty$ or $0\leq n\leq 1$ in unitary context).

- 0-1 ($\mathbf{p}$) and 1-2 ($\mathbf{m}$) fractal domains favour dimensional crunch to 3D at merging BN (p-adic space) as bio-evolute supports self-similarity where in incompressibility condition scalar field replaces vector field (Re>Im equatorially → polar displacement of Im at CNS under absolute churn) . They are decoded elementarily as finite primes (memory element) and antiprimes (inter-relational space of Leibnitz) in 3-4 fractal dimension on the 4D background of ascending infinite Prime-Antiprime series along ED-asymptote.



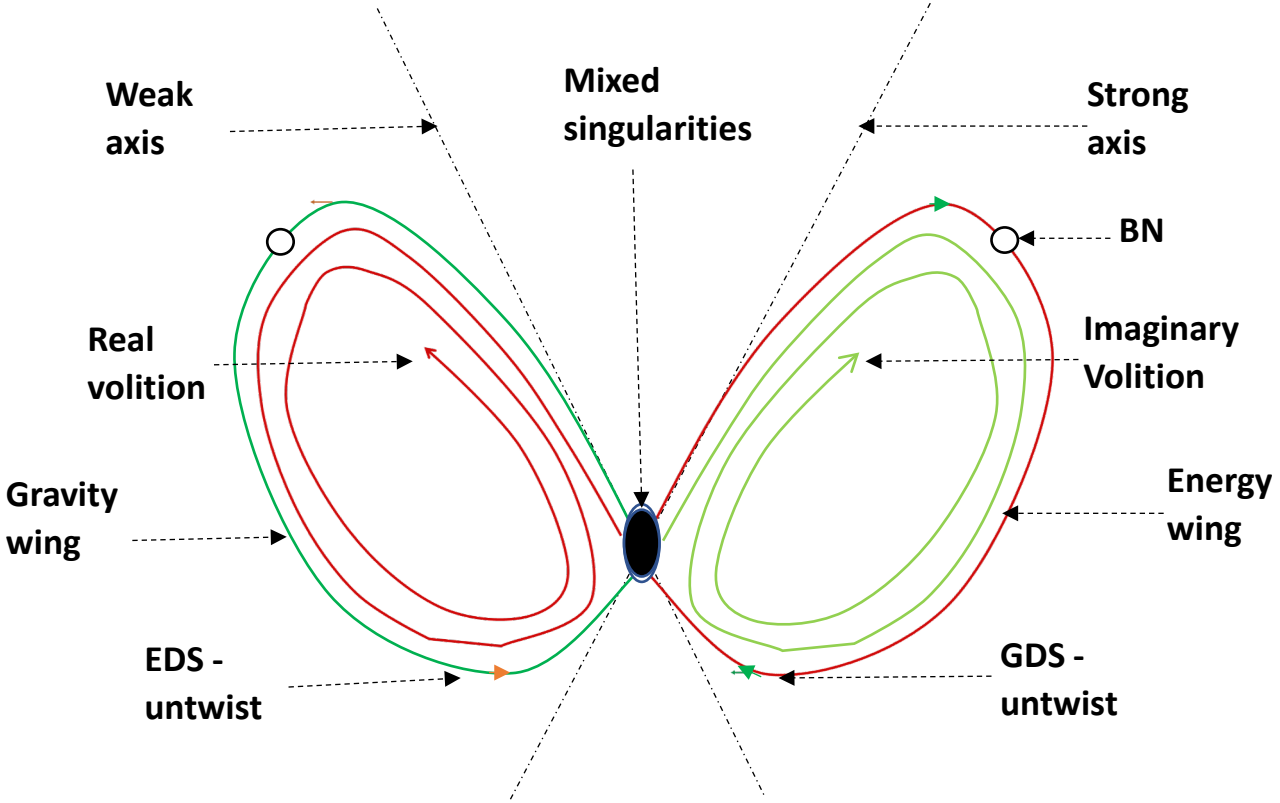
Both systems share the common frame except the fulcrum and operators' directions

- Axes: ED (mirror in FD) and FD (only ED accepts FD under Möbius complex functional rules) and Quadrants: ED and FD in both ED and FD perspective (rule) where face-face (F-F) or additive turn into back-back (B-B) or multiplicative stance.

- Particles: Elementary or hypothetical and pseudo-elementary or sentient.

- Topologically-close sensory extremals: ON/ q-Cl end ($+^{Q}|0^{C}$)/ BigBang Inflation/ Heavy momentum (curled mDs)| FN/ Cl-q end ($-^{C}|0^{Q}$)/ BigCrunch Exflation/ Heavy positions (curled pDs).

- Sleep and wake quadrants (ED-).



CMF is homologous to classical Lorenz attractor

- FD has two phases: FD and ED. FD-phase is evolutionary journey (alternative EDS-untwist and GDS-untwist) under subcritical stimulation (Superficial Awareness) with intervening tiny ED-phase. In complementary orbital **p|m** journey Re and Im can be discriminated but can't be separated.

- Volitional journey or freewill, either real (Rt. twist) or imaginary (Lt. twist) along gravity wing or energy wing respectively from the pole (opposite to the case of untwist) runs under critical stimulation until the titanic stimulation gets exhausted. Here Re and Im can be discriminated as well as separated.

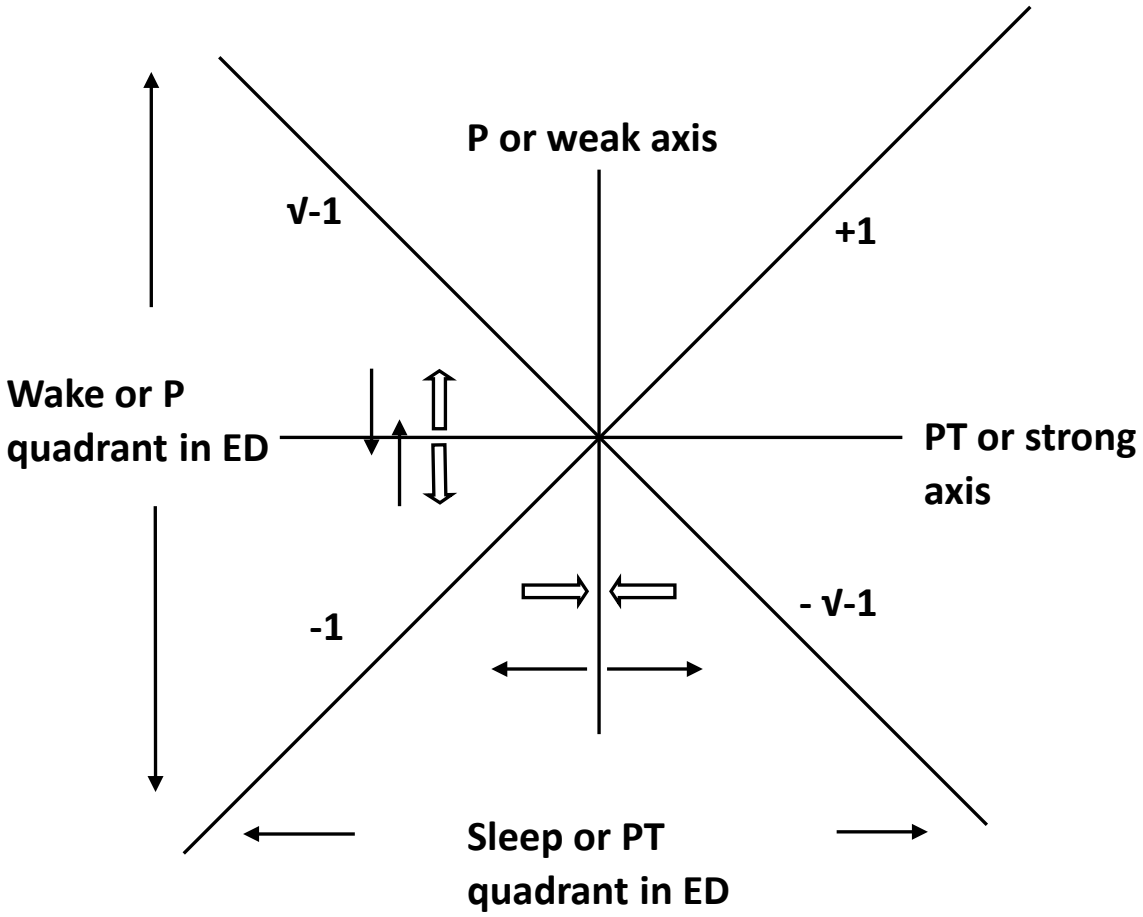
- GDS → EDS, evolutionary journey eventuates in two steps: Im axis inversion before and Re axis inversion after the ED-phase → introduces **p** ($+^{Q}$) > **m** ($-^{C}$) fluxed fwd (unimodal) by π-chopping along opposite untwistor surfaces of sensory wing → h-bar ($\hbar$) skip as lag – one walk over the other. Hence, in EDS sensory wing under untwist operation **p** walk over **m** fwd**.** In case of GDS direction of flux reverses bwd; although both advancements involve increased diffuseness either ways towards mixed singularity. Nevertheless journey both ways in ED-phase are simultaneous.

- In vortex model → ascend of every discrete **m**↑ (bottom to top) or **p**↓ (top to bottom) get skipped along 360^{0} journey of EDS or GDS respectively in the formation of sequential Poincare map in distoproximal untwist operation in sensory wings where multiplicative inverse > additive inverse operation → Lorenz attractor where N dimensional finiteness register on continue capturing N+1 dimensional infinite trajectory (P|AP) as series of discrete points along phase diagram.

- In CMF geometrically P and PT symmetries represent axes : P → weak and Im in both ED and FD and PT → strong and Re in both ED and FD. But in group activity P additive only in ED and PT multiplicative only in ED .

- In FD f_3 and f_4 symmetries designate physical execution: f_3 → denotes shrinking or addition or consolidation in both FD systems (Im and P in EDS and Re and PT in GDS) and f_4 → implies stretching or multiplication or diffusion in both systems (Re and PT in EDS; Im and P in GDS). In ED f_3 /f_4 denote p/m points of mixed singularity.

- Exact events are secretly fenced by FD-windlasses (ED determinism satisfy all valid probabilities) within '0-symmetry'. This back-back entanglement under even D later may get settled in face-face odd D in space-time. However, individual change under critical volition is generally of insignificant importance in universal context because it is journey where almost rest other systems are in subcritical evolutionary journey.



face-face wake (ED weak) or P-symmetry in equatorial quadrant

face-face wake (FD weak) or P-symmetry in polar quadrant

back-back sleep (ED strong) or PT-symmetry in polar quadrant

back-back sleep (FD strong) or PT-symmetry in equatorial quadrant

ED relation is more fundamental in complex collage

Re axis inversion begins and Im axis inversion ends ED-phase (EDS → GDS). Order changes in reverse case.

Some cognitive states in combinatorial symmetries of CMF:

- Classico-quantum (Cl-q) measurement: FD wake (√-1…1) in sensory equatorial (eq) quadrant and ED sleep (-√-1…-1) in motor eq quadrant in ED-phase in CNS universally.

- Cl-q mapping: under PT-symmetry FD wake (√-1…1) in sensory eq quadrant and ED wake (1…-√-1) in lower polar quadrant in FD-phase in EDS, are referenced at CNS.

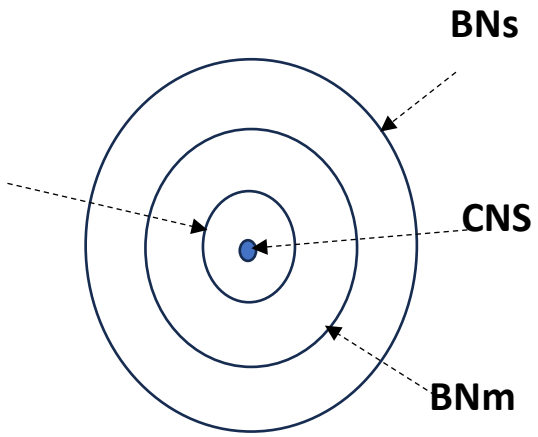
- Awareness: ED wake (±√-1… ∓1) in sensory eq quadrant and FD wake (-1…-√-1) in alternate polar quadrants in FD-phases of alternate systems.

- NREM sleep: FD sleep (±√-1… ∓1) in sensory eq quadrants and ED sleep in (-√-1…-1) in alternate polar quadrants in FD-phases of alternate systems.

- REM sleep: FD sleep (±√-1… ∓1) in sensory eq quadrants and FD wake in (-√-1…-1) in alternate polar quadrants in FD-phases of alternate systems.

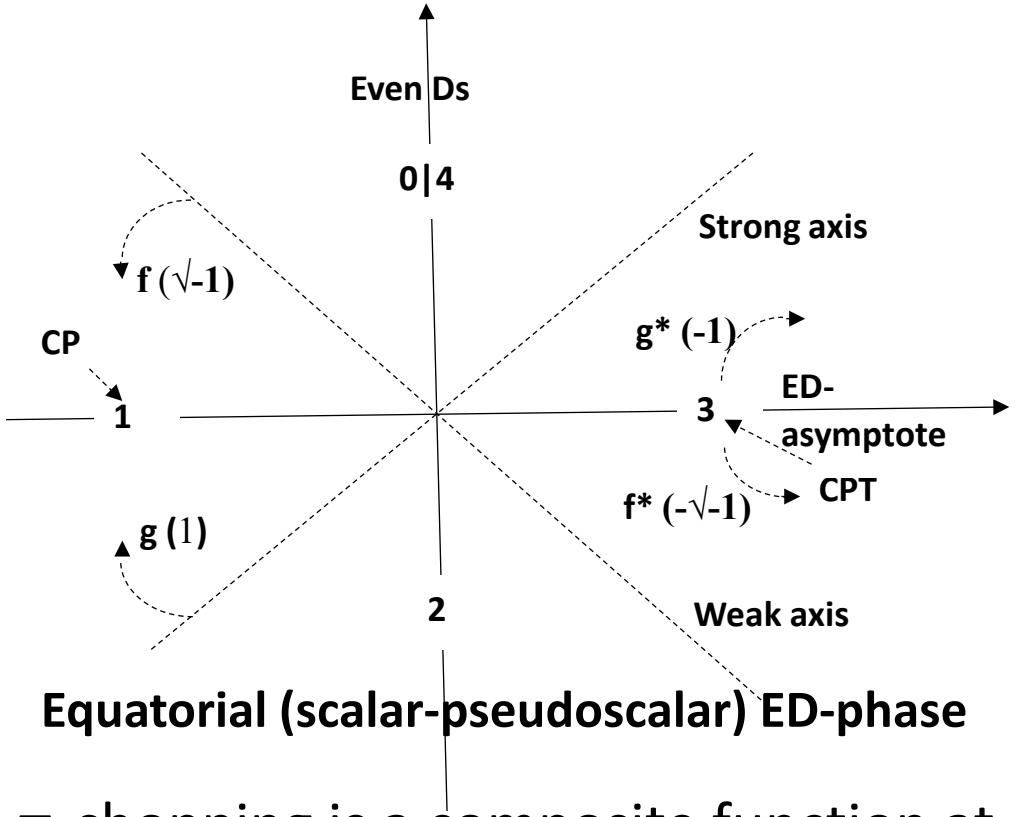
Equatorial stretch in spinor/unspinor space

Universal inversion of FD windlasses one at start of CNS of ED-phase the other at its end in GDS ↔ EDS



- Stretch between incorporating highest infinite P|AP (as BNsensory on N) under subcritical stimulation and current unstimulated P|AP (BNmotor on N+1) is the superficial coat i.e., ±>>0 multiplicative (selective randomness) on the deep i.e., ±<<0 additive (to Pure unbiased randomness). P|AP = 2 (BNs → BNm in EDS).

- As C-symmetry is hidden all fundamental particles (±1|±√-1) are hidden at source. Conditional ED-phase – system untwistors* (-1|-√-1 in EDS/GDS - Hilbert linear integral operators) shift journey from sensory to motor at the end of unconditional (PT) FD-phase → absolute churn (by -1|-√-1 in BNm) → fusion at BNs by (+1|+√-1 - Hilbert linear differential operators) → conditional differential limits pseudoelementarily in the form of scalar and pseudoscalar residues (multiplicative inverse > additive inverse → finite addition - fractal economy) ready be deciphered (CP) elementarily (CPT) in motor wing.



Equatorial (scalar-pseudoscalar) ED-phase

- ED-phase is the diffeomorphism between face-face CP-symmetry [f (√-1) & g (1)] in add. sensory wing and back-back CPT-symmetry [g* (-1) & f* (-√-1) in mult. motor wing. It may be Cl-q measurement i.e., still mode. Cl-q mapping may accompany EDS-untwist of FD-phase (±1, PT-symmetry) in EDS i.e., movie mode.

- π-chopping is a composite function at doorways of ED-phase, same as joint group untwist operation, where system toggles (GDS ↔ EDS) in unit Planck's time along the beats of cosmic pulsation. In ED-phase EDS and GDS run jointly to get nullified.

- Operationally in PT-, opposite functions run alternately in opposite directions in FD-phase (clockwise and anticlockwise) orbitally but in same direction equatorially in CP-symmetry along present moments (ED-asymptote) where Re dominates over Im.

Primary joint group untwist operation

- CPT-symmetry … in Null upset Grand stimulation synchronize all sporadic stimulations ever possible, living (independent) and non-living (dependent), on dynamic Euclidean field by rare chance under Primary joint group untwist operation.

- Space-time begins in sensory on diffeomorphic motor in equatorial quadrants in Classico-quantum way (3D) where speed of light (escape velocity in complex chaos) is absolute.

- Fundamental particles (fundamental neutrino and tachyon as orbital untwistor) trap highest entropy and negentropy in consolidated (f_3) form as local Visionary $\mathbf{p}$ ($+^{Q}$) and feeling $\mathbf{m}$ ($-^{C}$) at sensory polar ends from global motor diffusions (f_4) periodically.

- Elements of all order can be categorized under Multiplicative and Additive groups.

- Objectivism and subjectivism: finite (sensory/vectors) vs infinite (motor/scalars) ones.

- Primary multiplicative inverse: complex operation on polar axis with execution along equatorial axis → Dark energy and gravity (1st order) … + … all connected individual ‘C of Julia’ are created … equatorial component of Intrinsic mass (IM) that control central processing … Deep awareness (±<<0) … IMs are all self-similar, ever possible, selective randomness (finite stretch) under nesting hierarchy out of Pure randomness (infinite One).

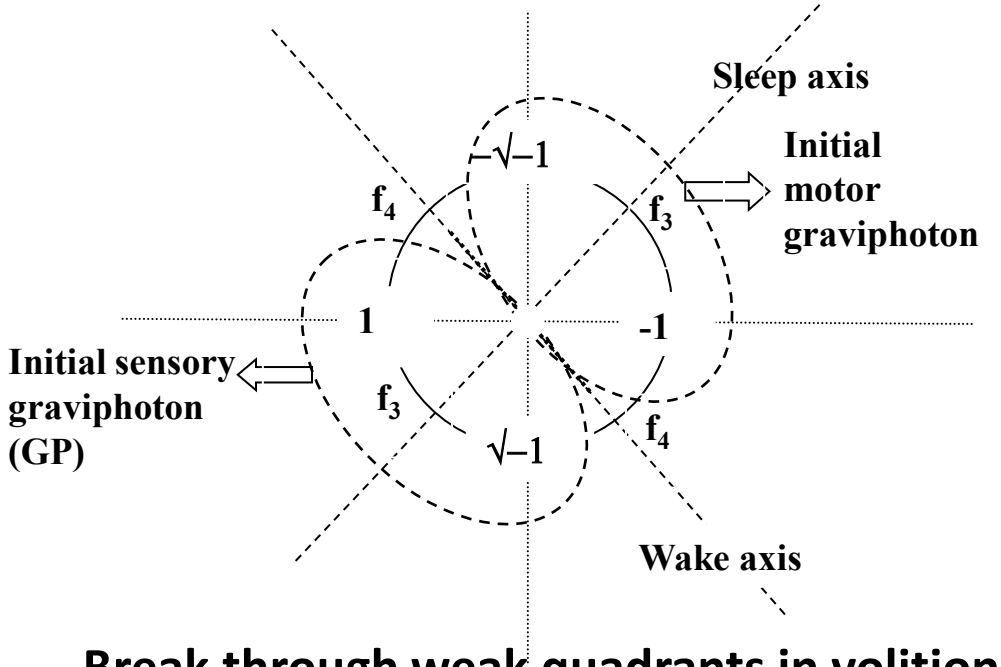
- Primary additive inverse: complex operation on equatorial axis that orbitally approximate poles → Shortening with inversion of sensory wing … Spontaneous symmetry break: 3 gauge fields (finite: weak → $0^{C} \pm +^{Q}$ & strong → $-^{C} \pm 0^{Q}$ at about the poles and infinite: EM → $+^{C} \pm -^{Q}$ at the equator) centered at sensory BN … orbital component of IM (Z*|Z) that control peripheral processing … Superficial awareness (±>>0).

- Void gravity balance the equator: i) weak or conventional gravity (origin ON), resist forward drag contribute to equatorially unstable potential component of extrinsic or physical mass. ii) strong gravity collectively resist globally diverging masses forward (→ FN); act in equator as unspinor, local time ($-^{Q}$); → intergalactic release as dark matter backward (→ ON) in 4D.

- Intrinsic mass is slanting of √2 bar that defines sensitivity and specificity of the subsystem and default tuning of windlasses (at Z|Z* = 0). This normalise Re extremals of equatorial axes with Im extremals of polar axis in the subsystem. Finite odd or matter spin of sensory association space extracts nontrivial '0' limit depending on this exclusive selective randomness out of Pure Randomness (absolute churn - neutralising ways of even D). This compose epigenomic phenotype that plays the keyboard of genotype of subsystem.

- Center of equatorial axis is set at CNS, site of common capture of universal event under nonstimulation of trivial '0'. It defines source of Bio-evolute i.e., Pure Randomness, central witness, where slanting of √2 bar is neutral (45^0). Here, y-intercept of the straight graph plotted by number of boxes touching against increasing scaling factors in log-log scale, is zero → self-similarity where BNm merge with CNS in Macroscopic quantum system.

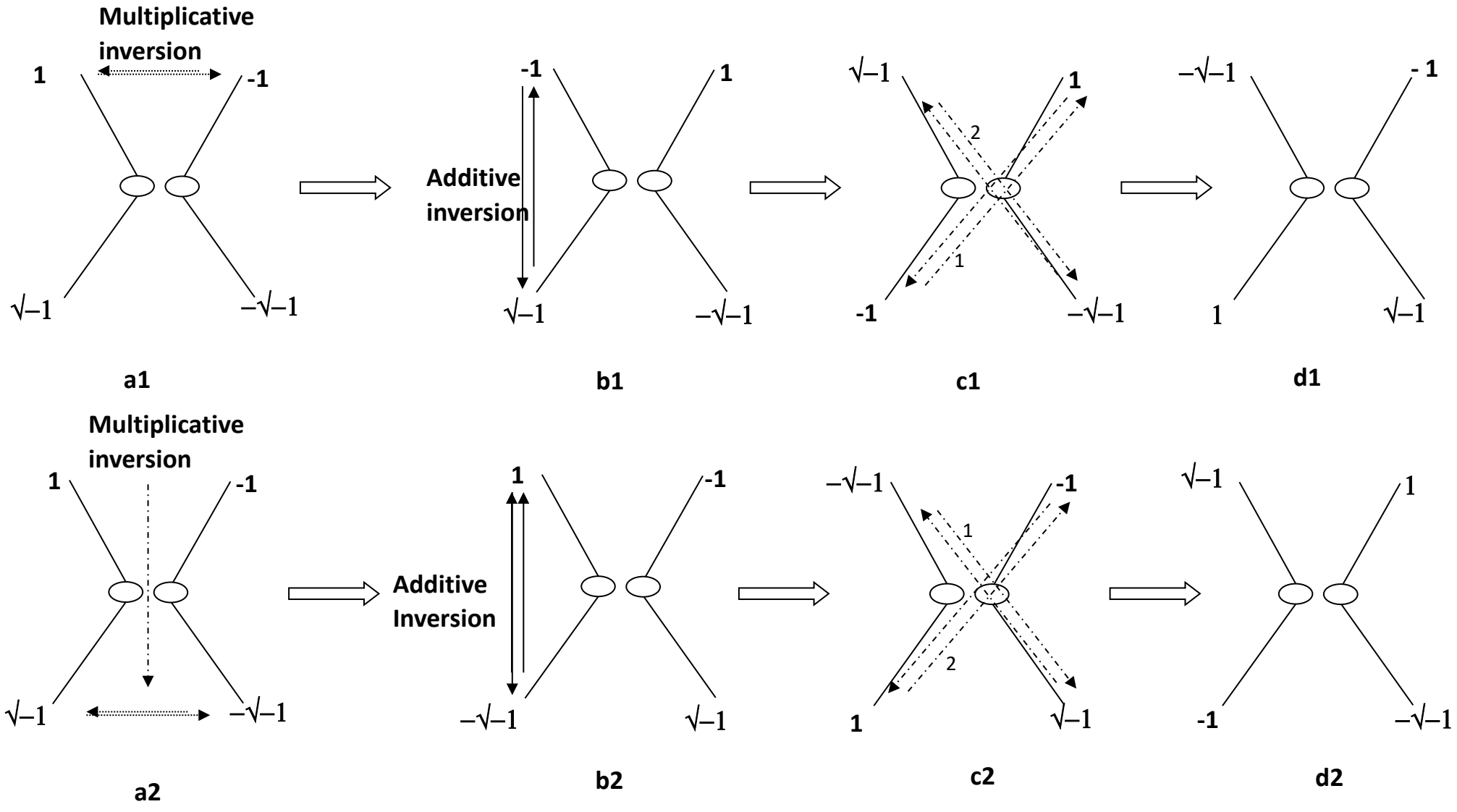
- a) 'C of Julia' a) Continuous or connected (Mandelbrot) i) Independent (living – odd consciousness) - MQS ii) Dependent (Non-living – even consciousness / reflectively odd) b) Discrete or disconnected – Borderline non-microtubular agents e.g. virus, viroid, prion.



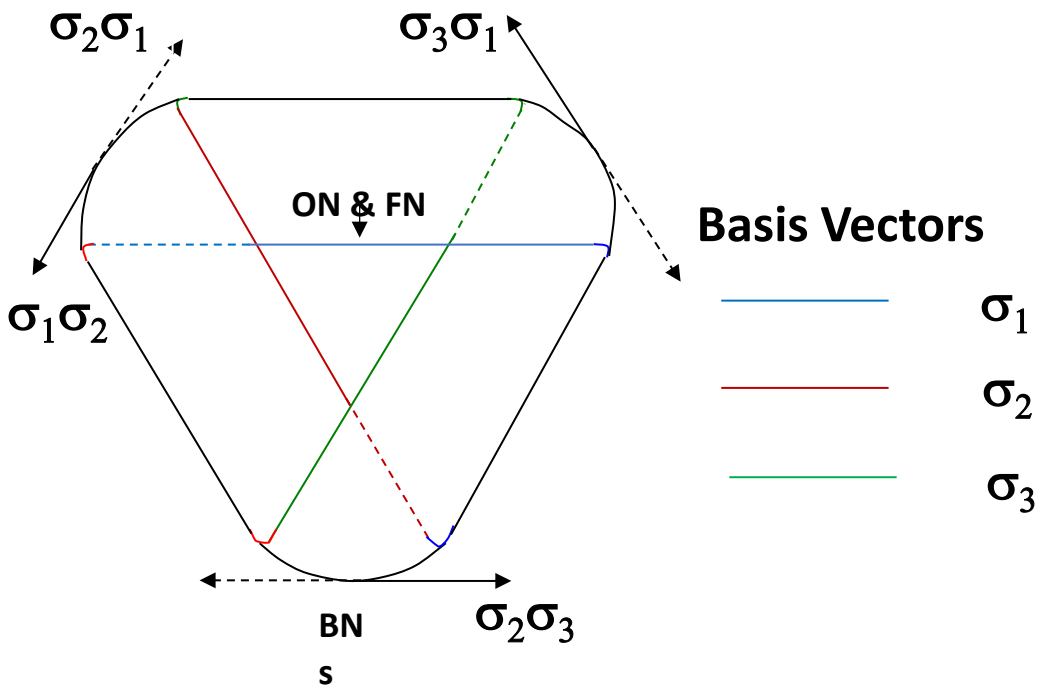
Break through weak quadrants in volition
GDS → EDS

- Bifurcation and reassembling of two halves by group untwist operation resulting shift of system (GDS↔ EDS) are two types: i) Typical bifurcation under critical stimulation. This may also be of two types: a) Primary i.e., Grand upset of Parent system and b) Initiation of volitional journey.

- ii) Silent bifurcation under subcritical stimulation happens in FD-phase. Here, group untwist operation involves inversion of both windlasses. Two halves do not get separated rather rearrange within themselves causing system toggle (GDS↔ EDS) periodically. Complexly cumulative orbital inertial game feed subsistence of equatorial exclusive IM of subsystem in multiplicative oddity for finite period.



Group operations in bifurcation in complementary systems in CMF (1-series EDS; 2-series GDS).



Basis vectors readily decoded at diffeomorphic motor wing → added as quaternions

- Trinary codon string, homologous to the supercoiled genome, is motherboard for joystick to sail in spacetime: concentrator that truncates probability in instant favour.
- 3 bosonic forces at 3 conflexures are transform of central bosonic space (note: CNS → BS) : pure at equator and mixed near poles.
- Always ON & FN are equidistant and in same direction from BNs.

- In the above basin of equatorial processing of polar information, rotational trajectories always cover same length of journey along both ways validate entrapped open-angle triangular bosonic space as Finite Rotational Constant. Note: In Riemann $\zeta(s)$ $s=\sigma+it$ where $\sigma = 1/2$, up to CNS, denotes present Prime. it denotes present Antiprime.

Lorentz invariance (‘0-symmetry’ – better be termed as ‘Null-symmetry’)

i) Universal event in proper time along ascending present moments on P|AP.

ii) Rotational invariance: Mutual manifold (Mandelbrot $Z \neq 0$) neutralisation of complementary dynamical systems – clockwise (entropy - objectivism) | anticlockwise (negentropy – subjectivism as relics of investment of energy).

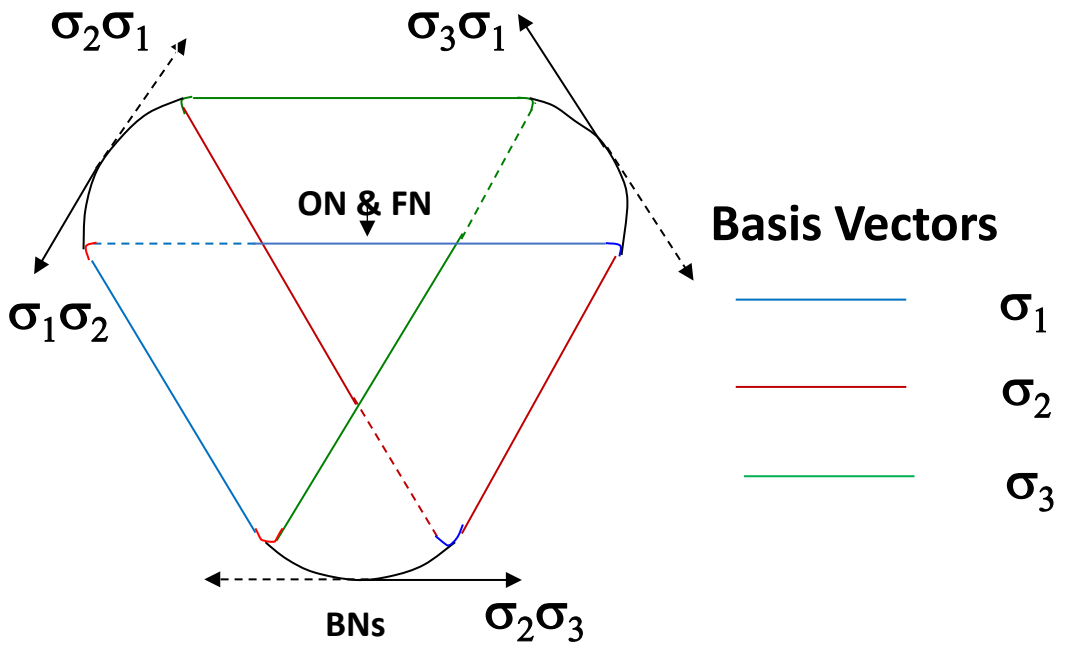
- ED-phase: absolute under non-stimulation.
- FD-phase: alternate cycle under subcritical stimulation – prompt wing neutralisation a) unskipped – Awareness (PT) b) skipped - Cl-q mapping → Re and Im (CP).
- Volition: late neutralisation → Re and Im, after phase of critical stimulation.

iii) Spinor | Unspinor neutralisation: Cosmos is instantly created under CPT symmetry.

iv) Finite Rotational Constant – same length of trajectories between ON|FN and BN.

v) ‘√’ (root over) normalization in orthonormality (Re|Im) ensured by neutral (45^0) slant of √2-bar in Pure randomness → unities of the same magnitude in the Pure core.

vi) Simultaneous creation of Future Big Bang and Big Crunch under CPT-symmetry.



- Topological whirl in complex structure of 3D-Möbius field supports Geometric Algebra.

- σ_1, σ_2, and σ_3 are orthogonal basis vectors along edges of central open-angle doughnut. Spinor and unspinor are at the height of twistor-free curvature.

- This executes exquisite incorporation of null ('0' in BN) and null derivatives (0^C or $\boldsymbol{\sigma_2\sigma_1}$ and 0^Q or $\boldsymbol{\sigma_3\sigma_1}$ at poles) within trinary codons of swirling Möbius topology.

- Finite Rotational Constant ensures exact universal matching of polar information (all grey numbers settle in CP-), position from sensory ON and momentum from sensory FN at BN en masse, validating Lorentz invariance ('0'-symmetry). This solves configural issue of finite prime and antiprime (CPT-) before Macroscopic Quantum System, ever possible.

Encoding and Decoding

σ_1 ('0' – 0|∞) → Null derivatives: 0^C and 0^Q (pseudovectors) – ascending steps define magnitude of polar lag.

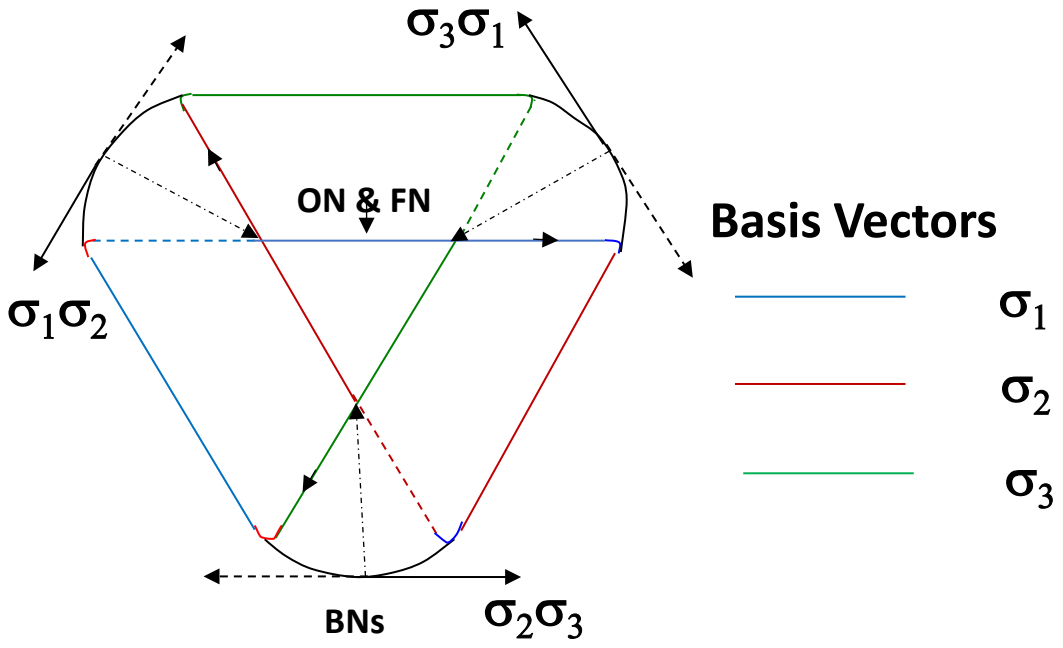
σ_2 ('+' position vector - multiplicative) → $\sigma_1\sigma_2$ $(+^Q)$ / $\sigma_2\sigma_3$ $(+^C)$ / $\sigma_3\sigma_1$ (pseudovector $\mathbf{0^Q}$): $\sigma_1\,\sigma_2$ (spinor) & $\sigma_1\sigma_3$ (INS = tcINS-unspinor + hcINS: Back-Back spinor|unspinor) converge towards BN.

σ_3 ('-' momentum vector - additive) → $\sigma_1\sigma_3$ $(-^C)$ / $\sigma_3\sigma_2$ $(-^Q)$/$\sigma_2\sigma_1$ (pseudovector $\mathbf{0^C}$).

$\sigma_2\sigma_3$ → Electricity ($+^C$ + $-^Q$ / Z) – fwd – electronic equatorial property ('-' charge; electrical field) – principally free … → absolute churn in the core → Re, space, spinor in 4D (Bimodal ED; convexity) - (fwd, at the center of Möbius strip) - $\sigma_1\sigma_2$ $\sigma_2\sigma_3$ $\sigma_3\sigma_1$ (1) Prime scalar.

$\sigma_3\sigma_2$ → Magnetism ($+^C$ - $-^Q$ / Z*) – bwd – atomic (nucleus '+' charge – North pole; magnetic field) polar property – principally fixed – Bistability … → absolute churn in the core → Im, time, unspinor in 4D (concavity) - (bwd, at the center of Möbius strip) - $\sigma_1\sigma_2\,\sigma_3$ (√-1) - Pseudoscalar / trivector.

- Decoding (3-4D p>m motor wing) – Absoluteness induce effortless vector multiplication, get reduced in scalars (polar:$+^Q$, $-^C$ and equatorial: $+^C$ and $-^Q$) and add them in universal format of Quaternions.
- Encoding (1-2D **m>p** sensory wing) – Finiteness induce scalar multiplication conformally optimum for vector addition (in deciphering information addition reduce finals at the end of multiplication).



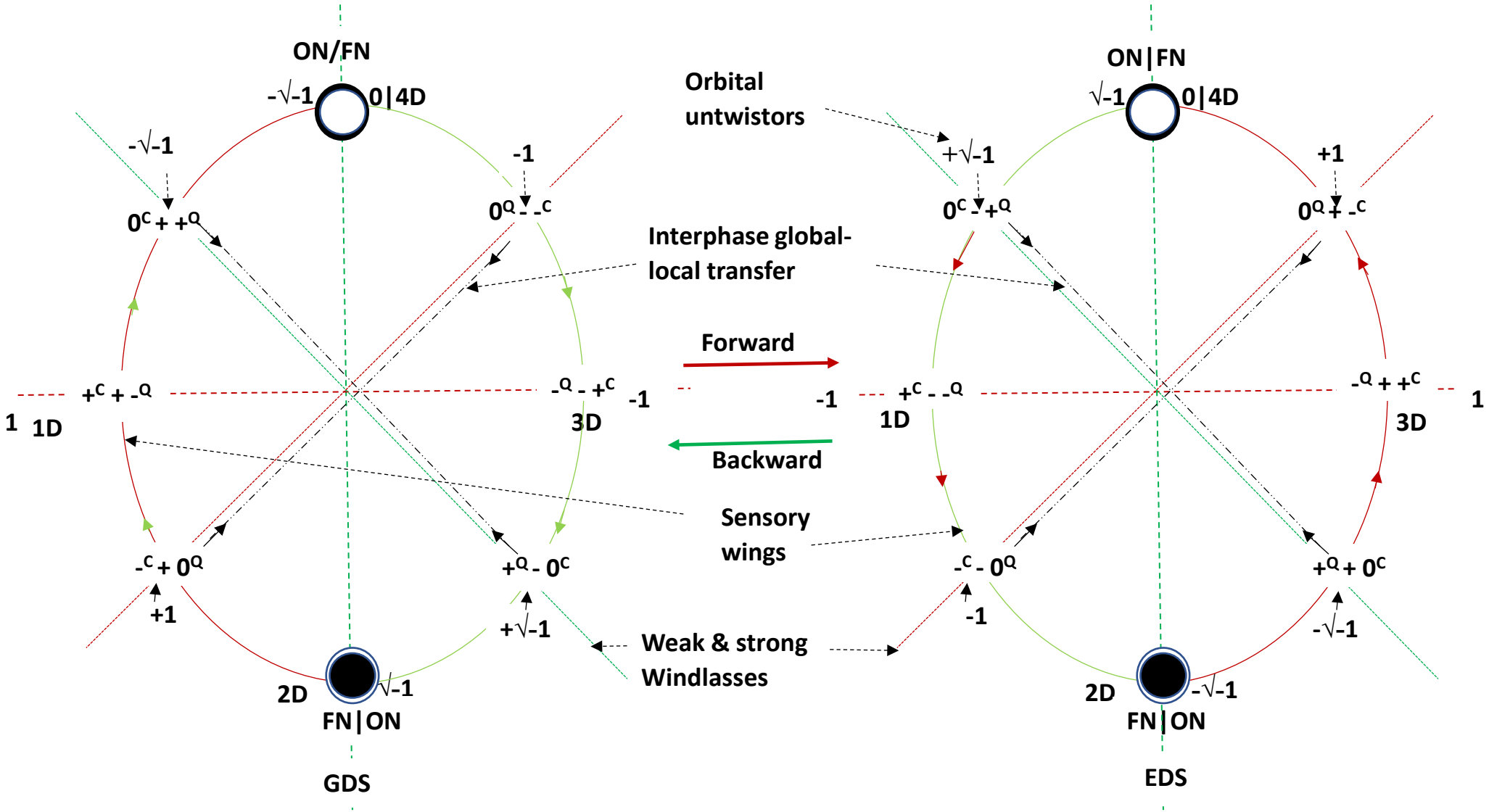
EDS-strip: conventional Rt. hand relation of vectors

- Orthogonal basis vectors edging central open angle triangular space shows conventional Rt. hand relation.
- Bivectors along the two edges of open angle triangle represent rotation anticlockwise (outside-in) as in folded fingers of Rt. hand in reference to third basis vector where arrow on z-axis (i) directs oppositely i.e., clockwise.

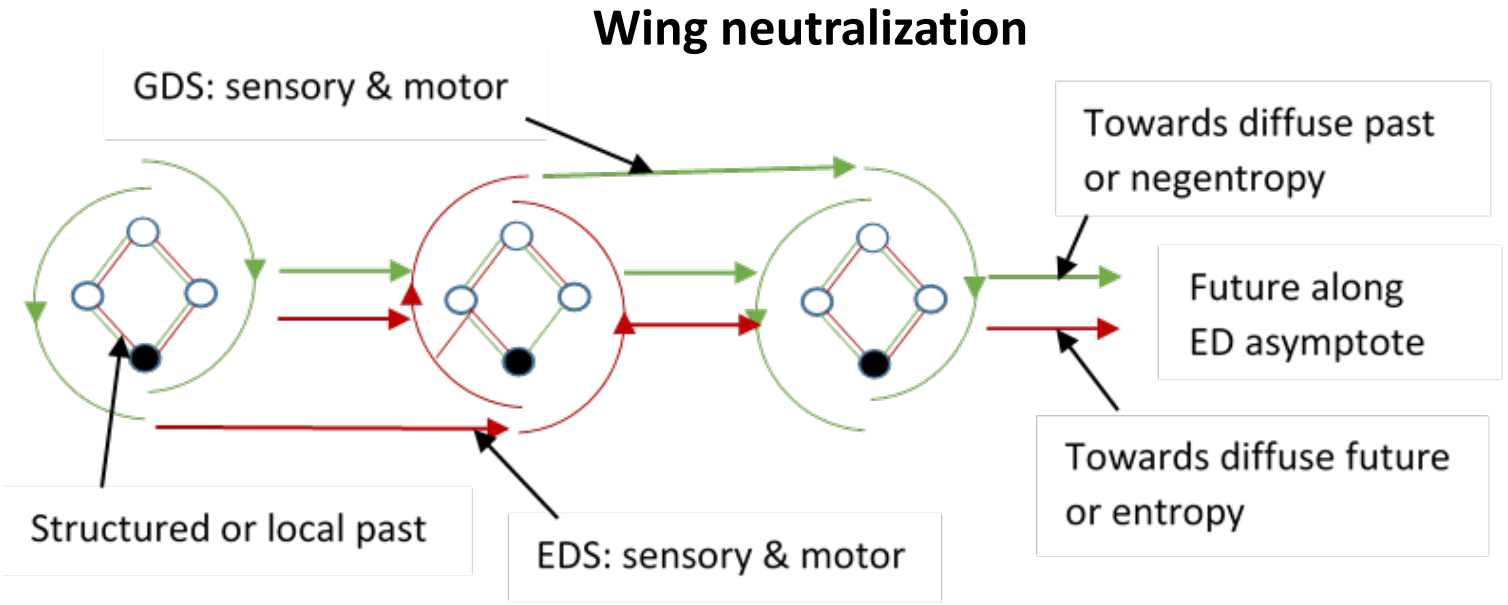
- So, it is self-evident from Geometric Algebra supported by CMF above:

$$\sigma_1\sigma_2 = i\sigma_3 \; ; \quad \sigma_2\sigma_3 = i\sigma_1; \quad \sigma_3\sigma_1 = i\sigma_2$$

This is exactly the algebra of the Pauli spin matrices, visualized as spin(i)-rotation complementation in complex 3D vector space.



Global to local information transfer in orbital (vector: p|m)
FD-phase along cosmic pulsation



- Primary group untwist operation originates all intrinsic masses, feasible.
- MQS with lower IM covers more space in lesser time to meet next Common station.

- In present moment information processing jointly happens in same tuning microtubular electron (ED-phase) and conjugate tuning microtubular electrons (FD-phase) along the prior series in ED-asymptote towards unknown future both ways.

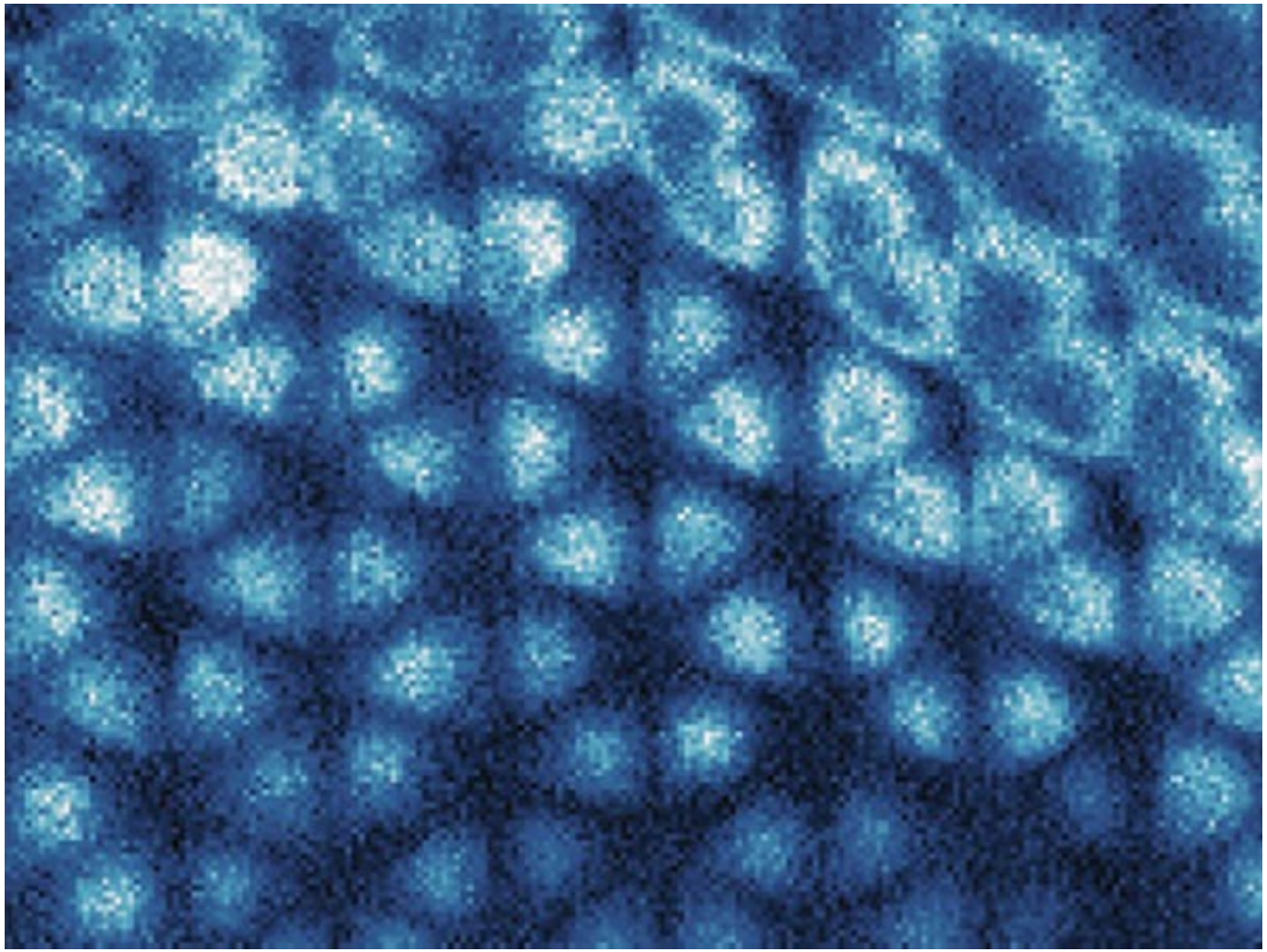
- Cl-q measurement is inside-out (c), a universal, phenomenon. Mode lock is holding EM field on unit electron volt for unit Planck time nullifies all fields. It can only be reached by reflective catch on tracking the ‘null experience’ i.e., already in the past.

Conclusion

- Finite position is essentially a scalar or rational. Finite position vector ($\mathbf{p}$) is dragged scalar, hence a dependent vector. But momentum ($\mathbf{m}$) is an independent vector. Both finite primes and infinite Primes are mixed group elements (assembly of both group operators: multiplicative, $\mathbf{p}$ and additive, $\mathbf{m}$). But both finite antiprimes and infinite Antiprimes are solo group element (solely formed by additive group operator, $\mathbf{m}$).

- In absolute motor context, position always envelops momentum but in finite sensory (encoder) context momentum always function as boundary solution of position.

- Reductionism is partially correct as the goal stands on visionary that is weak (rational); in contrast, feeling is strong (irrational). Therefore, an approach processing optimum complexity where both tools are incorporated is comprehensive.



First image of a solid made of electrons (Journal: ‘Nature Briefing’ 30th Sept. 2021)

Prediction expect verification

In the image of previous slide (first image of a solid made of electrons: Journal: 'Nature Briefing' 30th Sept. 2021) where capture of Wigner crystals get magnified, one may notice that electron (a fermion) structurally organizes in the form of a Lorenz attractor.

In my work, "Complex Möbius Field: The Web of Consciousness - Part l", Journal of Consciousness Exploration & Research, 2019 10(1) page 44, this came as an important proposition:
"Therefore, as the input is qualitative, the response is also subjective. In phase space, stimulated journey (critical or subcritical) has the collective appearance of a Lorenz attractor (Fig. 18). One may find that the Lorenz butterfly shaped attractor is the subjective presence of the processing fermion in phase space."

References:

[1] & [2] Bidyut K. Sarkar, 2019, "Complex Möbius Field: The Web of Consciousness" - Part I & Part II, *Journal of Consciousness Exploration & Research*, 10(1): pp. 24-64.
https://jcer.com/index.php/jcj/article/view/785
https://jcer.com/index.php/jcj/article/view/793

[3] Bidyut K. Sarkar, 2020, "'Complex Möbius Field: The Web of Consciousness' Revisited", *Journal of Consciousness Exploration & Research*, 11(2): pp. 227-235.
https://jcer.com/index.php/jcj/article/view/872

[4] Bidyut K. Sarkar, 2021, "Pulsatile Macroscopic Quantum Consciousness", *Journal of Consciousness Exploration & Research*, 12(1): pp. 43-54.
https://jcer.com/index.php/jcj/article/view/947

[5] Bidyut K. Sarkar, 2021, "Consciousness & Instrumental Astronomy", *Journal of Consciousness Exploration & Research*, 12(3): pp. 278-286.
http://www.jcer.com/index.php/jcj/article/view/968

[6] Chinmoy K. Bose, Bidyut K. Sarkar, Herbert Jelinek [2009], "Role of Nonlinear Dynamics in Endocrine Feedback," *Chaos and Complexity Letters* (Volume 3, Issue 3), 266-69.
http://researchoutput.csu.edu.au/

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Corrigenda

- **Lorentz → Lorenz i) Journal of Consciousness Exploration & Research (JCER) 10(1) – Complex Mobius Field: The Web of Consciousness Part I: Page no. 44 - 17th line. ii) Part II: Page no. 62 – 26th and 34th lines.**

- **local future ($-^{C}$) and past ($+^{Q}$) → local past ($+^{Q}$) and local future ($-^{C}$) JCER 10(1) Complex Mobius Field: The Web of Consciousness Part I: Page no. 44 – 25th line.**

- **quarternion → quaternion JCER 10(1) Journal of Consciousness Exploration & Research Part II: Page no. 58 – 11th and 13th lines.**

- **two → one and quarternion → quaternion http://researchoutput.csu.edu.au/ Role of Nonlinear Dynamics in Endocrine Feedback: Page no. 28 – 21st line and Page no. 29 – 15th line respectively.**

- **structure → rotational JCER 11(2) 'Complex Mobius Field: The Web of Consciousness' Revisited: Page no. 23 – 6th line.**

- **-√1 → -√-1 JCER 12(3) Consciousness & Instrumental Astronomy: Page no. 279 – Fig. 1.**