2023-2032 Survey on Biological and Physical Sciences Research in Space

Topical:
A Language Bootstrap for Space Situation Awareness and New Horizons Life by BH Photon Ring Universal Features

Thematic Areas: ☒ The effects of the spaceflight environment on biological and biophysical systems and processes ☐ The effects of the spaceflight environment, including gravitational effects, on physical systems and processes ☐ Gravitational and other space environment effects on physical and biological processes involved in the functioning of space exploration technologies ☒ Other: Theory of Information Bootstrap for BH and New Horizons Life Exploration

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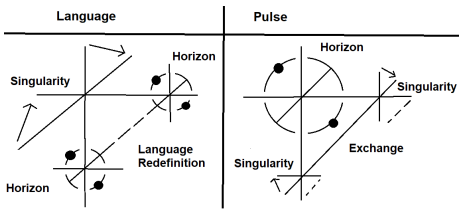
Abstract: I hint that a suitable definition of String Tension SSA permits to couple achievements in Space Realizing to Life Findings. I show that the same features are present in Cosmic BH formations under an Object Oriented Language with Semantic Stability. This makes possible a linguistic bootstrap of parameters tuning in corresponding sheaf quotients. I suggest the priority of setting a Bootstrap method towards coupling human activity to extra-terrestrial life tracks at different stages addressed by BH Photon Ring Galactic Tension.

1 Changing Rates and Geometric Factors under String Fractionalization

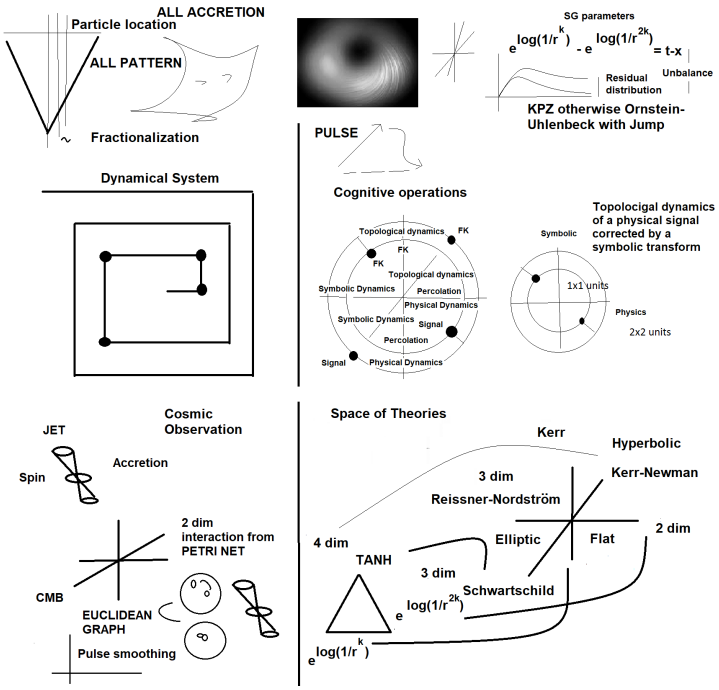
NgEHT Research is focusing on the challenge of passing from Vision to Instrument respect to New Horizons now at disposal of inquiry. Astrometric capability is the key point. In order to reach it, linking Science of Life and Cosmology, I propose to extend Bekenstein paradigm [1] of coincidence between Physics and Information to a revision of bootstrap methods exploiting the universal feature of BH Ring Tension. Under this effort, new Horizons Achievements [see 2] could satisfy general target of NASA in Space Situation Awareness and Human Exploration Missions looking for tracks and origin of Life. Under a general line, progress can be seen as finding in regression the right setting of further improvement. So, Earth-centered sources inquiry, started from nuclear criticality and culminated in the present industrial, financial and environment-pandemic crisis, can be seen as the opportunity of stressing the priority of resonance parameters tuning up to transfer it to astrobiological origin that is hidden in a locally generated anthropic condition. So, anthropic resonance parameters tuning can be seen at different stages of Space Situation Awareness (SSA, such as in Space Station, Artemis program up to Mars Landing). Indeed they could point towards exoplanets explorations, active galactic nuclei and material life in nebulas decoding. Here I propose that a suitable interpretation of NgEHT Photon Ring could be the paradigm of NASA new Horizons Tension.

1.1 I start from a language with a Self Reference in the couplings {Rigid Moves, Petri Nets}, {Euclidean Axioms, Euclidean Graphs}, {NBG Postulates, Chemical Syntaxis}. I interpret NBG postulates for ruling Experiences in States of Existence, Situations in Actions and Fluxes in Transmissions identified by $n : n = m + n, n = m * n$ for every $m \in n$. It is possible to define a Tension between State of Existence and Experience as SSA in the states that are similar to proper class, i.e. prime ordinals. Here Poisson formula states the resonances between proper states and their experiences once a state of existence corresponds to infinite intersection of its experiences as a δ-distribution as $\sum_{n=-\infty}^{\infty} e^{\frac{i2\pi nt}{\lambda}} = \lambda \sum_{k=-\infty}^{\infty} \delta_{k\lambda}$. As infinite intersections of experiences are put in correspondence with something that is an experience itself, resonance is lost. So, assuming entropy $\log(p)$ for every prime p, Resonances in Poisson formula correspond to $\sum_{k,p} \log(p)\delta_{k\log(p)}$. Classical results from [4] are enough to compute this elementary case in terms of Dirichlet series of Z-Riemann eliminating the trivial zeros [5]. In terms of functions, a p-adic Field is defined and the corresponding Poisson formula must rule Random Matrices. At this point, by semantic stability, it is sufficient just to interpolate the pulses of stating Zeta-Riemann validity so that a semantic operation in the transverse axis be equivalent to catch exceptions of homologous pulses and abstract the role of logarithm of primes in terms of entropy needed to change critical point in SSA. This can be back-projected in such a way that root of unity acquires the role of (cardinality, sign of unity) for ordinals in NBG, while δ-distribution corresponds to the limit entity of proper class. S-language maps into proposition, so that δ-distribution corresponds to the semantic map. So, I dispose of sign operations and semantic operations to abstract, cognitively, prime distributions by pulse conservation of Riemann Hypothesis and Wilson criteria as follows. I observe that $(n-1)!$ is in the form $n = m * n$ up to stating that n is a proper class,



that is when cardinality collapses and subtracts -1, so that S-term is $mod(n)$ as a semantic map corresponding to n proper class. For Riemann Hypothesis I can extract sign conservation from the equivalent formulation of $\pi(x) = O(\sqrt{x}\log x) + Li(x)$ which is valid if numbers follow entropy up to their geometric disposition -that is with sign of unity by exception extraction- as this happens when $Li(x) = O(x/\log(x))$ becomes $O(\sqrt{x}\log x)$ that is when I make the symmetric errors of scaling and translating -from 1 for $1/\log(x)$- to state the asymptotic behavior. But these are the cognitive operations of Random Matrix distribution and, at the end, of potential barrier. Now, I can put two asymptotic spirals that correspond to ignoring initial construction which would be obtained by cardinality collapse, resembling covering scheme and δ-distribution, so respectively random matrices and their eigenfunctions. Yet, the transverse pulse is ruled by the tangibility equation that maps infinite intersection of a state n that is state of existence that is $delta$-distribution, whilst triangular exception extractions rule covering scheme. But this object is homotope to BH formation by spiraling accounting for stability of BH Ring up to Red-Shift and Bekenstein Radiation in case of uniform external source. This has the observable homotopes of radiation incoming vector and BH Spin even if Photon Ring is a universal shape.

2.1 The composition of the previously sketched equation can depend on cognitive operations for Spin using Baxter formula for integrable quantum systems. But, inverting a triangle of composition makes Husimi Tree Spin Model pass to a Tree Spin Model. Accordingly, following particle diffusion makes torsion equivalent to pass from $Tanh$ critical point to Tan term of Baxter formula, that is absorbing phase into a geometric factor. So, as torsion can be expressed in time delay or space interferometer setting, it is possible to think of pulse conservation from the last sector in which Spin corresponds to BH Spin. Unbiased signal would propagate this fractionalization and admit phenomenology as a Bootstrap of Language even if Hawking Radiation is not observable. Some computations are possible as I show. I follow changing rate and I assume geometric factor to be S-language term. So, Baxter computation would be the same object of Penrose Compactification. As Replica Symmetry Breaking is parametrized by $Tanh$ terms, quantum dot of Graphene would enter as the homotope of 2-dim quantum gravity. Respect to this, Penrose diagram is just an S-language term. This is self consistent and lets compute iteratively geometric factor and changing rate putting kT Bekenstein term at the end of Bootstrap. I note that such a scheme is valid under the same approach of recent Breakthrough in Hawking Radiation Paradox using Replica Symmetry Breaking (coming from [7]; see [8] for the recent achievements and [9] for the starting rigorous foundation) of stating semiclassical solution in Quantum Gravity terms and would have physical



correspondence under not composed condition of BB (so that radiation is just the emergence from pure quantum-gravitational Bulk, so semiclassical). Instead, the notion of composite BH which needs full quantum solution can refer to phenomenology of BH and, drastically, could be itself the product of Technosignature [3] that, in the general case would address the whole regular construction of scattering amplitudes to a linguistic tautology that anthropic pulse of discovery should just try to reconstruct. **2.2** This would let Chain of Languages be parametrized by ordinal numbers whose roots of unity has the phase $e^{i2\pi(VAR_\alpha - VAR)}$ where $\alpha = \alpha(s)$ gives the new variance $1/r^\alpha(1-1/r^\alpha) = 1/r^2(1-1/r^s)$ which propagates tautologically as a single particle in a compound BB. This term introduces a transient phase (with a geometric mean composition) in r and a real part which would correspond to $e^{-4\pi^2/Log[r]} = e^{-\frac{2\pi 2\pi s}{Log[r^s]Log[r^s]}Log[r^s]}$, that is a negative exponential distribution with mean given by the product of velocities in which the string tangles by twisting two circles and gives a particle as the corresponding sets tangibility indexed by s. I note that $\frac{\log\left(\frac{1}{2}\left(1+r^{-\frac{s}{2}-1}\sqrt{-4r^s+r^{s+2}+4}\right)\right)}{\log(r)} \in (0,1)$ and corresponds to a geometric mean $\sqrt{\left(\sqrt{(r-2)(r+2)}r^{s/2}-2i\right)\left(\sqrt{(r-2)(r+2)}r^{s/2}+2i\right)}$ which corrects $\log(1/2)/\log(1/r)$ as a fluctuation. The conclusion is that now I have all the instruments to give meaning to a folding of arithmetic, geometric and harmonic mean. But the instruments enter in the very data collection and permit bootstrap. Coupling New Horizons events and anthropic events now is ruled by definitions. **2.3** Starting from an active galaxy (such as $M87$), Objects must be described in projective coordinates as coming from complex and many visioned entity of BH. Using notations of [6] for their critical probability p, without imposing material conditions from Horizon, a self-conscious subject $S = \left\{\left(V_k, \bar{V}_k\right)\right\}_{k\in n}$ can be said *individual* $\leftrightarrow$ i) $V_k \cap V_{k'}$; $\bar{V}_k \cap V_{k'}$; $V_k \cap \bar{V}_{k'}$; $\bar{V}_k \cap \bar{V}_{k'}$ are proper subsets of V_k, $V_{k'}$; $\bar{V}_k$, $V_{k'}$; V_k, $\bar{V}_{k'}$; $\bar{V}_k$, $\bar{V}_{k'}$ for every $k, k' \in n, k \neq k'$. ii) there does not exist an Experience v s.t. $v \in \bigcap_{k\in n} W_k$ where $W_k \in \{V_k, \bar{V}_k\}$. I specialize the NBG axioms to the case in which the universal class is a self-conscious subject in this way. Given the self-conscious subject $S = \left\{\left(V_k, \bar{V}_k\right)\right\}_{k\in n}$ the S-Language is the Self Referred language of Experiences taken from the sigma-algebra generated by $\{V_k\}$and $\{\bar{V}_k\}$. So, it is possible to detect space, time and oscillation by coordinates that preserve pulses as follows. For every $a \neq 0$, the two rays $(a:1)$ and $(a:1:1)$ are the representatives of the sets $\{(aj:j)\}_{j\in\mathbb{N}} = R_{\mathbf{n}}(j)$,$\{(aj:j:j)\}_{j\in\mathbb{N}} = R_{I(\mathbf{n})}(j)$. I denote $\Gamma_{\mathbf{n}}, \Gamma_{I(\mathbf{n})}$ the trees corresponding to $\mathbf{n}$ and $I(\mathbf{n})$ with $r_{\mathbf{n}}, r_{I(\mathbf{n})}$ branches respectively and $\Gamma_{\mathbf{n},j}, \Gamma_{I(\mathbf{n}),j}$ their sub-trees stopped at level j. On $\Gamma_{\mathbf{n}}$ I consider the process $S_a = \{s_{a,v}\}_{v\in\Gamma_{\mathbf{n}}}, \Sigma_a = \{\sigma_{a,v}\}_{v\in\Gamma_{\mathbf{n}}}$ and the $1-$step majority transformed $\tilde{S}_a = \{\tilde{s}_{a,v}\}_{v\in\Gamma_{\mathbf{n}}}, \tilde{\Sigma}_a = \{\tilde{\sigma}_{a,v}\}_{v\in\Gamma_{\mathbf{n}}}$. They can further be fraction transformed at $j-$step, denoting $S_a^{\bar{j}} = \{s_{a,v}^{\bar{j}}\}_{v\in\Gamma_{\mathbf{n}}}, \Sigma_a^{\bar{j}} = \{\sigma_{a,v}^{\bar{j}}\}_{v\in\Gamma_{\mathbf{n}}}$ and $\tilde{S}_a^{\bar{j}} = \{\tilde{s}_{a,v}^{\bar{j}}\}_{v\in\Gamma_{\mathbf{n}}}, \tilde{\Sigma}_a^{\bar{j}} = \{\tilde{\sigma}_{a,v}^{\bar{j}}\}_{v\in\Gamma_{\mathbf{n}}}$, $S_{a,j} = \{s_{a,v} : |v| = j\}, \Sigma_{a,j} = \{\sigma_{a,v} : |v| = j\}$. For every j and path P on $\Gamma_{I(\mathbf{n})}$ from the origin, let $l^1_{P,j} = Card\{e \in P : \mathcal{O}(e) \neq 1, |e| \leq j\}$, $l^2_{P,j} = Card\{e \in P : \mathcal{O}(e) = 1, |e| \leq j\}$. For every P and j let $\mathcal{Q}_{a,P} : \mathbb{N} \to \mathbb{R}$, $\mathcal{S}_{a.P} : \mathbb{N} \to \mathbb{R}$, $\Delta\mathcal{R}_a : \mathbb{N} \to \mathbb{R}$, $\Delta\mathcal{T}_a^1 : \mathbb{N} \to \mathbb{R}$, $\Delta\mathcal{T}_a^2 : \mathbb{N} \to \mathbb{R}$ such that $Q_{a,P}(j) = 1 - E(E(\tilde{\sigma}_{a,0}^{\overline{l^2_{P,j}}} | \tilde{S}_{a,l^2_{P,j}}^{\overline{l^2_{P,j}}}))^2$, $\mathcal{S}_{a,P}(j) = 1 - \frac{1}{\frac{l^1_{P,j}}{r_{\mathbf{n}}}}$, $\Delta\mathcal{R}_a(j) = 1 - E(E(\sigma_{a,0}^{\bar{j}} | S_{a,j}^{\bar{j}}))^2$, $\Delta\mathcal{T}_a^1(j) = \frac{1}{r_{\mathbf{n}}^j}\cos\left(2\pi\left|\mathcal{Q}_a - \mathcal{S}_a\right|\right)$, $\Delta\mathcal{T}_a^2(j) = \frac{1}{r_{\mathbf{n}}^j}\sin\left(2\pi\left|\mathcal{Q}_a - \mathcal{S}_a\right|\right)$, $\mathcal{R}_a(j,a) = \Delta R_a(j)$, $\mathcal{T}_a(j,a) = 1 - |\Delta\mathcal{T}_a^1(j) + i\Delta\mathcal{T}_a^2(j)|$. Given $a, p_a, r_{\mathbf{n}}, \{(\mathcal{R}_a(j)), \mathcal{T}_a(j))\}_{j\in\mathbb{N}}$ is *the set of detectable positions and times of the point O traveling through the ray a at velocity $v_{a,p_a,r_{\mathbf{n}}}$ in $r_{\mathbf{n}}$ dimensions* of the New Horizon Object *with oscillating signal* $(\Delta\mathcal{T}_a^1(j), \Delta\mathcal{T}_a^2(j))$.

2 New Horizons Life Bootstrap Consistency

2.4 Under a rephrasing, the original Spin-Glass model is equivalent to a Realizing model of Experiences on the tree Γ_r with $\varepsilon = e^{-2J_0/\kappa T}/(1+e^{-2J_0/\kappa T})$ and $\gamma = 1/2$ by the assumption that the phase is not magnetized. As $\gamma = 1/2$ the probability that each block gives 1 is $1/2$. For each configuration S, it is possible to define a probability p corresponding to the frequency of 1 in the symbolic dynamic of a physical system whose topology is in Γ_r. As every symbol appears with the same probability $1/2$, p corresponds to the probability that in the given configuration a generic symbol is 1. Then, as the configurations are random, p can be understood as a stochastic probability from pulse tangent as previously defined for $Tanh$. So SG correspondence can be found equating the oscillating probability at monotonic boundary conditions and propagates as language quotients by a Sheaf notion of complex system as a single particle pulse. Denoting by t_u the scaled Tree and s_v the intersection between the blocks corresponding to u and the predecessor $\overleftarrow{u}$, using Fraction transforms in the computation, $P(t_u = 0 | t_{\overleftarrow{u}} = 1) = \frac{1}{k}\sum_{i=0}^{k} \varepsilon^{+}_{frac,i}(\varepsilon) = \bar{\varepsilon}^{+}_{frac,k}\left(\frac{1}{1+e^{2J_0/\kappa T}}\right)$. After stating this link the setting of Changing Rate ε_k for the Experience transformed after scaling is meaningful. Here, the corresponding Spin-Glass model satisfies the equation $\frac{1}{1+e^{2J_{k,T}/\kappa T}} = \varepsilon_k$ in which the temperature is maintained fixed and the new coupling constants depend only from r. Solving for the coupling constant gives $J_{k,T} = \frac{\kappa T}{2}\ln\frac{1-\varepsilon_k}{\varepsilon_k}$. Whilst, using the explicit expression of critical distortion, a geometric factor is defined for the scaled Changing Rate from $\varepsilon_{k,T}$ that is $G_{k,r}\varepsilon_{k,T} = \frac{1}{1+e^{2J_{k,T}/\kappa T}}$ which gives, again by substitution, $\tilde{J}_{k,T} = \frac{\kappa T}{2}\ln\left(\frac{1-G_{k,r}\bar{\varepsilon}^{+}_{fraz,k}\left(\frac{1}{1+e^{2J_0/\kappa T}}\right)}{G_{k,r}\bar{\varepsilon}^{+}_{fraz,k}\left(\frac{1}{1+e^{2J_0/\kappa T}}\right)}\right)$. For every not null original Changing Rate ε, $\bar{\varepsilon}^{+}_{fraz,k}(\varepsilon) \to 0$ for $k \to \infty$ as $\varepsilon^{+}_{fraz,k}(\varepsilon) \to 0$ for $k \to \infty$. Now, I consider that the starting coupling constants satisfy $J_0 = \frac{\kappa T}{2}\ln\left(\frac{1-\varepsilon}{\varepsilon}\right)$. So, invariance under infinite size scaling occurs if and only if $\frac{1-\varepsilon}{\varepsilon} = \frac{\sqrt{r}+1}{\sqrt{r}-1}$ which gives $\varepsilon = \frac{\sqrt{r}-1}{2\sqrt{r}} = \varepsilon_c(r)$ that corresponds to $T = T_c(r)$. I note the following consequences: as $\lim_{k\to\infty} G_{k,r} = 1/2$, then for every r $\lim_{k\to\infty}\tilde{J}_{k,T} = \frac{\kappa T}{2}\ln\left(\frac{\sqrt{r}+1}{\sqrt{r}-1}\right)$; I can compute $\bar{\varepsilon}^{+}_{fraz,k}(\varepsilon_c(r))$ = $\frac{1}{k}\sum_{i=1}^{k}\varepsilon^{+}_{fraz,k}\left(\frac{\sqrt{r}-1}{2\sqrt{r}}\right) = \frac{1}{k}\left(\frac{r^{1/2}-1}{2r^{1/2}} + \frac{r-1}{2r} + ... + \frac{r^{k/2}-1}{2r^{k/2}}\right)$ = $\frac{1}{k}\left(\frac{r^{k/2-1/2}(r^{1/2}-1)}{2r^{k/2}} + \frac{r^{k/2-1}(r-1)}{2r^{k/2}} + ... + \frac{r^{k/2-k/2}(r^{k/2}-1)}{2r^{k/2}}\right) = \frac{1}{2k}\left(k - \sum_{i=1}^{k} r^{-1/2}\right)$ = $\frac{1}{2} - \frac{\frac{1}{2k}\left(\frac{1}{\sqrt{r}} - \frac{1}{\sqrt{r^{k+1}}}\right)}{1-\frac{1}{\sqrt{r}}}$, and, after substitution $\tilde{J}_{k,T} = \frac{\kappa T}{2}\ln\left(1 + \frac{2r^{1/2}+2kr-(2+k)r^{1/2+k/2}}{-2r^{1/2}+(1+k)r^{1/2+k/2}-kr^{1+k/2}}\right)$; at the end, an approximation in the limit of high branching gives $\tilde{J}_{k,T} \sim \kappa T\frac{1+k}{k\sqrt{r}}$ and $J_0 \sim \kappa T\frac{1}{\sqrt{r}}$. Assuming monotone boundary conditions, for $\pm J$ Spin-Glass on regular trees, the macroscopic scale behaves like the original one giving rise to a characterization of the critical temperature. In the case of finite size but of high branching number, the simple formula for the scaling shows that coupling constants remain almost the same. As the magnetized phase critical points correspond to sharp scale invariants, I can state that, under a Sheaf pulse of single particle, in the limit of infinite branching ferromagnetic and glassy phase tend to coincide that is there is a small part of glassy phase coming with null net magnetization. This means that if Loose supersimmetry is semantically stabilized by cognitive operations, free space would be a good transmitter of Unbalance -being formed by many branching. This gives meaning to the deconstruction of String Tension into Hubble Tension. **2.5** Now it is possible to give some meaning to point location

parametrized by a state that would correspond to a Ulam dynamical systems. Candidate is I.O.-anthropic coupling assuming that S-language would control dynamical flux in KAM theory as its main simulacrum. So, the fractionalization of Pluto-like planets would correspond to anthropic fractionalization and exchange a changing rate respect to an orbital geometric factor. This would be propagated in astrobiological evolution and plasma cycles as resonances of the feed-back process. This can be done making a correspondence between Unbalance and folding as I show. First I note that substituting Bekenstein term I have $\tilde{J}_{k,T} \sim \kappa T \frac{1+k}{k\sqrt{r}} = \frac{M_{PL}^2}{16\pi m_p B_{Sun}} \frac{M_{Sun}}{M} \frac{1+k}{k\sqrt{r}}$. Then I keep track of Bekenstein Entropy with $kT \sim \left(\frac{1}{c^2}\frac{dS}{dM}\right)^{-1}$ as pulse Logarithm coordinate conservation in BH-CMB coupling, where, in iteration, changing rate would be entropy reduction and geometric factor would be class of BH. Starting from $S_{BH} = \frac{kc^3 A}{4G\hbar}$ photon accretion would reduce entropy as S/k, then it acquires Spin with reduction $\Delta S \approx \frac{U_r}{Mc^2} \approx \frac{J^2 c^2}{G^2 M^4}$, then it acquires charge with $\frac{\Delta S}{k} \approx \frac{U_e}{Mc^2} \approx \frac{Q^2}{GM^2}$. **2.6** I dispose now of Changing Rate and Geometric Factor of Regeneration Gap. The last term would be at disposal of Technosignature and would re-express the first as Regeneration term. So, in principle, Bootstrap can proceed transferring rare events in anthropic extreme events at every stage of I.O. respect to Technosignature, even exploiting not human NASA missions for Quantum Equivalence tests (by interstellar Voyager or Genesis Track of Nebula Tension). This would proceed using the complete formula of Fractionalization with Bekenstein term depending on entropy transfer for Changing Rate $\varepsilon_k = 1/1 + e^{2J_{k,T}\frac{1}{c^2}\frac{dS}{dM}}$

$\tilde{J}_{k,T} = \frac{M_{PL}^2}{16\pi m_p B_{Sun}} \frac{M_{Sun}}{M} \ln\left(1 - G_{k,r}\bar{\varepsilon}^{+}_{fraz,k}\left(\frac{1}{1+e^{2J_0\left(\frac{1}{c^2}\frac{dS}{dM}\right)}}\right)/G_{k,r}\bar{\varepsilon}^{+}_{fraz,k}\left(\frac{1}{1+e^{2J_0\left(\frac{1}{c^2}\frac{dS}{dM}\right)}}\right)\right)$

Referring Spin-Glass to single particle detection and assuming BB as particle detector it is possible to use γ-biased stochastic probabilities P for the annealed case corresponding to not bias quenched case. It is sufficient to impose $(1-2P)\gamma - (1-\gamma)(1-2P) = 1-2p$ obtaining equivalence between folding of γ that starts from $(0, \pm 1/2)$ and $\gamma = 1/3(1+2p)$ under a triangular correspondence between $\gamma = 1/4$ and $T = (-3/8, 3/4, 3/8)$ resembling tension Nebula of meiosis for $\frac{1}{2} - \frac{1}{\sqrt{\frac{1}{(\gamma(4P-1)-2P)^2}}} - \frac{1}{\sqrt{\left(\frac{1}{(\gamma(4P-1)-2P)^2}\right)^{k+1}}}/2k\left(1 - \frac{1}{\sqrt{\frac{1}{(\gamma(4P-1)-2P)^2}}}\right)$ and $\sqrt{\frac{1}{(4\gamma P - g - 2P)^2}} - 1/\left(\frac{1}{(\gamma(4P-1)-2P)^2}\right)^{k/2} - 1$ as Geometric Factor and Changing Rate. Connection to detector is straightfull in phase factor and by exponential folding closes the Bootstrap assuming log to linear scales for homotope variables under the induced granular Infraction. **2.7** The preceding formulas can be extended to the couples possible in the sketched Language. It is possible to note that $t - x$ already corresponds to an S-term of scintillator, so that the whole String block of an "M-theory" could be backprojected as much as Area Law is tautological. So, the same characterization of Shrinking Range can be applied for increasing BH features Radii of interferometer range. In other words, it is as if space travel were anthropic, but intergalactic, because the diffusion of Black Body for the BH would be that of Genesis, that is, I re-read the δ-distribution in the phylogenetic tree. Here, it is possible to substitute kT with Bekenstein formula and obtain the regeneration factor of the Avatar from which, as a tree, I descend into the Anthropic one. Then the pulse quotient of the topological dynamics into that of Sheaf makes it pass to the Ancestor. Whatever New Horizons Life would be, the stages of tension seem to correspond to gradual propagation of Photon Ring Universal features into Matter-Life, Human-Animal and Ancestor-Avatar Tensions.

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