This Theory is 0

All QM physicists know about *real* eigenvalue (Dirac eq), observables. All mathematicians know that the limit of a Cauchy sequence of rational numbers is a Cauchy *real* number. So all we did here is show we postulated *real*#0 by using it to derive a rational Cauchy sequence with limit 0. We did this because that same postulate (of *real*#**0**) math *also* implies the *real* eigenvalues we get from a generally covariant generalization of the Dirac equation that does not require gauges (Newpde), clearly an advance over previous such physics pdes.

So next we first must define 0:

Algebra of 0: numbers 1=1+0 and *list* 0=0X0, 1=1X1 defines *symbol* z=zz

real#0 implied if plugging z=0 into z=zz+C, **eq1**, gets *some* constantC(ie $\delta C=0$) [ie **postulate**0]

Eq1 iteration $z_{N+1}=z_N z_N+C$ *defines* bigger numbers z_{N+1} and so we can *define* additional symbols (eg., fields, rings and δC calculus) *without* axioms [except 0]

Table of Contents

$\delta C=0$ implies we only need the 2 real **extreme** of C (fig1)

I) *Lower **extremum** iteration* of eq1 from $z_0=0$; We must reject the Cs for which $\delta C=\delta(z_{N+1}-z_N z_N)=\delta(\infty-\infty)\neq 0$ The Cs that are left over are the **Mandelbrot set** C with *lower* δC extremum CM= -1.4..Next larger fractal scale (fig1: N=1,'observers') called big C. Also z=1+**δz** into eq1 implies

$$\delta z+\delta z\delta z=C \quad (2)$$

II) *Upper **extremum** from quadratic equation* eq2: $\delta z=\frac{(-1\pm\sqrt{1+4C})}{2}\equiv dr+idt$, $C<-\mathbf{1/4}$. Thus that rational Cauchy sequence is $z_{N+1}=z_N z_N+C=\mathbf{-1/4}, -3/16, -55/256,..\mathbf{0}$. So 0 is a real number QED

Eq2 also implies for big C (N=1,'observer') $\delta z \ll \delta z\delta z \approx C$. Thus $0=\delta C\approx\delta(\delta z\delta z)=\delta((dr+idt)^2)=$ $=\delta[(dr^2-dt^2)+i(drdt+dtdr)]=\mathbf{0}$ =Minkowski metric+Clifford algebra≡ **Dirac equation.**

So these *Real*#s are real eigenvalues because:

III) 2D Mandelbrot C δz (fig1) perturbs independent 2D Dirac dr getting 4D eigenfunction ψ in

Newpde≡ $\gamma^\mu(\sqrt{\kappa_{\mu\mu}})\partial\psi/\partial x_\mu=(\omega/c)\psi$ for e,ν, $\kappa_{00}=e^{i(2\Delta\varepsilon/(1-2\varepsilon))}-r_H/r$, $\kappa_{rr}=1/(1+2\Delta\varepsilon-r_H/r)$; fractal $r_H=C_M/\xi=e^2X10^{40N}/m$ (**N**=. -1,0,1.,); $\Delta\varepsilon=0$ for neutrino ν, N=-1 or no object B. So

Postulate(0)→Newpde

Appendix A,B,C: N=1 fractal scale $^2P_{3/2}$ Baryon Newpde objects A,B,C. We are inside object A

Spherical Harmonic Solutions to Newpde: $2P_{3/2}$, $1S_{1/2}$, $2S_{1/2}$ at $r=r_H$ Stable $2P_{3/2}$ at $r=r_H$

N=0 at $r=r_H$ **$2P_{3/2}$** 3e **baryons** (QCD not required) Hund's rule **$1S_{1/2}$**,μ,**$2S_{1/2}$**,τ **leptons** (Koide)
4 SM Bosons from 4 axis extreme rotations of e,ν

N=-1 (i.e., $e^2X10^{-40}\equiv Gm_e^2$). κ_{ij} is then by inspection the Schwarzchild metric g_{ij} (For N=-1,Δε<<1). So we just derived General Relativity(GR) and the gravity constant G from Quantum Mechanics(QM) in one line.

N=1 Newpde zitterwegung expansion stage is the cosmological expansion.

N=1 Zitterbewegung harmonic coordinates and Minkowski metric submanifold (after long time expansion) gets the DeSitter ambient metric we observe.

N=0 The third orderTaylor expansion(terms) in $\sqrt{\kappa_{ij}}$ gives the anomalous gyromagnetic ratio and Lamb shift *without* the renormalization and infinities.

So $\kappa_{\mu\nu}$ provides the general covariance of the Newpde.

So we got all of physics here by *mere inspection* of this Newpde with no gauges!

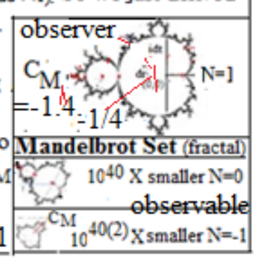


fig1

Conclusion: So by merely *postulating* **0**, out pops the whole universe, BOOM! easily the most important discovery ever made or that will ever be made again.

*Thus our concept is: **Ultimate Occam's razor postulate0 →ultimate math-physics**
so simplest 0 definition(1=1+0; list 0=0X0,1+1X1 is z=zz, *not* z=zzzz) and we have from our (obviously required) real0 postulate thereby *real* eigenvalues *and so* Hermitian operators (observables) with their eigenfunctions ψ provided by the Newpde.

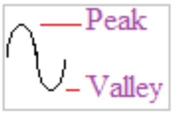
$\boxed{z=zz+C}$ **eq1**

Peak $\delta(\text{eq1})=0$ — Dirac eq — Newpde — universe

Valley $\delta(\text{eq1 iteration})=0$ — Mandelbrot set C — Newpde

$\delta C=0$

So 2 real extreme for C



Both Peak and Valley math are very simple (section 1)

So this silly little **eq1**(C constant) gives the universe.

This is a powerful reality check on this idea

0 is real# ⟶ real eigenvalues

if z=0 plugged into **Eq1** gives ∃ constant C

postulate 0 ⟶ Newpde: $\gamma^{\mu}(\sqrt{\kappa_{\mu\mu}})\partial\psi/\partial x_{\mu}=(\omega/c)\psi$