General Physics Notes (10092026):

Let's remind the reader of the quantum wave equation of Schrödinger. When relativistic it can be turned into the Dirac equation. We'll discuss this later. I would like to cover the scattering amplitude and relate it to the zeta and then a sum over all states. We can then discuss the physical-mental-mathematical zeta derivation. We can also discuss the calculus based zeta derivation. Finally, we can discuss the Hilbert space filling curve with a zeta convolution.

$$H|\psi\rangle = \frac{\hbar^2\nabla^2}{2\mu}|\psi\rangle + \widehat{V}|\psi\rangle = -i\hbar\frac{\partial|\psi\rangle}{\partial t} \tag{1}$$

$$f(k \to k') = \frac{\partial\sigma}{\partial\Omega}(\Delta k) \tag{2}$$

We have to build the zeta into the radiatatrix of expanded states such that the resultant spectrum of emerging vectors is a function of the zeta primes.

$$f(k \to k') = \langle k \cdot \zeta(s,t|\widehat{V}|k' \cdot \zeta(s,t)\rangle \tag{3}$$

A property of the zeta is that is is scale invariant. This means that the modifications of calculus at one scale resembles the modifications at any scale, and that if we modify with metadata in one frame, it washes over the other frame. We are still working on whether we modify the zeta. It goes something like:

$$A(x) \cdot \zeta(s_1) \cdot B(x) \cdot \zeta(s_2) = A(x) \cdot B(x) \cdot \zeta(s_1 \cdot s_2) \tag{4}$$

This is very simple because the metadata is just the reference frames 4-vector.

$$s_{i,j,k,t} = x^2 + y^2 + z^2 - c^2t^2 \tag{5}$$

What is happening is a physicalism being impart into the mathematical structure so that the correlations are built into a complex adaptive system. Adaptive information content can generationally represent the new metadata approach. It means that generations form with new metadata correlations.

$$f(x) = \int \frac{\partial f(x)}{\partial x}\partial x + C \tag{6}$$

This is the traditional approach. Gaussian attempts with a transformer or language model will never be able to extrapolate a new iteration orthogonal to traditional mathematics. We require novel new mathematical convolutions.

$$f(x) = \int \frac{\partial f(x)}{\partial x}\partial x \cdot \zeta(s,t) \tag{7}$$

When we set the calculus to study dimension, or when we look at the divergence theorem and the holographic principle. We have to think of how space fills.

$$\mu N_{particle} = U = N_{particle}R^D = N_{particle}[R \cdot \zeta(s,t)]^D \tag{8}$$

We are filling space with the most descriptive and isomorphic space filling curve and its geodesics in the string picture. The nature of space is that is is a crystal or fabric. The zeta is the punctuated equilibrium and inflationary model. Let's discuss this later.