the existence of a boundary
or
the necessity of change

Maximilian Weinhold

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1 Introduction

Ok, we wish to codify a notion of changing space. Easy enough, so we start with a resolution.

$5.39 * 10^{-44}$ per Swinburne, Australia.

Quite fine, per our gargantuan tools.

The first course of action:

We must investigate the size of vacuum puncta! For if these roiling boils of spacetime exist, how small may be the influence?

Even $5.39 * 10^{-44}$ per *H.* Planck's formula.

And if it is influenced by this Planck time, that is, spacetime puncta, we must find a way to compute! Phenomenal savings with our chattiest codesigners.

So with a finitude of thought and a finitude of space we compose a function on observers. Or of observation?

$$f(o * \psi) = \Psi$$

That a composition yields all a perceptive space Ψ, being composed of an action on a tender scale ψ, which arises in a frame as such:

$$t : f \to \Psi$$

An unproven and dear notion.

The prompt on dragons[1] was fortuitous to conjure an observer, for which we now relay innumerable.

[1] In full, as off-Null: (of referring to AI) with our finest contrapatriots.

And yet I worry of the atom, and its dislike to split. Though its love to fuse, and drive the hearts of men.

And to conjure symmetries in the minds of women, as our colleague reports Emmy Noether has found the heart of all groups.

$d_t \neq 0; d_t = n\tau$

Now before the resolution we put a post, that is here be dragons, and define

$$dragons = unknowable(t)$$

$o* : \{ \langle | \rangle \}_n$

That defining a length, n which was related to a minima t, on a setwise composition of expectations we create the action that conforms f to resemble Ψ

The proof follows as such:

2 0.0

We assume knowing Ψ. then, in performing a deinvelation on $f \to f^{-1}$ we momentarily leave $o * \psi$ without its frame-like influence. For a choice example, a square root '$\sqrt{}$' may be equipped with a positive or negative sign to the same polynomial mapping '$n^2 = a \iff n = (+\sqrt{a}, -\sqrt{a})$ ' where you also get a notion of a complex plane reflexively when $a \in C$ where C is an ordering in the complex [2]. Ψ could be treated as itself obtaining whether f appears positive or negative through a computation-like action, $s(f) = \uparrow \vee \downarrow \equiv min(S(\Psi))$

Whereby, in producing S, Ψ obtains a choice, which is $\uparrow$ or $\downarrow$, though this means $min(S(\Psi)) \geq Cost(set(\hat{z}))$

Where we assume whatever process is demonstrating generates a signal with an axis $\hat{z}$, that must be set for a sensical read $read(\uparrow \vee \downarrow)$.

Could also be a prior.

So:

$$Cost\big(read(\uparrow \vee \downarrow), set(\hat{z})\big) \geq Cost\big(set(\hat{z})\big) \geq S \geq 0$$

We wish to prove that $min(S(\Psi)) = min(S) = Cost(set(\hat{z}))$

Firstly, assume $S(\Psi) = min(S(\Psi)) = Q(set(\hat{z}))$ as our prior.

We say that $S(\Psi)$ is the most-efficient process of its kind, and that it is valued at some Q, which is the lowest global information-gathering step to be composed. If only because we imagine particles as coupling or not or hardly noticed with an axis.

Since we treat this as a global process, we will say

$S(\Psi) \geq min(S) \geq 0$

Now, per quantization, we may say that any process may be treated as such: $S^{-1}A(S) = kS$, and k is given inverse units of S, or 'heat'. Therefore,

As a pleasant axiomatic cost savings, let us make $(f^{-1}f)(x) = s(f(x)) = read(\uparrow XOR \downarrow)$

Where the rightmost equality, that breaks the XOR, might be labeled the result.

And so this unknowable process finds a way to an answer, which is frequently art. And thus we compose a neat notion:

no amount of (action on) dragons is as such knowable, being contrary to t, which is a notion of knowing.

Neatly,

$dragons \geq d_t$, even though is just a thought made live.

[2] I don't think I've said anything on order mattering. Do you think it does?

2.1 A pleasance

I'll conjecture this one:

$Cost(read(\uparrow XOR \downarrow) \geq Cost(read((\uparrow \vee \downarrow)) = Cost(set(\hat{z})$

Sorry to write so many costs, I think we have to assume commensurability to bring them under one roof:

$Cost(a * b)$ allowed if $Cost_l(a) * Cost_l(b)$ where some l is shared.

Notably, $(\uparrow XOR \downarrow)$ or $(\downarrow XOR \uparrow)$, to not perturb the state further with a meaning of order, may also be held (anti)coherent, though we create a duality of future space, which seems like it'd be (immediately) costlier. At least that's my intuition for parallel computation.

A primary justification for

$$Cost(read((\uparrow \vee \downarrow)) = Cost(set(\hat{z})$$

is only the presence of a direction being specified, and no information about how the tend of energy is stored is generated.

It's quite pretty, even nicer when we're (to)in(vent) a unitary cost gauge.

2.2 might be a different s

$min(S) = ks \vee s^{-1}A(s)$

If you'll give me a morphism.

And a minimum:

$Cost^{-1}(Cost(\phi)) = 0$

That the lightest cost ϕ, with respective un-ask, is free.

For most-everything else, $Cost^{-1}(Cost(k\phi)) = kS$

For an efficiency $Cost$ developed with S and a quantum scaling on ϕ.

3 An uncertainty of late

I require one more Axiom, it helps create a contradiction.

3.1 Working on it

Let us associate.

$\uparrow$: ks and $\downarrow$: $s^{-1}A(s)$

We will need $Cost^{-1}(ks)$.

Or to show that $Cost^{-1}(Cost(\cdots) = \cdots$.

That any process A occurring in and on S and a number-of-spacings (energetic unit) k.

3.2 Wait for the reveal

*preparation(A*B) = preparation(B*A)*

So we say that if we are to compose Ψ, we do not know if it is presently generating/requiring $Cost$, and thus $S(\Psi)$, or surely a component of Ψ, is unknown.

Or at least,

$$S(\Psi) \geq 0 \pm Cost\big(set(\hat{z})\big)$$

Where

But I thought $S \geq 0$.

No problem, probably. $S(\Psi) > (min(S) == 0, 1)$ where the 1 is held high.

And give the condition:resultant $S(\Psi) == < 0 : S(\Psi) = S\big((\alpha, \beta) \cdot (0 \vee 1)\big)$

Where, crucially, $(\alpha, \beta)\cdot$, the probability of selecting 1 - in action in natural units - or 0, may change.

This set of conditions, one held true, one only occasionally, with an indeterminate, influenceable (α, β) as otherwise how could Bose-Einstein condensates exist?

Improbably so.

We create such a unit as uncertainty:

$$\Delta(o * b)$$

And as I play together Kolmogrov, which produces that of the shortest length and Gödel , a number of self-description into describing the same object:

$Kol(\Psi) : gdl(\Delta())$

That causes Ψ to such:

occasionally vary.

There is a curious case. A contradiction. We let it in. Via *ansatz*.

$$S(\Psi) = S = 0$$

And remember how we often define S:

$$S \equiv \int_{T_b}^{T_a} dq$$

And as such make $T_a = T_b$. Or $\oint$

And yet, in all other cases

$S > 0$. So in the one case that the preparation of the state is indeterminately associated with a negative entropy we give a notion, that $set(\hat{z})$ has no Cost. That Ψ receives a notion of spin without an ask.

I'd call that anticoherent.

4 A look back

Assuming:

$$S(\Psi) \subseteq \Psi$$

where you'll forgive the set notation either as a notion of withiness or with a richer category formalism ($\subseteq \in o$ for $o \subseteq f$ can coarsely attempt).

Said imprecisely, the entropy of a global state is a component (including the whole piece) of the global state.

In a certain case,

$$S(\Psi) = 0$$

, whereby Ψ returns information on its composition f without cost.

In this moment, We envision such:

$$S(f(o * \psi)) = S(\Psi) = 0$$

And, out of necessity, $S^{-1}(0) = 0$, as not-even a bit of information is required to store nothing.

Thereby,

$$o * \psi = 0$$

And so, as we kept o arbitrary, any combination will likewise perform as 0.

With the proper ψ. For this to be true for any combination written as o, $\psi = 0$. This is odd.

Though not really. Categorically everywhere. At least, as seems to me.

What else is a black hole? Or inside the planck volume?

5 1.0

As one convenient example, we imagine a formalism

$$\nabla_\eta(u * \rho^{-1}p) = 0$$

And as such relate a formalism to a cavity:
$\oint_{/[\rho]} \Box \frac{u}{(p^{-1}\rho p u)}$

That, if ρ varies linearly, to compute u and $p^{-1}\rho p u$ separably, allowing the evaluation $\oint$ 'outside' a dimension of ρ hence 'undensity-like'.

Then, as long as we may find $\nabla \in \Box$ ensuring ${}_{/}\rho \oint = 0$ is as simple as letting $\nabla = \Box$

For if we will, a vorticity characterized by a viscosity on a coupling between a flow field and a density-permuted pressure gradient ensures it own existence as a dimensionless number.

The tides are surely beautiful today.