The logical universe and ghost fields.

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Abstract:

Here I posit the existence of a logical universe, within and behind the physical universe, the existence of fields that can calculate problems and how these relate to strings.

Introduction:

In order to explain consciousness and other phenomena I put forward the idea of a logical universe analogous to our physical one. I am sure this is not a new idea but has some interesting consequences especially regarding relativity.

The logical universe is topologically equivalent to the physical one. It is manifested in ‘ghost fields’ that convert data into logical sequences. These fields are created by the existence of matter (information). These fields create a network of data, out of this comes things such as gravity, prime numbers, pi, e, strings etc.

Mathematical symbols are not unique and quite arbitrary. They actually describe objects which here we will call curves (wave functions) They can be expressed in a finite number of ways, depending on the size of the system. It is the same scenario with words, the events represented however are real.

The logical universe is complicit in processing information sent to it by the physical universe.

Because the logical universe has space as simply a variable it is possible to transmit information anywhere up to infinite speed. Events however are separated by time this means
Speed = distance/ time thus distance = speed X time therefore the logical universe can be infinite in size, thus it is the basis for the multiverse.

It is infinite in dimension, all possible events can occur, however it is time that slows the events, giving them separation. Also, as discussed later, there are certain rules that control the flow of information from the logical to the physical.

This points to no beginning of the logical universe. 1)
Our universe, however, is finite and not everything can happen, thus
the possibility space is still open therefore we have a higher
potential.

Symbols are a collection of curves that are equated with other
curves (curves being objects). Equated is the key word here this
means that whatever happens to one curve happens to the other
curve. Curves can of course be represented as wave functions. Thus
if \( y = x \) there are curves that are solutions to the problem. Curves can
be symbols, this is the magic between algebra and geometry. Curves
are self evident. In fact anything that can be depicted on the
Cartesian plane is self evident.

This is where a concept called anti-info comes into play, symbols
that do not have a physical reality are said to contain anti-info.

Anti info is essentially information that doesn’t fit in the solution set.
It is the material that can’t be quantified from the logical to physical.

It was said above that a possibility space is full if all possible states
have occurred. What if no states have appeared? This is where there
are no curves, and time without events has no meaning. No curves
implies nothing so Sum of information = 0

This is the definition of space, no curves. Thus if a local point has no
curves there is empty space, or a parameterisation of empty space
in the logical universe.

This means the notion of curvature in relativity is in error. There are
no curves in empty space, even if space itself is curved because the
curves imply something is there. The redeeming feature is that you
need objects to curve space—time. This is the clue that logic somehow plays a role in the functioning of the universe.

Thus curves (objects, waves) are one to one from the physical to the logical. Symbols however are dependent on configuration which can be completely arbitrary. There is however a structure following mathematics on this planet.

Basically if we set logic in motion we have thought. Here the curves themselves are solutions. The brain produces selections that are solutions to unique problems.

Any symbolisation in the brain is dependent on curves. Curves dominate the mind, symbols are a subset of curves, when set to time produce thought.

For example a sound wave is a pulse of air that produces a geometry of air particles. It is then a succession of electric currents each in a circuit with a radius. The only way to represent this in physical form is to give it some sort of structure, structure implies shape. A symbol always has to be rooted to a curve.

Here we must discuss rules. Rules take away the absolute nature of curves in that they are separate entities. If there is a rule that says that everything is nothing and this rule is true we have the fact that everything is nothing

1) Rule says that whatever exists is nothing
2) The rule is true
3) Therefore everything is nothing
   (is this fallacious?)
   Here even the rule is nothing.
   1) Infinity is zero
   2) The rule is true
   3) Therefore infinity is zero
This second statement supplies the answer to the nothing paradox because nothing is nothing therefore everything can't be nothing. This means that rules take precedence over curves. i.e nothing is not a curve.

Curve = rule = Curve = rule

Think a little about this equation.

The curves of the letters on the page equal a rule and this equals the curves. The exception here is nothing

Perhaps the logical universe has its own dimension, perhaps for every dimension in reality there is a dimension in the logical sphere, perhaps all dimensions in the physical universe can be reduced to one dimension of information.

The physical universe supplies existential motivation for the logical universe. There are many things that can exist in the logical universe that don't exist in the physical one, this however is time dependent hence the equivalence principle

- Whatever can be achieved in the logical universe can be achieved in the physical one and vice versa.

An example of this may be the strings in string theory. They are a mathematically fascinating avenue of physics. If a string can be thought of as a curve and a string is information then they may well exist in both spheres.

It is a limit of the quantum field view of the universe that at any point there is empty space, overlain by matter. What strings are in essence, may be, products of space itself.
String metric(string1 – string2) = feature of space/time.

I provide some postulates below that aid in the quantification and analysis of information flow..

**Postulate 1)** If a problem can be seen it is easier to solve.

**Postulate 2)** To analyse something it has to be broken down into its constituent parts.

**Postulate 3)** Things move from high potential to low potential.

**Postulate 4)** The universe has no memory apart from large scale structures. i.e. photons etc.

These may seem quite arbitrary and nonsensical but are necessary to understand phenomena such as time travel. Central to our revered field of physics is the notion of conservation of information.

Also the equivalence principle states that:

Every action that can be performed in the physical universe can be performed in the logical one and vice versa.
The nexii between the logical and physical are time and motion.

Space is simply another variable in the logical universe

\[(x,y,z,t) \rightarrow F(t)\]

High potential \rightarrow low potential

Once every possible combination of a system is enacted the system is full. The motivation of the physical universe is the tendency to fulfill every possible state. Here life supplies a paradox in that it enables new states but denies others (natural selection).

Motion is simply a reconfiguration of a systems information states.

\[(x,y,z,t) \rightarrow (x',y',z',t') \rightarrow F'(t)\]

Massless particles still have an energy. Time is an effect caused by the motion of particles. Here time is a function of momentum within the universe. Without events there is no meaning to time.

This implies that without events there is no such entity as time.

Important here is the notion of the equivalence between information and matter at very small (Planck length) scales.

A hypothesised mechanism for the ability of the mind to control the body is that there are tiny, mechanisms for the mind/soul to manipulate. These occur at planck length and are a way of the mind, in an infinitesimal manner to control matter. They are essentially miniscule ‘levers’ that the mind can manipulate and then amplify. Thus the mind may exert a force on the universes albeit very weak and this can trigger small changes in the planck length scale of the universes.

(credit to Alex lang).

The following is some hand rendered mathematics due to the onerous nature of typesetting.
The ‘ghost fields’ are separate to quantum fields in that they 'calculate' the states (information) into a single function of information, which can be processed through the divide between physical and logical. Thus the four dimensions can be thought of as a single function of information.

Through the logical universes, the physical universe can communicate with other states, points of events ie separation by distances and times. It may be that the entire universe communicates through the logical universe and the rules are somewhat 'self aware'.

The physical universe is essentially an evolution of certain rules and curves (wave functions) which can’t be changed, at least for now, except by rules that allow this. The ghost fields calculate by interactions (motion) between the logical and the physical. It is motion that gives the vitae to communication.

Interactions can proceed in both directions but are only allowed from the logical to the physical by certain rules. These rules are the fundamental evolutionary - informational rules of the universe. Thus only certain amounts and types of information can be transmitted from the logical to physical. Rules are separate to wave functions. These are all that exist, rules and wave functions.

For example the rule governing the evolution of life is a manifold of the rules governing the universe, they are nearly the same set.

Rules of life < rules of universe = K (rules of life)
K is simply a frequency

This implies that given the evolution of life it will eventually fill the universe as much as entropy allows.

Life = W – S
W = is all the states possible in the universe
\[ S = \text{entropy} \]

Life can be described as a localised decrease in entropy = \(-S\) plus a decrease in energy
\[-S = W - S - E\]

And also an increase in information
\[-S + I = W - S - E\]

Therefore \( W = I + E \) which can describe every event, given energy is a rule.

- Time is infinite

\[ W = I \]

\[ E = I/t' \] energy is a function of information over time.

\[ I = I + I/t' \]

\[ I = I \left( 1 + 1/t'' \right) \]

\[ 1/t' = 0 \] which implies \( t' = \) time is infinite

- Ghost fields

As fundamental size of a field approaches zero the divide between logical and physical is diminished. The key here is \( \lim x \to 0 \). This can be taken to mean the smallest possible unit of space, commonly held to be planck length.

If however we go smaller than planck length we have a ‘sweet spot’ where information can be traded until we have the smallest structure of information. This is written as a wavelength

\[ \text{Speed} = \text{frequency} \times \text{wavelength} \]

\[ S = fD \]

\[ D = s/f \]

\[ D^2 = c^2/f^2 \] to give an area.
\[= c^2/1/T^2 = c^2/T^2\]

Let \(c=1\)

\[D^2 = 1/(PT)^2\]

Possibly the smallest information structure is the inverse of planck time squared.

Finally we get to strings in string theory. Strings may be an inherent part of space. They may be the smallest, calculable units of wave functions. They may be pure motion, thus capable of communicating with the logical universe. If we go smaller we have information only, if we are at string size it is the level of rules being able to manifest. Strings may themselves be the messengers of rules in the universe. For this to happen it is likely they are planck length or smaller. As said above, the structure of information can be smaller than this but this is simply the ‘doorway’ to the logical universe. There needs be messengers that enable the information to be transmitted.

Strings appear to be the physical bridge between information and matter/energy. Adding strings together adds the information, possibly in a linear manner. They are likely candidates to have angular momentum, which is motion and as stated above, this is the key to communicating with the logical universe. Time seems to be a rule. This rule acts upon the smallest unit of curves (wave functions) and these are strings. Space without time is a constant in the language of universes, time is a rule thus it is born of this universe.

If you desire a more detailed view of the possible mechanism as to how the ghost fields communicate with the logical universe and what the ghost fields could look like topologically see:
http://vixra.org/abs/1607.0475

There is more to be said. Laws arise from the fundamental necessity of true and false. Not everything can be true and not everything can
be false, there needs to be a rule that distinguishes between the right and the wrong. Conscious beings have an innate ability to discern the basic rules governing the universe, they know simply what they need to know.

Then, if \( x = y \) and there is a third curve \( z \) then if \( z = y \) then \( z = x \).

There must exist something more than the coincidental event of there being solely two things in the universe.

Shape is possibly as absolute as absolute can become, any shape can be represented by a set of coordinates, these shapes must be separated by something.

The event of movement is tantamount to information. Information and time appear to be separate but have the common feature of describing movement. Information can be defined from 0 to a certain value, in this universe that certain value is \( c \).

Adding two motions gives a third motion

\[ N \text{ motions } \rightarrow N+1 \text{ motions}. \]

Motion is defined in terms of other motion, conservation of information is conservation of angular momentum. This implies that information is distance i.e a bit is simply a separation in space and time.

Time causes both convergence and divergence of information, time can be studied in terms of divergence and convergence of information, entropy is the constant between divergence and convergence. Convergent events reduce the space in which they occur. Divergent events increase the space in which they occur.

The rate at which information can be transmitted follows the Lorentz transformations. This means larger and smaller velocities transmit more and less information.

Patterns are the result of an imperfect communication of information. If all information was transmitted in an infinitesimally small amount of time there would be no structure.
Life attempts to store information, locally violating the increase of entropy. Most information occurs at locations of energy/mass. Acceleration is a resonance of information exchange, mass also resonates with an objects movement.

Minds exist as perfect symmetry between and within the logical and physical universe, they are logic given time.

All events can be broken down into their constituent information but if examined the information will vanish.

Info found = 1 – probability of finding info.

Information is directly proportional to the number of configurations of a system, it is also proportional to the size of a system, the density of a system and the time taken to change state of configuration.

Information moves from high to low potential. The number of configurations of a system disappear into a possibility vacuum. Entropy is a measure of information exchange, Information is the connection between laws and wave functions. I.e there exist only laws and curves (wave functions), info is similar in nature to time.

The central notion to the existence of ghost fields is that information itself has no size. Information is something that describes the states of a system and can thus be considered a law. It is however a wave function or some sort of symbol which implies a curve. Thus information is the essence of existence – the bridge between what is real and what is not real.

The fact that information has no radius means that any structure composed of information can be shrunk to a infinitesimal size. In this universe I believe that to be 1/planck length squared as outlined above. This means the ‘Ghost Fields’ can exist without physically interacting with the universe, they may well be the very structure of space/time. Given below is a possible outline of how they appear. They essentially exist because information exists. The fact that
space/ time is curved motivates the existence of information as outlined above. Therefore even in empty space there is some sort of information, produced by the curvature of the metric.

Moreover we have the concept of anti info. Anti info is anything that is not in the solution set, it is anything that can't be expressed logically in the physical universe. It may be responsible for entropy but this needs further analysis.

The ghost fields have a further purpose. The branches have a certain angular momentum. This, and the separation between the branches gives a clue as to what sort of information is above the field. Thus they are a sort of calculator.

The ghost fields calculate the density of information etc and then transmit it to the logical universe.
Proof that information has a radius of 0:

\[ f_1 - f_2 \]

\[ \text{Assume the added equal to radius}\]

\[
\frac{\text{Speed}}{\text{time}} = \frac{S \cdot d}{t} = \text{d}s / s_{r} = s_f
\]

\[ S_f - S_{r} = s_f \]

\[ \text{occur across some time interval multiply by a common mass} \]

\[ S_f - S_r < s \]

\[ m_S_f - m_S_r < m_s \]

\[ \text{Assume mass} \quad \text{some arbitrary}\]

\[ \text{same radius of}\]

\[ m_f \quad \frac{64}{7} \]

\[ \frac{47 S_1}{C_1} - \frac{47 S_2}{C_2} = \frac{64 S}{t_2 - t_1} \]

\[
S = \frac{d}{t} + \frac{s_0}{f} \quad \text{or} \quad (d + \frac{s_0}{f}) - \frac{1}{f} \quad \text{or} \quad f \quad \text{subtracting}\]

\[ 27 f_1 - 67 f_2 = f_1 f_2 \]
\[ m = \frac{\text{mass}}{\text{height}} \]

Given: Let \( A \) be a solid. Then:

\[ f(x) - f(a) = \int_a^x f'(t) \, dt \]

is the area.

(If this work is correct, \( dx \) = \( \frac{\text{increment}}{\text{number of increments}} \).)
Information comes in 2 distinct types of manifestation.

1) Plane Earth

...which can be attributed by the presence of other information

2) Is that

large things make up of Sun, Earth ...
Some thoughts on info and anti info

$$\text{Anti info} > \text{info}$$

$$P(\text{info} - \text{anti info}) > 0$$

Existence of ghost field

The fields exist because information exists. The more information the more the branches of the fields become distinct.

Thus the ghost of a hidden past becomes a measure of energy.
Equation:

\[ \text{If } \angle A = \angle C \text{ and } \angle B = \angle D, \text{ then } \angle A = \angle C \]

Diagram:

1. Two overlapping circles with intersecting lines.
2. Points labeled as A, B, C, and D.

The circles are

equipollent unless

\( \text{opposed } \angle \text{ is a right angle.} \)
A time is the rate of change of information w.r.t angular momentum

$$f = \frac{d\alpha}{d\omega}$$

A some thought on laser

$$\frac{d\alpha}{d\omega} = 5\nu \nu d\omega$$

$$5\nu \omega \nu = 5\nu \nu d\omega$$

$$5\nu = \nu$$

$$\nu = \nu \frac{\nu}{\nu}$$

$$\alpha \nu = (\nu \nu) \nu$$

At any small section of change, angular momentum change is change in time
In $L^2(T) = \int_T f(x, t, \omega) \, dx$

$C$: length of

$x$: position

$t$: time

$\alpha$: wave number

$v$: volume of column

$\int T$ do $\int_T \, dx$

$\int f \, du$

where $f$ is some function with $\partial \omega$ and makes $f$ vary with

$T = \int_T f(x, t, \omega) \, dx$

In some we smudge those and hard
An example of my symbols in a body

\[ E = mc^2 \]

\[ E = m(\gamma + 1) \]

\[ \Delta / \Delta t = E \]

For a system of a gun fire bullet or a light wave, I was to consider the system.

A mass and mass is that

\[ m = \text{information density} \]

the ratio of that information space

\[ \frac{\Delta m}{m} = \frac{x^2 - x_1}{t_1 + t} \]

\[ E = mc^2 \]

\[ E = \frac{\text{max}(x^2 - x_1)}{t_1 + t} \]
\[ f' = \frac{h[f(x) - f(y)]}{x - y} = \frac{x_2 - x_1}{f_2 - f_1} \]

\( \Rightarrow \) each inflection with a change in sign.

\[ f' = dx \]

\[ \left( \frac{dx}{dt} \right)^2 + \left( \frac{dx}{dn} \right)^2 = \alpha^2 \]

\[ \ære \]

\[ \int \frac{a}{T} \Rightarrow \textit{multiple} \]

\[ \text{d.here} \quad \frac{C_D}{C_S} \quad \text{C.D. d.here good} \]

\[ \text{C.S.} \quad \text{good} \]

\[ \text{where} \quad 1 - \frac{C_D}{C_S} \quad \text{C.S. good! good!} \]
The expansion of the curve

\[ \frac{dw}{dt} = w \]

\[ \int \frac{dw}{w} = \int 6t \]

\[ \ln w = 6t \]

\[ e^{\ln w} = e^{6t} \]

\[ w = e^{6t} \]
A Some who red 

\[ \theta = \begin{pmatrix} \cos \alpha & \sin \alpha \\ -\sin \alpha & \cos \alpha \end{pmatrix} \]

\[ \hat{\theta}^{-1} = \begin{pmatrix} \cos \alpha & -\sin \alpha \\ \sin \alpha & \cos \alpha \end{pmatrix} \]

\[ \hat{\theta} = \begin{pmatrix} \cos \beta & \sin \beta \\ -\sin \beta & \cos \beta \end{pmatrix} \]

\[ \hat{\theta}^{-1} \hat{\theta} \]

\[ \hat{\theta} = \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix} \]

To normalize rows of \( A \)

\[ \hat{A} = \begin{pmatrix} \alpha & \beta \\ \gamma & \delta \end{pmatrix} \]

\[ \hat{A}^{-1} = \begin{pmatrix} \alpha^{-1} & \beta^{-1} \\ \gamma^{-1} & \delta^{-1} \end{pmatrix} \]
Some Fundamentals

\[ J = dx \]

A list of symbols is a clue:

\[ \frac{dx}{dt} = \mathcal{A} \]

Change in distance = an ... function

\[ \frac{\Delta X}{\Delta t} = \mathcal{F}(\mathcal{A}) \]

\[ f_{\text{end}} = (x_f - x_i) \]

\[ \frac{dx}{dt} = t \]

mass = volume \cdot density \cdot radius needed for the ... slower