

The Mind, Strings and Flux

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Abstract

Here we discuss that consciousness is an iterative process, contained within the brain. That is if awareness is a state of flux, it is contained approximately within the brain. Decisions are crucial in awareness and work, charge, energy and force are key variables. Essentially equality implies a form of awareness, and the decision term μ controls the equations, as do the choice functions E and B (see previous papers). If we let the number of occurrences, n be analogous to frequency ω , we can set up exponential solutions that demonstrate the role of curves (strings) in consciousness.

Introduction: Here we use a few simple formulae:

$$Force = F = qE$$

$$Work = W = \pm qEx$$

$$Flux = F_s = EdA = E x^2$$

Where here E is the electric field, distinct from E the choice function. It should be obvious from context which is used.

The following is a simple paper designed to show that the brain can control its own electric flux. The decision term μ inherent in this process and the generalised mass/energy spectrum operator:

$$E - B$$

Are important.

Results: The decision heuristic D (included with I,C, A etc from previous papers) can be written to control force:

$$D \rightarrow \Sigma qE$$

And the work done can oscillate:

$$D \rightarrow \pm qEx$$

So charge can be written as:

$$\frac{W_{i+1} \{h(\beta) e^{\pm int}\}}{xq_{i+1} \{k(\beta') e^{\pm in't'}\}}$$

Is iterated as:

$$\frac{W_i \{h(\beta) e^{\pm int}\}}{xq_i \{k(\beta') e^{\pm in't'}\}}$$

Assuming the exponential term, with β is a form of charge q so that force is expressed as equal to the difference of the above two equations, resulting in :

$$= \mu_i \text{ the decision term.}$$

Thus:

$$[E - B]D = [E - B]\mu_i = \Delta \text{ Force} = qE$$

The difference in charge is:

$$\frac{F_{i+1}}{E_{i+1}} - \frac{W_i}{xE_i} = \mu_j$$

The flux function F_s is:

$$-\frac{F_s}{xW} = \frac{x}{\mu_i} - \frac{E}{Fx}$$

Such that the R.H.S has the form:

$$x - \frac{1}{x}$$

Doing some algebra we have:

$$\mu_i = \frac{-x^2W}{F_s - Ex}$$

Or:

$$F_s = -x^2 + Ex$$

Writing (with constant M) , the spring constant K is equivalent to permittivity k' .

$$M F_s = -kx^2 + k'Ex$$

Which is an energy function. N.B

$$k = mf^2 = \frac{m}{t^2}$$

Which we shall use as a definition for Coloumbs (in part):

N.B the duality:

$$\mu_i \rightarrow \frac{\mu_i}{x}$$

(see calculations later).

We can write charge as the ratio:

$$\frac{\partial}{\partial t} \left(\frac{\Phi}{t} \right) = \frac{\partial^2}{\partial t^2} \Phi'$$

Which has exponential solutions, showing that curves are inherent in charge, where:

$$\phi = h(\beta)e^{\pm i\omega t} \text{ as above.}$$

Thus strings (curves) are used in charge, flux, force etc. N.B it may be possible to show that for n bits, these can be written as frequencies ω . So for:

$$P = \phi^2 \rightarrow P = \frac{n}{\Sigma N}$$

And we define charge q as:

$$q = i P \Sigma N ??$$

Calculations: To show that the permittivity k' is approximately equal to the spring constant k, setting M suitably:

$$M F_s = -kx^2 + k'Ex$$

We know permittivity is equal to:

$$\epsilon = 8.85 e^{-12}$$

So for flux of a hydrogen atom of radius:

$$x = 5.3 e^{-11} m$$

We have, rearranging:

$$k = \frac{F_s}{-x^2 + Ex}$$

So for an electric field of:

$$100 \frac{V}{m} \text{ and an area of } x^2 \text{ we have the flux } F_s = 2.81 e^{-19}$$

And k =

$5.3 e^{-11}$ approximately half the permittivity of space.

Thus using spring constant k is approximately equal to permittivity $k = \epsilon$ we have the energy equation"

$$M F_s = -kx^2 + k'Ex ??$$

N.B using the choice function B in dimensional analysis we can write: $Bk = \epsilon = k'$ such that the brain can select dimensions in the sense of units.

(N.B the formulae, algebra and calculations need checking)

References:

Serway, R., et. al. Physics Vol 2, Asia Pacific Edn.

Wikipedia,. Value of electric field in the brain.