The Mind, Strings and Flux

John Peel
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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 \( \mu \) 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 \( \omega \), we can set up exponential solutions that demonstrate the role of curves (strings) in consciousness.

Introduction: Here we use a few simple formulae:

\[
\text{Force} = F = qE \\
\text{Work} = W = \pm qEx \\
\text{Flux} = F_s = EdA = E x^2
\]

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 \( \mu \) inherent in this process and the generalised mass/energy spectrum operator:

\[
E \rightarrow B
\]

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:

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

Is iterated as:

\[
\frac{W_i}{xq_i} \left\{ h(\beta) e^{\pm int} \right\} \left\{ k(\beta') e^{\pm in't'} \right\}
\]
Assuming the exponential term, with $\beta$ 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 $k'$.

$$MF_s = -kx^2 + k'Ex$$

Which is an energy function. N.B

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

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

N.B the duality:

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

(see calculations later).

We can write charge as the ratio:

$$\frac{\partial}{\partial t(\phi)} t = \frac{\partial^2}{\partial t^2} \phi'$$

Which has exponential solutions, showing that curves are inherent in charge, where:
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 \( \omega \). 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:

\[
M F_s = -k x^2 + k' E x
\]

We know permittivity is equal to:

\[
\varepsilon = 8.85 e^{-12}
\]

So for flux of a hydrogen atom of radius:

\[
x = 5.3 e^{-11} m
\]

We have, rearranging:

\[
k = \frac{F_s}{-x^2 + E x}
\]

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 \( k = 5.3 e^{-11} \text{ approximately half the permittivity of space.} \)

Thus using spring constant \( k \) is approximately equal to permittivity \( \varepsilon = k' \) we have the energy equation”

\[
M F_s = -k x^2 + k' E x
\]

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

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

References:


Wikipedia, Value of electric field in the brain.