Teleportation, Entanglement and the Connection to Decisions

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Abstract

Here the author again uses the fundamental equation of duality and its meaning, related to decisions. There may be hidden variables affecting the universe(s). See previous papers for more information. Essentially we can manipulate the fundamental equation of duality to show how forces, energies (etc) and lengths are related. Continuity is used frequently in these papers and this is related to the Generalised Lagrangian Operator which connects Energy, logic and the necessary structures.

Introduction: The fundamental equation of duality is given by:

$$\frac{ɣ(k^j)}{x} - \frac{x}{ƛ(k^i)} = \mu_i$$

Which has the form:

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

Where the μ term is that of a decision.

For the equations used in continuity:

$$m^i x^j f^k \to f(m^l x^m f^n)$$

Where for example angular momentum is:

$$mx^2 f$$

Thus in continuity we have :

$$\left| m^i x^j f^k - a \right| < \boldsymbol{\delta}$$

And

$$|f(m^l x^m f^n) - f(a)| < \varepsilon$$

For further work if we relate the dimension $x^i \to x^\mu$

We may be able to put energy , force etc on axes and relate these to angles.

Results: Lengths and quantities can be related as follows:

$$x_1 \to kx \ (force)$$

$$x_2 \to kx^2 \ (energy)$$

$$x_3 \to mx^{2f} \ (angular\ momentum)$$

Here to produce a constant we have:

$$\frac{k^j}{x} = x \ s.t \ x^2 = k \ a \ constant$$

So again the fundamental equation of duality:

$$\frac{Ɣ(k^j)}{x} - \frac{x}{ƛ(k^i)} = μ_i$$

So if

$$Ɣ(k^j) \to \infty \to μ$$

We have

$$Ɣ(k^j) - \frac{x^2}{k^i} = xμ_i$$

Where the energy of a spring is:

$$kx^2$$

Here the μ term can be a "free" parameter. Which is equivalent to energy as will be used later. (both sides of eqn are true -> curve = rule = curve = rule.. as was discussed in papers).

Writing (for two energies $W = fx \ and \ W$:

$$\frac{Fx}{l'} - \frac{W}{x} = μ_i$$

Where $l' = \ constant \ NB \ some \ constants \ have \ to \ be \ supplied.$

Where $μ_i \ is \ a$ free $parameter$

Thus for the work equation: $\frac{Fx}{l'} - \frac{W}{x} = μ_i$

And multiplying by x:

$$\frac{Fx^2}{l'} - W = xμ_i$$

Or equivalently:

$$xE\_k - W = x \ μ_i$$

Now for entanglement there may be minimal work and distances are perhaps 0 so:

$$-W = x \ μ_i - xE\_k$$

Or:

$$\Delta W = xE\_k - x \ μ_i$$

s.t

$$\Delta W = x(\ E\_k - \ μ_i)$$

Thus if the energy is a decision :

$$E\_k = \mu_i$$

And the total work is 0. So for:

$$\Delta W = x(E\_k - \mu_i)$$

$$\frac{\Delta W}{x} = E\_k - \mu_i$$

Or:

$$force = E\_k - \mu_i$$

Again a decision term:

But for any x as:

$$E\_k - \mu_i \to 0: \; E\_k = \mu_i$$

No matter the x: (That is $E\_k - \mu_i \to 0$)

So for zero work there is a zero x (??). Now for the implications of continuity:

$$Let \;\; f(Fx) = F$$

So:

$$|Fx - a| < \boldsymbol{\delta}$$

And

$$|F - a| < \varepsilon$$

Equating $\varepsilon \; with \; \boldsymbol{\delta}$

$$|Fx - a| = |F - a|$$

Or:

$$Fx - F = 0 \;\; so\!: \;\; Fx = F \; or \; x = \frac{F}{F} \; for \;\; x = \frac{F_1}{F_2}$$

$$so \; for \; \frac{F}{F} \to \; \infty \;\; either \;\; F = 0 \; or \;\; F = \; \infty$$

$$But \;\; the \; logic \; is \;\; that \, \infty \; is \; a \; decision \;\; term \; \mu_i$$

S0:

$$x - \frac{F}{F} = \; \mu_i$$

Or using:

$$\frac{F'W}{x} \; we \;\; have \; x - \frac{W}{xF_2} = \; \mu_i$$

Letting $F_2 \to K \ \ (a \ \ constant)$

We return the original formula for duality :

$$\frac{k\,x}{l'} - \frac{W}{x} = \ \mu_i$$

If $F_2 \to 0 \ then \ Fx\frac{}{l'} - \frac{W}{x}\infty = \ \mu_i \ and \ as \ \ x \to \infty$

Then:

$$\frac{\infty}{l'} - 0\ (\infty) = \ \mu_i$$

But μ is related to energy and structure (Dualities). We can write:
Energy as both length and inverse length:

$$E\_k = x = \frac{1}{x}$$

So:

$$\frac{E_k}{l'} - \frac{E_k}{xF_2} = \ \mu_i$$

Or relating the energy $E_k \ with \ \ the \ \ choice \ \ function \ E \ \ and \ B.$

$$[E - B]f(x) = \ \mu_i$$

So for:

$$f(x) = x - \frac{1}{x}$$

We have:

$$[E - B]^{\circ}\left[x - \frac{1}{x}\right] \ or \ Ex - Bx - \frac{E}{x} + \frac{B}{x} = \ \mu_i$$

NB for an unspecified number of variables:

$$\frac{\Sigma \quad Ɣ^{i(k^i)}}{x} \pm \frac{\Sigma \quad x}{\Theta^{j(l^j)}} = \ \mu_i$$

And for:

$$\Theta^{j(\,l^j)} = \frac{1}{F}$$

For:

$$F \to 0 \ \ and \ \ F \to \ \infty \ \ the \ \ eqn \ is \ dynamic$$

Defining the energy as the structure of the eqn:

$$[E-B]\left[\frac{\sum \quad \gamma^{i(k^i)}}{x} \pm \frac{\sum \quad x}{\theta^{j(\iota^j)}}\right] = \mu_i$$

We produce the desired result that energy itself is a form of logic, using continuity:

$$|f(x)-f(a)| < \varepsilon \ where \ E_k = x = \frac{1}{x}$$

Or:

$$E^\circ E_k \rightarrow E_k{}^\circ E$$

Which relates actual energy to the Generalised Lagrangian Operator. NB, equating all $i \ and \ j$ bar one element of each we produce the original eqn:

$$\frac{k}{x} - \frac{x}{k} = \mu_i \ where \ these \ are \ elements \ of \ the \ above \ sums.$$

This may imply only one variable can be measured at a time.

References:

Susskind, L. All Stanford lectures in order. (on the web).