Re: E = wLF Derived By Modified Quantum Logic

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Notice that:

1) p(x,z) = 1 + z − x < = p(x,y) + p(y,z)

since we haveL

2) 1 + z − x < = (1 + y − x) + (1 + z − y) = 2 + z − x

Similarly:

3) p2(x, y) = 1 + (y1 − x1)/2 + (y2 − x2)/2 < =
p2(x,z) + p2(z,y) = (1 + (z1 − x1)/2) + (1 + (z2−x2)/2)
+ (1 + (y1 − z1)/2) + (1 + (y2 − z2)/2) = 4 + (y1−x1)/2 + (y2 − x2)/2

and it is easy to prove similarly the triangle inequality for pn(x,y) = pn((x1,...,xn), (y1,...,yn)).

So pn(x,y) for n = 1, 2, 3, ... obeys the triangle in− equality and nonnegativity and is in [0, 1] and increases from 0 to 1 as the Euclidean type distance d(x,y) decreases from 1 to 0.

We could, of course, as in much of functional analysis, concentrate only on the unit ball or here the unit n−cube in a functional space, or concentrate on Rare Events which would correspond to P(A) < = .05 and P(B) < = .05 in the quantity P(A−−>B) (or one or both of these last two) which would select xi and yi in a subset of [0, 1] for i = 1, 2, ..., n. If we want to expand this to the non−Rare scenario without trying to map [0, infinity) to
[0, 1), we could choose a very large distance (larger than the farthest observed distance at a particular time in history) D and normalize distances by D to put them in [0, 1] for Euclidean−type distances. Or we could agree to use the Euclidean type unit n−cube as a model of a [0, infinity) X [0, infinity) X ... X [0, infinity) space.

Proximity pn(x, y) involves differences of coordinates yi − xi and so can be regarded as dimensionally length L (1 would be a unit−valued quantity with unwritten length dimension in pn(x,y)), although P(A−−>B) is not expected to have all three aspects of dimensionless, probability dimension P, and length L simultaneously, so we expect a dimensional constant k1 such that [P(A−−>B)], the dimension of P(A−−>B) = pn(x,y), is:

4) [P(A−−>B)] = P = k1L = k2(dimensionless probability)

where k2 is another dimensional constant. Since ww* = P, taking [w] = P^(1/2) would give us (using L for a length/distance variable corresponding to dimension L if confusion is unlikely):

5) w = P^(1/2) = (k1L)^(1/2)

Continuing in this way in the expression:

6) Ew^(−1)L^(−1)F^(−1)

we could reduce w and L to variable functions of L and therefore for a constant dimensionless ratio of type (6) express E and F in terms of only variable L. This puts us in range of our desired results, but I'll leave that for another time.

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