**Local Wave Function vs. Nonlocal Position.**

Conventionally, we think of particle position as local and wave function as nonlocal. This is ***only*** true, however, if the wave function is assigned a probabilistic interpretation. Eliminate the assumption of a probability wave, and nonlocality (as well as quantum entanglement) is an illusion, nonphysical and unreal.

**LOCAL WAVE FUNCTION**: Orientable from the origin **LH** (counterclockwise) and **RH** (clockwise)

Angular momentum is preserved (by conformal mapping) to infinity, without boundary. Randomness rules (no preferred orientation).

**Fig 1**

**LH RH**

**NONLOCAL POSITION:** An assumption of nonorientable measure space demands arbitrarily chosen nonlocal boundary conditions. Probability measure is implied by a continuous range of variables.

**Fig 2**

In other words, a discrete probability measure artificially replaces the continuous wave function, as if the ***observer’s*** choice of boundary conditions determines the wave orientation. It should be no surprise, therefore, that Bell-Aspect results find measured correlation between quantum events, because the assumption begs its own conclusion.

**GLOBAL TOPOLOGY COMPELS LOCALLY CORRELATED WAVE FUNCTIONS:**

**Fig 3**

Although this simple 2-dimensional drawing falls far short of the mathematical beauty of Joy Christian’s **S7** topological model – the principle of the correlation function as a local phenomenon shows up even here. With no preferred orientation one partner is compelled to occupy a point at infinity, a point identical to the origin of the wave evolving in time – because if we detect a particle in one random orientation, topological orientability demands that the correlated particles are ***not*** randomly oriented, *because their wave functions are correlated.* The singlet state is therefore indifferent to the observer’s choice of orientation, and the extra degree of freedom that Nature reserves for her random choice of direction orients *either* particle position *or* particle momentum at infinity so that these particle properties are simultaneously determined. Preservation of angular momentum guarantees particle pair correlation at any distance from the origin; were it not so, how would we in fact even be able to speak of position and momentum? – after all, zero momentum (by Einstein’s unreduced derivation of E = mc2) in a particle of positive energy implies negative mass: is there any better way to define negative mass than a point at infinity? Conversely, conservation of the wave function’s angular momentum (conformal mapping) to infinity perfectly pairs with a massive particle of nonzero momentum. All told, one either measures angular momentum and gets mass at the opposite pole, or one measures mass and gets angular momentum at the opposite pole. The choice of measurement function is independent of remote measurement outcome.