

Synthetical Synopsis

Paris Samuel Miles Brenden

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Introduction:

The hypothesis seems to be apparently simple now:

- 1.) Measure(s) obtained by measurement(s) are exact and certain.
- 2.) Measurement as a process is semi-deterministic.

This is what I have discovered; as to if anyone would be interested; I have no reasonable speculation or guess at either a 'yes' or a 'no;' but to that which it is a contribution; it is a step beyond 'uncertainty;' to which improves a number of speculations in the sciences.

- 1.) In (2.) it is at most in-determinant.

The basic argument is that uncertainty is only possible when an object is 'at' the speed of light; for the reason that it must escape the dilemma of ' μ ' or ' ν ' holding a superposition and hence two-body interaction; but then when one does; forcing absolute certainty on the other degree of freedom of the second body to which it leaves behind results in the refutation of certainty; which is the dual side of the dual sided relation that is quantum uncertainty; meaning; we arrive at where we began; with that of the uncertainty; a dual contradiction on that of the two-body problem to which if we insist certainty we arrive at uncertainty and vice versa.

A recommendation for a re-phrasing of the uncertainty principle is the following:

"Exact precision on the knowledge of position and momentum are codetermined and known simultaneously at the time of a measurement; however; all other information we may obtain proceeding or following a measurement of a semi-deterministic characteristic in the process of measure is indeterminant as to simultaneous knowledge to position and momentum; by which simultaneous knowledge that follows as an antecedent is of at most an undetermined nature."

Considerations:

- 1.) Relativistic conversion of frame to frame is tantamount to conversion from ' μ ' to ' ν ' as labels; but this is nothing more than a re-labeling of pre-existent quantities or qualities; to which ' μ ' and in description ' ν ' are nothing but the same (idealized) and 'proper' time of flight of two 'prescriptions' for differential descriptions for the same 'certain' thing; then the point being that they hold 'geometric' or descriptive prowess and place in our equations; in as much as physical content of description.
- 2.) Re-labeling of ' μ ' for ' ν ' does nothing really in essence but re-label our description but does implicate a physical effect of prowess to which is it's physical importation of meaning; meaning to which is that from frame ' δ ' frame-descriptions ' μ ' and ' ν ' carry information about the system with physical implication; the momenta or position may differ to which energy and momenta *will* differ in the contrast of looking for physical '*effects*' of which are '*affects*' of frame descriptive prowess.

This holds two parallels where description of frame ' μ ' and frame ' ν ' holds the resultant of a physical

effect; for which one deals with the certainty\uncertainty principle; and one of relativity:

A.) It can be seen that the resultant description one arrives at carries the physical import of frame ' μ ' and frame ' ν ' conveying information about the momenta and position which differ from their frame descriptions in ' α ' versus ' β ' as auxiliary frame labels and points of view; a view which holds physical import of meaning in that of a two body or larger interaction there is an *apparent* but very real *energy dependence* by the transparency of descriptive prowess holding geometric content.

B.) It can be seen that the derived notions of certainty in ' ρ ' and ' η ' of which are their geometric factors of probability amplitude scale in such a manner as to compose to unity; of which the - again - very real and particular *weight* attributed to either body will differ considerably such that a geometric rule holds; these being the momenta and position derived results of finding the particle within some certain region of space traveling at some certain rate; thereby an overlap and difference following.

Here is the main point; we can convert between these systems of knowledge; or we can say they are the same thing; idealized to description to which the seamless integration of known's for what are their conjugate twin relations stem from the same geometric rule of possibility; then to which they are projections of the same thing; that is to say that relativity and quantum mechanics become the same.

I found that there are three key points here of emphasis in terms of descriptive prowess of import:

- 1.) Frame description ' μ ' and frame description ' ν ' carry physical import of real physical and geometric nature; to which we can even describe a 'law' that has a real physically sound 'effect.'
- 2.) These frame descriptions are '*seamless*' in that we ascribe something to them; but that the 'real' identities of physical quantities holds no meaning; other than that it is privilege to a transparent law.
- 3.) Frame description can be fragmented in such a way that it's displacement is a law of probability; to which one body in replacement for the other suffices to describe a breakdown of presence and absence; to which the total probability being unity; either law obeys '*certainty*' at the same identified and particular '*point*' at which the laws agree; one into which transparency and seamlessness of integration and differentiation become identified; and both laws hold truthful weight and bearing.

For now; all this is surprising to me; to find that an invisible law holding no more than descriptive prowess would impute a relation of which is physical material weight of apportion and leverage.

In this; the probability relation is one in which the relativistic argument entails a quantum analogue; that of which is the probability scale to which probability weigh's of an apportion with leverage owing to the relativistic argument of which is it's composition rule; here the mentioning of ' ρ ' and ' η ' as being comparative probabilities that *form* unity; these laws being the laws that we amount to when the total probability for the composition of bodies 'A' and 'B' is a real quantifier; known then as the probability of finding 'A' and 'B' in [a] particular situation(s); the geometric composition rendered by a compromise between relativity and quantum mechanics; of which is their composition in one/two.

In this it is that probability rules dictate activity in as much as relativistic frame descriptions do; to which altering relativity alters the probabilistic interpretation in a compositional manner; for if probability were to alter relativistic interpretation it would have to alter it in the manner of the construction of the two body from the one.

There are not an unlimited number of possibilities; but a number; for the configuration of elements in this dialog:

- 1.) Probability is the reciprocal of the relativistic factors. (Obviously a special case.)
- 2.) Relativity builds a structure on 'top' of the probability relation. (Should be arbitrary.)
- 3.) This is the constitutive relation for boosts and quantum probabilities. (Deconstructive.)

It turns out that (1.,2., and 3.) are all valid possibilities as relations; of which the laws explicated are the

manner in which composition of one for another relate; the bridge and exchange of which is their intimate relation. But only (2., and 3.) are testable relations with '\eta' and '\rho' as operators; their remaining somewhat separate matters; having obtained the fruit of my labor by expertise and strenuous effort.

It was learned the two sides of the equations for the Principle of Equivalence and the Principle of Inequivalence are akin to a lookup table or translation table from relativistic factors in relationship to the quantum probability rules of constructive and de-constructive interference.

So, at the least:

- A.) In application there is either a solution - or - in application there is no solution; to which we face the position of 'not' a motion of the system; useful later for refutation of the counterpoint.
- B.) With this it should be noted that an exact solution satisfies both relativity and quantum mechanics; to which the one body decomposes into the two body problem. (Consider both.)
- C.) The alternative is that beyond a solution to superconductivity there is here laying a prescription for the reduction of two body problems in general application. (Independent.)

Deductions:

I have just learned that the 'relativistic' view and its complement of the 'non-relativistic' view relate the one body to the two body problem; by allowing a general method of conversion from one view-(point) to the other; in which any two problems are related; the polynomial/normal distribution (exponential); and hyperbolic (sinh, cosh, tanh, sech, sinh, coth) being intimately related (with log - the logarithm) to the resolution of this problem; going as far to say that incorporation of relativistic factors is what admits and allows us to conclude (& judge) the two body problem as a 'set' of one body problem(s) for which separate into one body momenta and position via my superposition rules.

In this to note is that relativistic and non-relativistic simultaneous solutions in mathematical expression are necessary to cast a view on that of the two-body problem of which admits and allows resolution and decomposition into one body problems. So there is a caveat that the one body is classical in a sense to which the two body is relativistic; and hinges on that of the (relativistic) factors wherein conversion from classical to (non)-classical point like decomposition is a required consideration for that of (de)-composition of the two body into the one body problems; or their conjoint two body solution; of which is intimately related to the incorporation of quantum and relativistic considerations.

In this the (super)-position equations of constructive and (de)-constructive interference I came up with are neither relativistic nor (non)-relativistic but are decompositions of the wave equation into which we see simultaneous solutions in relativistic and (non)-relativistic mechanics; i.e. taking the proper time everywhere versus a free frame transformation of which imputes the relation of dynamism to the equation and a *real* physical effect; a pre-requisite of which solution to the two body problem does not apparently occur without this unique and special ingredient to the solution we arrive at; one in both the (non)-relativistic and relativistic (everywhere) solutions; for which proper time is used.

The result is that I can view a non-relativistic or relativistic solution to the two body problem; the missing ingredient of superposition required to be 'free' of the transformation caveat's; to which for instance we do not require any special assumption on that of the group of relativistic transformation laws; as the physical world is coordinate free; this is the incorporation of a law of seamless integrative and degenerate meaning simultaneously; in a manner in which they relate being 'free' of restriction that might be 'hypothesized' were we to conclude otherwise; i.e. that we require a 'special' consideration and treatment of quantum mechanics when incorporating relativity; so this leads to a classical world.

The argument that the superposition formulas are the only fit is as unique; for that of the seamless integration and (dis)-integration only occur when we have exactly these formulas; which could be transformed into a different variety (now); but to which previously (were) the only one's I had come up with; those of which convert the constraint (free-) quantum mechanical language (barriers) into relativistic

(barriers); that of which affords seamless integration and (dis)-integration now being the only free transformation group to which we witness this (de)-composition of the language of quantum mechanics and relativity; into which cutting two problems in half reduces to a solution for one.

Assumptions:

- 1.) Total probability of finding 'A' in some state and 'B' in some state is unity.
- 2.) The invisible descriptive prowess of relativity is a real phenomenon.

We (with immediacy) arrive at composition rules for quantum/relativistic states; when we realize that relativistic to and from (non)-relativistic considerations are the key to the two body problem; it's resolution that of separation of one two body problem into two one body problems.

Thought Experiments:

I: Limit of mass going to infinity implicates base uncertainty measured for a baseball comparative to either the baseball itself; or no baseball whatsoever is smaller in natural units than the size of an atom's natural scale (in position and momentum) of the baseball itself; for the non-relativistic limit is such that since uncertainty covaries given relativity; by contradiction it must diminish.

We begin with the commutation relation for the uncertainty principle; to which when velocity is taken as one part; and the conjugate position momentum as the other variable; their difference multiplied by the speed of light is the energy; therefore as energy scales and accumulates we find that momentum implies the uncertainty in natural scale of position by momentum must be diminishing as the limit of scale goes to infinity; for in the non-relativistic limit the two scale in apportioned units to which any increase in velocity or change in position of the baseball must increase uncertainty; therefore as uncertainty must covary given relativity; it is true that by contradiction (ad reduction *back* to the system of classical non-relativistic limit) so too is the uncertainty vanishing smaller than the natural scale of the atom; at any given classical scale.

II: Rotating a superconductor with a magnetic field therefore produces radiation that is vanishing in frequency as the scale of the superconductor grows; implying uncertainty vanishes to zero.

Here the frequency of oscillation of one electron in a pair singlet wave structure of co-orbital motion follows with the magnetic field; while the other orbits in the opposite direction; as a consequence of the superposition rule being abut to the theory of relativity and quantum mechanics; the frequency of radiation in amplitude must vanish as the magnetic field increases due to the null principle of relativity; for the instance of which is that coordinate dependence is vanishing; therefore to which relativity imputes that a high temperature superconductor is null in this experiment; the certainty to which is imputed stemming from the superposition laws of which relativistic composition with quantum mechanical rules of overlap holds it's importance.

Proof Structure:

Given that uncertainty and certainty are the mutual implications in refutation of the above; it's contradiction is that the speed of light were 'exceeded' or at least 'met' to which the uncertainty principle may be taken as refuted in it's absolute form; (i.e. we always know something about position -&- momentum) but true as an upper *threshold* on that of the laws of physics; to which it is noted that measurement will always be certain (for it involves more than one body) and to that of which measurement will always be semi-deterministic (for it involves at least one action participating at-the-speed-of-light); in this we have three quarters of the

picture to which may be recomposed by the reflexion of that of information and our principles of conservation of fundamental quantities; returning; to where we find we always know something about both the position and momentum; exact certainty being then defined when we perform a measurement.

Exact certainty is therefore defined for measurement when we *meet* the speed of light; for the *uncertainty* principle affords a *threshold* of which is to that of exact determination of at least one property; the position -or- the momentum; and to which with the classification of at least one of the momentum and position as 'uncertain' the *uncertainty* relation drops away; to which reveals that we know everything about the position and the momentum of one body and an-other; for there is no one-body problem; it is a mis-classification by which we have not accounted for that of the position of other bodies; but which lay on the side of the measure; not the measurement; for determination of position of one body in a two body problem will genuinely alter the position of the second body; but of which when we measure either one body or two bodies with position and momentum; we have opened the relation to exact position determination on the second body; for that of the conservation of both position and momentum via the above assumptions; knowing the position of one body and the position of the second body; for the certainty in two variables 'up-to' the *threshold* of the *uncertainty* leads to their co-determination.

It is therefore true that if we include our measurement apparatus as a quantum element of the system that unique co-determination of two bodies for what they are as two bodies will reduce to the exact co-determination of two of their positions or momenta or an admixture; to which the bounds on error are below the 'threshold' of the uncertainty at any scale of examination.

Therefore the uncertainty principle is about what is as most in-determinant; that we possess some ignorance of outside or interior prevailing factors on which the system is constructed or that of it's prevailing 'noise;' the fact of which is that a device can be constructed to repeat a measurement or a behavior in which two bodies are involved; and locked into an experimental bind of measurement and measured of which either relate to certainty over either related variable of position and momentum within thresholds; a possibility that would not be possible if there were uncertainty that grew with refinement in our apparatus; instead it is that this principle co-varies; and it is the very principle with which covariance is determinancy and indeterminacy at the level of which is that of scaling an equivalence from and to the problem of the non-relativistic to the relativistic problem; of which either produce a solution to the two-body problem; that of which ensures that we can take compositions of states for which the universe is therefore (for all of this possible) pre-deterministically situated such that:

- 1.) Measure(s) performed by measurement(s) are co-determinant, exact; and certain.
- 2.) Measurement when performed is semi-deterministic; and at most indeterminant.

Only then can we say that our results are '*uncertain*;' for alternatively we would have to deal with a situation in which uncertainty quickly grows (via a regress here) as we incorporate more and more elements to our apparatus; or to which when we combine measurement apparatus and measure(d) elements of our approach to that of measurement of fundamental quantities; therefore that of the uncertainty is a *threshold* on that of measurement coherence and fidelity; to which beyond there is no scale by which we may refine our approach; and it remains as of this way for that of many bodies or just two; or just one; to which we find that semi-determinism is the confirmation that our measurement as been performed and the two body problem remains; for if we were to fragment the problem we would violate the speed of light and the statistics by which we can be sure that one particle *and* the other particle remain located somewhere and participate in some behavior (of our assumptions); therefore refutation of indeterminacy would refute at least both of our principles of relativity and quantum mechanics (with *uncertainty* as a *threshold which cannot be exceeded but in no way implicates ignorance for we can construct a system of two bodies that in turn reflexively incorporates certainty prior measurement on both bodies*); to which cannot be done; therefore to which we live in a world of irreducible semi-determinism and certainty when performing a measurement; our assumptions are valid; as is the hypothesis we began with.

Discussion:

I have summarized that the uncertainty in being large comparable for that of a state alone; that under

combination; since uncertainty is involved when we have two bodies and amounts to at total of $\hbar$; that with the superposition rules intact; the uncertainty of the individual particles; and thereby that of the object; diminishes in accordance with this as a *scale* and a *threshold*; to which *their* uncertainty is relatively diminishing to zero as the number of bodies (here particles) increases; where 'here' we are not talking about *relative* uncertainty; but *absolute* uncertainty.

Certainly, taking the uncertainty principle to invoke either:

- 1.) Absolute uncertainty diminishing by superposition of positions and momenta on different particles in such a manner that it is suppressed leads to the conclusion that uncertainty is relative.
- 2.) Absolute uncertainty diminishing by the two body problem; in which we see a process; as different from a state description; is a different thing; to which 'once' the particle is certain.
- 3.) Absolute uncertainty diminishing by the covariance of uncertainty leads to a picture that is in agreement with one of the above; but by which it remains a threshold on semiclassical objects.

As it turns out; the question is whether (2. and 3.) lead to (1.). 2.) is the one I have worked the most on; to which I have determined that as the classical world is akin to observation there appear to be two conclusions; that of the hypothesis being valid; on measurement for one; for the measure is then always certain in the two body problem; and 1.) follows; to which 2.) is a corollary, and 3.) is its solidification as a statement; 3.) may thereby be taken to be the residual of a relative theory.

Certainty is therefore definable for the baseball or its constituent atoms; (for example it went into a hole *with* its atoms.) And 1.) is what makes it possible; 2.) is what makes it possible; and 3.) is the corollary from relativity theory; the fact that as-a-process no thing happens without certainty.

Then:

- 1.) Absolute certainty as defined by an experiment of semi-deterministic nature is one side.
- 2.) Absolute semideterminism as defined by an experiment measuring certainty is side two.

And these are parallels.

In fact they are parallels of contributing agents definitional of certainty; to which exists for the sake that there is:

- A.) A threshold (the baseball or golf ball that went into a hole possessed an uncertainty that was less than the restrictions of falling into the hole).
- B.) Measurement and measure therefore co-conspire to produce certainty; which is the irrefutable position in which uncertainty is relative.

Then, 3.) makes the statement that covariance of uncertainty ensures semi-deterministic evaluations of certainty are possible, potentiated, and the normal behavior of the system.

Certainty would therefore be defined (in the two body problem more extensively) any time we have a measurement apparatus which measures within threshold(s) that of a prescribed system to enjoy a behavior in which one 'ball' (a conch shell to the uncertainty) fits within the prescriptions of a 'larger' bound on certainty (a russian doll to the uncertainty fitting inside certain relations,) to which one prescription fits '*within*' the range of its uncertainty; the tower now being built as a 'tunnelling' into uncertainty/certainty for which certainty is the result. The measurement apparatus here is the 'hole' and the measure is here the 'hole'.

Conclusions:

Principle of Codeterminism: Inequivalence

"The seamless incorporation of a bridge from non-relativistic to relativistic situations of mechanics is therefore the indication that exact pre-determination of certainty is a reality (for our measurement apparatus interacts via the only unique fit of these theories to one another); and that measurement of measurables is semi-deterministic but exact."

Principle of Codeterminism: Equivalence

"There is only one bridge from the two body to separable one body problems; of which is the equating of logarithmic frame composition and disjoint correlations of quantum states; and which seamlessly exists as unique and general; for it admits mutually codetermined, exact and certain measure of variables by and of semi-deterministic measurement."

Principle of (In)-determinism:

"Exact precision on the knowledge of position and momentum are codetermined and known simultaneously at the time of a measurement; however; all other information obtained proceeding or following a measurement of a semi-deterministic characteristic in the process of measure is indeterminant as to simultaneous knowledge to position and momentum; by which simultaneous knowledge that follows as an antecedent is of at most an undetermined nature."

Short Proof:

"Because uncertainty covaries; reasoning in return for that of the relativistic to non-relativistic bridge upon return to that of a macroscopic object; as general covariance is insisted and the results of measurement are null to coordinate freedom; it is true that uncertainty is prone to a relative interpretation whereby macroscopic objects obey a vanishing uncertainty for in the limit of scale growing to infinity we must preserve the return to a non-relativistic setting; one in which as alternatively position and momentum change we are forced to conclude that relative uncertainty is vanishing as the scale and number of particles in the object increase."

"The alternative is to have an uncertainty that interpenetrates our notions of relativity; to which when for instance we were to move away from the non-relativistic setting uncertainty would grow; not diminish; but by contradiction there is covariance of scale to which uncertainty must be seen to vanish as the scale, size, and number of particles in the object increase; relativity therefore setting an upper bound on the scaling of the uncertainty in practical terms; and to which when we examine a macroscopic object uncertainty is prone to a relative argument; by which it succeeds in becoming as large as the conventional uncertainty; but lesser comparative to for instance an other object (the hole); to which the piece then fits."

"Then; it is to that of which a relativistic covariance insists an upper bound on that of the uncertainty of one body for the sake of the other; which diminishes as the scale of the momentum and position grow by accord of equivalence of non-relativistic and relativistic viewpoints; the comparative difference of which relative uncertainty of an object in possession at half the position energy and momentum energy would possess twice the relative uncertainty; while reasoning from the other vantage (relativity) the body with twice the position energy and momentum would possess half the relative uncertainty of the other; here the comparable difference of bodies enclosed in that of their energy relation; for in that of reflexion of relativity upon the other theory there is the suppression of uncertainty for the sake of what may be called casting of the one theory in the light of the other; to which relativity insists that by covariance uncertainty varies; the descriptive prowess of relativity (coordinate freedom) holding sway."