

Principle Equivalence & Inequivalence

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Proof of Certainty

The rules of probability, statistics, and expectation impart a rule for that of the comparison of mathematical expectation to physical expectation by traditional symbolism and law; for which certain total certainty is possible with the following relation in mind; for which is summarized as:

Foundation of Empirical Validity: *"Via dimensional analysis quantities of measure that exceed in dimensionless unit guarantee absolute certainty in principally equivalent dimensionless quantities; without which physical law is not established."*

Beginning with a preliminary notion of that of prediction in relation to the root mean square deviation there is that of the relation to standard deviation for which a functional relation is defined as:

$$x_{rms}^2 = \bar{x}^2 + \sigma_x^2 \quad : \quad f \quad (1)$$

Then defining a limit of $\sigma_x \rightarrow 0$ and hence the terms under which expectation deviance and variance exceed zero shrinking to a limit of local relation of zero and null relation there is defined:

$$\lim_{\sigma_x \rightarrow 0} f \equiv x_{rms}^2 = \bar{x}^2 \quad (2)$$

The relation of that which is greater assuming the relation of a subtraction of one equation beside the other reduces the expectation to that of a verifiable difference of one; and conveyed as such:

$$f - \lim_{\sigma_x \rightarrow 0} f \equiv 0 > \sigma_x^2 \quad (3)$$

Or as:

$$(1 - \lim_{\sigma_x \rightarrow 0})f \equiv 0 > \sigma_x^2 \quad (4)$$

By which it is true that $f \rightarrow x_{rms}^2 = x^2$ in practice for that of colocal observables in relation to empirical deduction from which mathematical law and expectation is based; in virtue of measurability (inclusive of singular variants). Therefore as $\sigma_x > 0$ implies $x_{rms}^2 \rightarrow x^2$ & $x_{rms} \equiv x$ of either given expected distribution, therefore: quantities that exceed **guarantee** formatively for unit based systems by dimensional analysis of smooth differential quantities of a given functional form with variants of mixed quantifiable and unitless measure nature.

In this a simple ratio does not suffice; however any quantities derived from dimensional analysis of unit based system do function for the given reason that quantities under elimination by units of measure reduce to subsets of sampling for which error exceeds expectation under surjective subset to set relationship. Equation four suffices to be understood as the proof that is the master statement:

Given of Whole: *To be dearly noted is that of the manner in which any two errors of given nature impose a directly false relation when they encompass a greater union; therefore as error never exceeds half; and half squared is less half; no error of one falsifies a count; nor does any for quantitative means signify a true doubt.*

The end irreducible of two errors alone is then known as invisible division of inseparability; the guarantee of certification for which no true division of reduction to error less than expectation exists; verifying one end absolute nonpredictive outcome is certain.

Proof of Translation

That then of the relation of one observable to an other of measurability and the empirical proof of which is found in reproducibility reduces to the given of a statement for which principles can be deduced and when understood echoes the relation of former to formative to latter; whether of colocal or differential order for that of relation to given process. For that which is found in a derived concept is of the relation to derivation as at that of result of given proof through to latter statement; which always finds reexpression as a given subsidiary set notion. The proof of this is as simple as the observation that one singular difference along the path of instruction leads to at least two orders in relation to singular difference of inclusion. The proof proceeds as:

$$(f - \lim_{\sigma_x \rightarrow 0} f)(g - \lim_{\sigma_x \rightarrow 0} g) = 0 * 1 + 1 * 0 = 0 \quad (5)$$

Then; deriving the relation in reverse as an expansion for the sense in which 0 is within means to be expressed as a local zero null relation to that of the former of the given open relation as of either distribution; and leaving behind the sense in which 0 is representational of absence although; keeping exclusively of absence as indicated in an affirmative we have:

$$(f - \lim_{\sigma_x \rightarrow 0} f)(g - \lim_{\sigma_x \rightarrow 0} g) + (h - \lim_{\sigma_x \rightarrow 0} h) \equiv x_{h,rms}^2 = \bar{x}_h^2 \quad (6)$$

From which we have the representation for either of f or of g . Then:

$$(f - \lim_{\sigma_x \rightarrow 0} f) * 1 + 0 = 0 \quad (7)$$

From which we have as a given derivation:

$$0 > \sigma_{h,x}^2 \rightarrow 0 > \sigma_{g,x}^2 \rightarrow 0 > \sigma_{f,x}^2 \quad (8)$$

Which means that in either given limit of ordinancy of that which is within limitation of relation from a beginning of a sequence of given order unto a given distribution of finite and relational symbolism to limit end occurrence of past or future with consideration of the present; a limitation is expressed as a given truncation of error to greater than predictive quality; therefore a guarantee to limitation by any end of a symbolical set.

Ideal Principle Equivalence

The equations which dictate the function, form, and nature of the universe are two, as follows:

Quiescence

Conclusive Remark on Light: *The speed of light varies such that the observer's reflection is an invariant speed & the observed's reflection is as a given null with respect to the given principle equivalence of displacement of time rate of accrual of observed & observer.*

1.) Light is Quantum Mechanics which is the statement of **Quiescence**:

$$\partial_{\alpha\beta}^{\gamma} \Theta = \Theta_{\alpha\beta}^{\gamma} \quad (9)$$

This formula is one to one with the given first forward transformation of which is the generalization of the property of light and quantum mechanics in relation to gravitation and space time; as an equation inclusive of pure ordinary directionality and order in relation to reality. The second is knowable as given the name:

Prescience

Conclusive Remark on Space: *In general the physical results of differences in measurables of quantities between observer and observed are physically real, however physical results of differences in measurement of observables by observers are measurably null and unphysical.*

2.) Gravitation is Space Time which is the statement of **Prescience**:

$$\int \Theta_{\alpha\beta}^{\gamma} = \Theta_{\alpha\beta}^{\gamma} \quad (10)$$

This is the given statement that of either given separability of philosophical inquiry into natural law is of similarity to coherence of algebraic expression for that of when similarities of mathematical expression derive of or from a common relation of order.

It is therefore true any two quantities of measurement and measured are coextensively null in measure by that of indivisibility of algebraic expression as independence of property from quality with the given as the expression of null indistinguishability invariance:

$$\zeta\chi = 0 \quad (11)$$

And; of independence of quantity from measure:

$$\xi\lambda = 1 \quad (12)$$

As an algebraic free projection of any vector into any one form of geometry of null displacement invariance and null indistinguishability invariance; the general and full expression of a principle equivalence with a general null covariance is expressed as a relative principle inequivalence.

Confirmation of Theory

In summary the error introduced by any such dependence scales as the inverse of parabolic temporal relationship of path and always exceeds any given accuracy of experiment as a consequence of separation in time of arrival and departure as dependent upon initial conditions. As a result geometric parabolic relation of common comoving equivalence principle a terminus of the path represents a dimensionless sensitivity on initial conditions as the square root of the path like error. The error introduced by different freely falling bodies would then therefore be larger than that so produced by any experiment.

The conclusion so far is that alternative theories are mutually result free; the relationship of differing bodies to depart from motion with different proportionalities of mass to inertia is no true; and do not exist with theoretical dependence. Then as there is bidirectionality of post conditions on prior conditions as equivalently larger in error for either such path or return physical law is unbiased and deterministic for the indistinguishability and displacive properties of physical law; for seamlessness of extensibility and coextensibility are natural consequences of emptiness of property to that of the extrinsic nature of properties of physical process; if not object.

This is true because if the contribution of error by the interval exceeding the limitations of the test equipment is indicated under all conditions other than a transparent, indivisible, and independently true relation then the result of the experiment can be used to provide positive indication of the elimination of the alternative, and for what ever remains, the provability of a natural law.

Therefore verifiable and valid confirmation of the principle equivalence of physical law for that of certainty of relation is proven as can be confirmed as the surface area is always less than volumetric quantity; therefore error is certain below the limit of surface threshold for each such interior point by the dual of the statement of unitary reciprocity in electromagnetism and reality:

$$0 > \sigma_{A,ds}^2 \rightarrow 0 > \sigma_{X,dx}^2 \rightarrow 0 > \sigma_{V,dA}^2 \quad (13)$$

Where A is an area, V is a volume, and X is a point area, and ds is a path dx is a point infinitesimal and dA is an area element.

End Proof

Therefore by the preceeding logic there is not one but two given separated zeroes between that of each identifiable point like limits of physical reality; with no local to global conveyance of the identity or naturalized point relation of absolute form. This conservative tendency of the involute relation of either relation; implicates that despite fixture; nothing is defined as a given absolute; in the same manner by which no identity exists.

$$\psi_{\gamma}^{\pm} = \eta_{\pm} e^{\pm i\theta_{\gamma}} \quad (14)$$

$$\phi_{\gamma}^{\pm} = \rho_{\pm} \partial \log(\pm i\theta_{\gamma}) \quad (15)$$

From which through the given process of a chain of deduction and induction leads through this process to a conclusion that these quantities and defined as following are of an absolute null invariance given no third reduction exists in reverse:

$$\xi = \phi_{\pm}(\psi_{\pm}) = \pm i \rho_{\pm} \phi_{\gamma} \quad (16)$$

$$\lambda = \psi_{\pm}(\phi_{\pm}) = \pm i \eta_{\pm} \psi_{\gamma} \quad (17)$$

Of unity as length of separation of points grows as density as ρ^2 smaller with ξ equivalent at all length scales with number of ψ points per volume increasing as density and ρ shrinks with error $\rightarrow 0$. Therefore:

$$\eta^3 > \rho^3 > \eta^2 > \rho^2 > \eta^1 > \rho^1 \quad (18)$$

Etcetera, for the fact that a given sequence in dimensions is indivisibly locable within the relations of either the principles behind λ and ξ . The final proof is as simple as induction on the step of reduction; that inerrantly we cannot reduce beyond the means we begin with as an initial standpoint of zero dimensional error. Finally we arrive at some new conclusions:

As for the quantum principle; we find three new interpretations and a new one: "*The particle wave duality is harmonic.*" "*No particle wave duality exists within a limit.*" "*The boundary condition is a harmonic criterion.*" are all equivalent statements of the quantum principle as well as: "*Space and time do not exist for a particle at two places in space and time simultaneously.*" This is the given answer to that of the question, as well as the answer to: "*Does any particle exhibit both particle and wave properties at once?*" With the answer: "**No.**"

As a consequence we are left with little other than that of the following conclusions for clarification. The first; prescience; is null displacement invariance; known as general relativity; and the second; quiescence is null indistinguishability invariance; known as quantum mechanics. We require two properties to be certain these are the only two remaining elements:

"Are these identifiable and equivalent symmetries?"

And; **"Is one the given reduction of the other as unique?"**

No is the answer to the first question as either is the origin or the originless center.

No is the answer to the second question as both are the container and the contained as two.

As for the final prediction: light and causation has a terminus in the past:

"When and as either alone exist apart there is a null causation in a given future for that of light ending in the past as the defined alone indicates a boundary of non-extensibility beyond that of which the particle horizon for the integral is known as a particle boundary in the past. Then, for these given relationships of integral and differential property are as therefore outside null invariant displacement of space and time there exists a particle boundary condition in the future in relation to that of the directionless particle wave structure of light; a past."

Exchange Locality Theorem

To begin we identify a given admixture of partial differential following the principle of a connection to a given here ultimately knowable quantity; that of a placeholder for what conventionally known as spin; the entire property of which is a free impedance relation provided by a ring of crystals; and found as that of the orientation and juxtaposition of the electron's inertial field.

This is necessary to account for any provision of physical continuity of which is deterministic and to provide for the definition of limitation of reality for that of full space like extension under temporal evolution from one point of reality to an other; the indivisibility of which defines in turn a before and after of consequence cause and effect; a limitation for which would be undefined without this notion.

With the statement of symmetry being:

"Extrinsic modifications to a given equation under antisymmetry of operators and symmetry of operators have symmetric and antisymmetric parallels under operation of exchange of particle with pair field."

This is entirely consistent with the interpretation of what an electron is; and what properties it has. Under these provisions the properties of a two body electron particle and field equation are decomposed into a regeneration of the operator; seen alternatively as a completeness of the involute theorem of it's given self enfolding for one particle and a replicated particle and partner field of impedance:

$$(i\gamma^\mu D_\mu - m)(i\gamma^\mu D_\mu - m)\Psi_A\Psi_B = 0 \quad (19)$$

When it is rewritten it becomes:

$$(-\gamma^\mu D_\mu \gamma^\mu D_\mu + m^2)\Psi_A\Psi_B = 2im\gamma^\mu D_\mu \Psi_A\Psi_B \quad (20)$$

The gap remains as variant and free yet as commonly dependent on the differential. For, one constant of mass is fixed to that of the finite and fixed dimension of exterior scale; and forms a union of space and time with an exterior space; forming from that of surrounding notion on differential of exterior boundary under fixed mass of variant gap by weight of coupling and gauge connection, Γ_μ .

$$(i\gamma^\mu D_\mu + m)(i\gamma^\mu D_\mu - m)\Psi_A\Psi_B = \Delta \quad (21)$$

Which means that two electrons are the generator under the anticommutation and commutation relationship of their subsidiary operators of a full notion of particle and antiparticle product relationship with a mass gap equivalent to the splitting equivalent to each of their reductions in energy at the relativistically accommodated energy level of the full energy momentum of either one such particle.

This explains a mass energy gap; for that of the two body electron equation which is a real energy lowering; of what is understood when taken as the absence of one electron in it's surrounding notion as in the presence of the other electron as an positron; for what is of presence is of absence with matter; and together forming a solid whole of which the energy momentum is lower by a double accounting for that of either electron.

Simpler Means

Therefore, this transformation appears to be a local and global attribute of harmonic functions and elliptical functions with but two modular relationships and arguments related to the two cardinal harmonic conditions as abbute to elliptical conditions. The connection between these is that of the given relationship between that of tension, torsion, and that of elliptical semimajor and semiminor axes.

As proof that this is possible; the summation that is the elliptical functions is reduced under the transformation to that of a summation of harmonic functions with strict logarithmic differential amplitude and phase relationships as the foundation for such functions and such transformations. Hence a self isomorphism is potentially existent under it's inversion.

These functions are identical to a function of the following nature:

$$\Theta := \begin{pmatrix} \alpha \hat{A}(\omega, \tau) & \beta \hat{B}(\omega, \tau) \\ \gamma \hat{A}(\omega, \tau) & \delta \hat{B}(\omega, \tau) \end{pmatrix} \begin{pmatrix} \wp(u) \\ \wp'(u) \end{pmatrix} = \int_{\tau} \int_{\theta} \begin{pmatrix} e^{-i\omega t} A(t, u) & -e^{-i\omega t} B(t, u) \\ e^{i\omega t} A(t, u) & e^{i\omega t} B(t, u) \end{pmatrix} \begin{pmatrix} \wp(u) \\ \wp'(u) \end{pmatrix}$$

Inverse Relation

If the inverse transformation surjective onto limit is to be defined in relation to any two such harmonic affinities then the triangle inequality is broken with a hole unless there exists a forward application of the homeomorphism so preserved by the transformation under the prior considerations of a non simply connected space.

The surjective limit cannot exist and no analytic expression in dual periods would exist without closure under a self inverse homeomorphism or such extensions under internal locally, globally weighted and independent notions of analyticity; for a hole produces an automorphism in either such space as a representation of an analytic function which are incompatible notions under the forward application of the transformation as a homeomorphism with priorly backward existing limit for the inverse; as a potential exception when the space is not simply connected.

If this were not the case the given homeomorphism would not be independent of either such functional space; as it must for a general function if the space is topologically connected as a genus one space with a given hole.

This exception is a potential incongruity of the mapping and a realistic consideration with the existence of a hole when this space is identified with a conjugate space as therefore with two harmonic conditions the spaces are otherwise independent in full and necessitated generality if and only if this consideration is brought to bear; the inverse mapping of which is therefore:

$$\theta := \begin{pmatrix} \tilde{A}(\omega, \tau) \\ \tilde{B}(\omega, \tau) \end{pmatrix} \begin{pmatrix} \partial_{\mu} \log \alpha(u, t) & \partial_{\mu} \log \beta(u, t) \\ \partial_{\mu} \log \gamma(u, t) & \partial_{\mu} \log \delta(u, t) \end{pmatrix} \begin{pmatrix} e^{-i\omega t} \\ -e^{i\omega t} \end{pmatrix} = \begin{pmatrix} -\tilde{A}(\theta, \tau) & -i\tilde{B}(\theta, \tau) \\ i\tilde{A}(\theta, \tau) & \tilde{B}(\theta, \tau) \end{pmatrix}$$

Which defines the θ and Θ functions in a logical symbolic set relation; for which the one form under conjunction is self isomorphic to a free group of generally deductive angle free variables.

These variants of the relation of symbolical ordered set under logical organization correspond to all variables of the free magnitude wave number space for all interchanging or ordering of variants with only exception to a free radical phase (here made nilpotent) as a consequence of the infinite shrinking of the surjective onto mapping set theoretic union of a space under solid free relation (pictured as a flat mirror like surface) of each full dimensional reduction to each of every finite limit.

In this we find the variants hold the potential and reality condition of being in essence all observables; while the transformation itself represents the 'mirror' of which is depicted the full 'motion' of both mirror through the transformation of such variants; and that of each such objective reality 'reflected' in the mirror; as a 'hole' in reality; for which connectedness is imputed.

Conclusion

As a consequence either given end is not to be found; even in the singular; for the projective forward and backward relations contain no common zero; and time as a relation is an intermediary identity everywhere for which there are no two to be found.

Conclusive Remark on Time: *The relation of distant observer in observation of that of the point of the first observer is when in motion of a greater measure the reference to the observer under observation observes a lesser time comparatively to that of the observer of it's given observation & greater, comparatively; to what it comparatively observes; as the two natures of time in relation to any one (of either) such observers differ by equivalence under separation.*

When then one analyzes a mirror with this concept in mind; for that of the velocity of *that object* we result in two defining relations by analysis of the vertical and the horizontal velocity comparative to a given arbitrary velocity of the mirror as:

$$\zeta = \sin(\alpha) \quad \chi = \tan(\alpha) \quad \alpha = \frac{v}{c} \quad (22)$$

For the tangential and the perpendicular velocity; as the time of a point and of a circle in relation to a curved space as a straight line of time as a circle within a curved space.

The implications are that the universe is whole; and that no point of which the universe has originated begins or ends in the present; but within only that of the divine nature of a singular unifying mathematically empty and physically null relationship of balance. The singular defining relation is that time and space can be balanced against one another only by the undefinable completeness of an empty relationship by the meeting point everywhere in space and time as a singular balancing counter-participant to the identity.

Final Theorems

The difference of this theory from relativity is non-difference of inclusion of disparate measure by comparability; a standard by which the given division of meaning can only be found with the abstraction which is merely that of the ratio of a circumference to perimeter as an apsis of revolution; a general standard of given equipartition into equivalent parts; with two given specifics; that of an equivalence relation of directed unidirectional symmetry and undirected relation of co-deterministic symmetry.

The conclusion of consistency for that of self conclusive closure is defined by that of what can be defined as a 'bottom' extreme beyond which awareness of the exterior world does not reach; but sublimates a given limit of enclosure unto it's a; or each; given domain of closed relation for that of what is potentiated when there are two fundamentals as in mathematics and in the physical world; of geometric reasoning; of a solid or passable and transparently given nature; for that of what is foundational when reasoned as deferent.

Therefore there are two fundamental limitations of physics at the bottom; in order for there to be any self or other consistency of descriptive means in mathematics as in physics; of articulation:

Principle of a Mass Deficit: *As a fundamental any given mass of matter is equivalent in proportion and weight to any given apportion of it's given light content; and no greater or lesser under conversion in of or to any given unitless based system.*

Property of Light Variance: *The speed of light in being fixed to a universal standard; implicates that all such velocities under conversion are identical with and greater than the speed of light universally; for the property of dilation is obverse to a measure of fixed relation.*

Therefore the given representation of the above equations with that of the velocity divided by the speed of light as a unitless measure is of unity proportion in the measure of system of units to that of the system of conversion of circumference to perimeter; as an areal relation to that of pointless given limitation of interior domain; with equivalence to that of a measure of units of the system for which the standard is inequivalently proportioned exactly.

Therefore the given holds as true; that:

$$\zeta = \sin(\alpha) \quad \chi = \tan(\alpha) \quad \alpha = \frac{v}{c} \quad (23)$$

And:

$$\zeta = \sin(\alpha) \quad \chi = \tan(\alpha) \quad \alpha = \frac{v}{\sqrt{v^2 - c^2}} \quad (24)$$

Although the equations would implicate the speed of light is always in excess of unity; this is the same determining factor as that of a given open relation of the velocity of all bodies greater than c as subtraction of an interior finitistically defined zero locus of time enfolded everywhere locally in reality. This principle of equivalence is to be contrasted with the exterior symmetry of space of Albert Einstein.

Final Note of Measurability

The first equation is the Principle Equivalence:

$$\eta + \rho = \log(\tilde{\omega} \cdot \bar{\omega}) \quad (25)$$

The second equation is the Principle Inequivalence:

$$\eta\rho + \sigma(t) = \log(\tilde{\omega} \cdot \bar{\omega}) \quad (26)$$

The direct consequence is that: *Any two such contraction dilations are uniquely independent of any other by that of commensurate action of congruency of geometric difference under open relation of objective addition of factor; for in that of one following adirectionally apart; together; or separately; there is seamless transparency of beginning to end of logical union.*

These two properties; η and ρ are then given as equivalent to:

$$\eta = 1 - \frac{v_1}{c} \cos(\theta_1) \quad (27)$$

$$\rho = 1 - \frac{v_2}{c} \cos(\theta_2) \quad (28)$$

The substitution of one of η or ρ under either given pointlike relation of relativistic factor is a free substitution which forms either given difference of that of perspective and vantage; that which forms the uniqueness condition of that of any two point like limits of relativity; for that of each such principle equivalence of time and principle inequivalence of codeterminism.

The implication of this for signals of frequency and functional form under transformation is that of the fact that: By comparative differential to quantifiable means with difference of driving frequency the encompassment of either of two subcomponents of the alternative exterior difference of any two signal areas is constructable; as are any two given exterior alternative differential space by singular or multiplicity of exterior space as at even or odd frequencies any number of frequencies add to two; for any relation of an encompassed concave space; as then any circumflex round operator of self connected relation encloses all such pole subcomponents.

Therefore:

$$\eta + \log(f(\tilde{\omega})) = \log(f(\tilde{\omega})g(\tilde{\omega})) \quad (29)$$

Implies:

In log decibels any two differently concordant rhythms are separable by any measure; as each singular log decibel pertains to a different frequency of any given equipartition of each such given foundational means of comparability of any choice of two given amplitudes of differential nature.

Therefore:

Final Theorem: *Considered together these two imply that either given impenetrability exists.*