

## **The Tree of Fireflies:**

### **Penrose Tiling & the Game of Life**

*A Theory of How Superconductivity Emulates Evolution*

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The Tenement of Inertia:

“If one; a body; were to take a position of the predicate to it’s given individuation; for what for one would remain solid; the position of it’s alternative given provided; the multiplicity of the preceded are as a taken; known only as the given of the presumption of the position of in one; that of motion; to which they are bodies of which in multiplicity or at rest; a given in motion.”

The Given of the 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 Salvagement of Knowledge:

“The lightness condition of which is to the greater of knowledge and in it’s leverage in weight; differs from that of the volume to the surface as in that of dimension by one from integral to differential.”

## Introduction

The ‘Tenement of Inertia’ and the ‘Given of the Whole’ indicate a preliminary observation; that this world is composed in such a manner that the co-existence of both statements ensures that the surjective limit is smaller than the injective limitation of any set; as if time in it’s determination of certainty; makes the past ‘solid’ and the future ‘soft’ and ‘congruent,’ meaning; the determination of one for the other is directed at the future; but directed ‘back’ at the past, explaining the direction of the arrow of time; to which the ‘Injective’ relation is to a past; and the ‘Surjective’ is to a future in this diagrammatic expression; precisely because the universe is built as it were to answer a question.

Complimentary to the “Tenement of Inertia” and the “Given of the Whole” is the “Salvagement of Knowledge” to which as time passes; and dimension subtly increases or decreases it is noticed that as the height of a three (or four) cone diminishes comparative to a cylinder that when the volume is accounted for; at the difference of a dimension; that as we account for the notion of knowledge; as it vanishes to a point; the ‘lightness condition’ ensures that the integral of the boundary is greater than the volume, to which dimension increases by one; therefore information and knowledge sinks.

We therefore have two tenements and one principle by which the Universe operates:

Tenements:

- 1.) The Tenement of Inertia (Co-Determinism and Change)
- 2.) The Given of the Whole (Persistence and Certainty)

Principle:

- 1.) The Salvagement of Knowledge (Displacement and Invariance)

First; it is important - if not imperative - that we check for any circularity in our dialog through which something 'other' can fit of a relation; there is for instance as an example the 'self' and the 'other;' of which play prominent roles in philosophy.

Second; it is important - if not incomplete - that this leaves us asking a question; for which the answer must be directed at it's cause; to which it is known as an 'effect;' and to which there is for instance a 'self' and an 'other;' to which metaphysics uses as a predominant 'utility' or 'tool' in explanation; if not the entire thing; a subelement.

The tenements and the principle at work here are both exchangeable with the 'self' and the 'other'.

Under their limitation to one observer; they are both the fulcrum and the pivot; to which in either knowledge is their weight and their balance in integral or differential; to which the lightness and heaviness of knowledge is their metre; and lightness their balance; for in that of one moment away from the Salvagement of Knowledge is found again the Given of the Whole and the Tenement of Inertia; by which lightness and heaviness is a continuum from bottom to top; and the Salvagement of Knowledge; leads from the 'Tower' of 'Wisdom' to the 'Path' of 'Excess.'

Therefore there is a corollary to these three; of which does not form a fourth; but it's limitation upon that of the three given (two of which are tenements and the third of which is a principle):

Corollary:

The Permanence of Change (Impermanence and Change):

"Strict singular presence is non-indicated as co-determinism lacks a stringent occurrence; therefore geometrically free properties of a system are endowed by the mutual and the other of which any fourth is independently determined from out of and in relation to the three of capacitative mean."

"The Permanence of Change" in contradistinction to the "The Salvagement of Knowledge" is a displative theorem akin to the same nature; however in dealing with particle limits of finite quantifiable elements; there is freedom to that of accounting in either of the tenements.

The corollary would have that what we perceive as changes is really literally a singular agent known as 'change;' this corollary fitting together with the first principle; as once literal accounting is accomplished; an event has passed into the past; and remotely, nearly, and fundamentally as in spatialized understanding fails the prescription of the first two tenements but to that of their agreed 'partitioning;' to which the consistency of the system owe's it's due; for changes in these are their paramount role; in that of promoting a cycling of the four elements to which either agree with the foundation of knowledge being an impermanent and dynamic agent differing from other theory.

Reality can then be seen to be four dimensional by the following argument:

- 1.) We have geometric equations on that information of motion (1) and (2) and that of a multi-body problem (3) and (4); of which there are three determined undetermined in relation to one; for which one may with any four be considered unrelated; this being the free theory we arrive at then.
- 2.) Under reduction to which is that which we are left with; there is in being only one non-observer.
- 3.) This can be visualized as a non-self; but it is the emptiness of the self of non-existence by which there is left that of a physical item; within such as the example of the free addition of work to two.
- 4.) Since by the lightness condition of reality; the simplest theory is usually the true one; this is all we are left with under reduction to any number of observers, observables, agents, or coparticipants.

Therefore there are four of which (the analogy with a Penrose Tile now becoming clear).

Two are tenements.

One is a principle.

One is a corollary.

From this it was deduced that no such thing falls into a category or classification alone; but by way of properties and qualities; as such this theory fits a final test; which is all that such things do; the dichotomy between properties and qualities being strict; by that of the tenements and corollary.

With this we are equipped with the major agreed viewpoints to make headway on the problem we are concerned with: namely that of 'Superconductivity;' the first main point the last to be made before venturing to a diagrammatic depiction and several illustrations of the inner and outer operation of these novel materials; the analogy with a "Tree of Fireflies" now becoming clear.

## **Motivation (Why & How)**

"The reason for superconductivity is that "Electronic Inertial Considerations" (their timescale) with the contribution of time dilation contraction factors exceed the importance of all other considerations (with a suppressed screening) leading to a net attractive effect."

There are other considerations to be made for our understanding of the universe; one of which is the inverse limitation; the golden ratios and spiral; and  $\pi$  and  $e$ ; that of natural constants; of which the generating ideal is that these all fit a relation of the non-spatial to the the non-spatial; that of the relation of for what would be a mathematical congruence between sets of non-spatialized data sets. The open conclusion is virtually any element; so the justification is in very general terms; as to what prescriptions we can place on our system; it defining any potential four dimensional reality to which we could embody; the structural ideas being of two in their nature; the Penrose tile; and the also so often mentioned “Tree of Fireflies;” one active and dynamic; one rigid and unassuming; but of their nature random and apredictive; but the one structural; the other decompositional and a continuum.

The Tree of Fireflies:

1.) In very general terms we can identify reality with a tree to which cycles a random chaotic cycle; returning eventually in cycles of waves forming a continuum life; a structural element of which is decomposing and reassembling continually on an edge between life and death of basic substrata.

Penrose Tiling and the Game of Life:

2.) In very specific terms we can identify reality with a network to which patterns assemble and disassemble in non-random very strict orders and non-periodically vacillate and come into and go out of existence at nodes; to which compositionally is composing moment by moment by vectors.

The main idea of this treatise is now seen that there are two natures of order and complexity; to call a beast by it's name; and that there is but one nature to chaos; to which the other; chaos; comes in many varieties; the purposes here two; to which the topics are their organization and perception:

- 1.) To make sense of why order and complexity fitting in but two categories are situated 'above' chaos; and that of order at the bottom; but enclosing chaos; for we there is a way to tame chaos.
- 2.) To make sense of the fact that chaos is often confused with seemingly very complex and intricate order; of which is evocative of the difference and similarity between disgust and beauty.

## Questions

- 1.) Is it the purpose of a complexity theoretician to dissect order from chaos and classify; can a dividing line be drawn?
- 2.) Is this a predictable outcome; or will we always find order within chaos and chaos within order at every scale of reality?
- 3.) What is the fundamental difference; what purposes does it serve; why is a discussion important; and what difference does it make to science to know of this distinction; the purpose being limited to our instruments and artifacts of nature; is the evidence even present and verifiably evidenced?

## Differences in Argumentation Style

Lightning is an example where the phenomenon is chaotic; and unpredictable; but while the valence bands of atoms on the surface of the Earth; and in storms are predictable but are underlaid with complexity; lightning is chaotic; while the underlying situations that gives rise to lightning are not.

Similarly in superconductivity; but albeit very different; the phenomenon that gives rise to superconductivity may be chaotic; but the otherwise resulting phenomenon at the heart of this problem is the direct opposite; being the consequence of chaos and therefore of complexity.

This is at the least the way such a situation is seen until it turns around; and there is a revolution in insight; to which we pin that one peg on the insurance that is chaos and complexity and a given situation turns around to our benefit; of which the various trails of evidence lead together; to where we as a theorist had hoped they would some day; but could not predict for very real and yet not so identical reason as to what we began with as an argument, for their default conditions of rest and motion are unrelated; and seeing something closely related to chaos but more a logistic problem to which is indeed similar but not identical to chaos; we find that complexity in disguise is therefore definitely not chaos; and what occurs in our thinking is given validity; as a vastly complex problem becomes amenable to analysis; complexity reduces; and chaos is swept aside as a valid possibility.

This fundamental shift in thinking similar to a phenomenological reductionism does occur in reality.

The world is non-dimensional; as I realized; a system that incorporates space and time incorporates change; and therefore conventionally speaking; that of space via a dependence is found without the dependent attribute of a point to the differential; for which is merely a stochastic set for which there is a difference mapping that of the prior space into the last; for which all laws of symmetry of physics subscribe to; the world is therefore for example equivalently three and four dimensional:

- 1.) A simple harmonic oscillator takes upon a form of a variable of displacement and time coordinate and differential; a three dimensional reconstruction of which in this case it is solid.
- 2.) A simple harmonic oscillator takes upon a form of only position that of a zero dimensional point exploring a variance in another variable; and is therefore equivalently one dimensional to a point.

In all cases the relation is a solid and is a mere whisper of it's relevancy; therefore by the lightness condition; time being the reversal of reality (and if we take this hypothesis) is agreeably equivalently zero, one, two, or three dimensional, or even four; to which we have saturated all dimensions with that of a point; into a solid relation; the principle of displacement of the Salvagement of Knowledge; and then, utilizing the corollary of impermanence of the Impermanence of Change; there is noticed that the reduction of a system to it's non-determinant degrees of freedom reveals the universe is both non-dimensional and dimensional; in that it is any dimension; and strictly non dimensional; as equivalently a mathematical object; of which is exploratively one and the same in any dimension; to which although truncating to four dimensions; contains a hidden symmetry of infinite dimensions.