

## **Extracts F18 – Rules of localisation-extension in the literature**

Some formulations of the rules of nexial-topologic deployment exist already in the literature, but scattered in widely different fields, and in the form of explanations rather than imaging. They are usually reduced to puzzling observations with no clear rules. Described in the sciences as consequences of physical laws especially in general topographic distribution (see <Deployment of perspectives>), they are, in the human domain, viewed as limiting personal ‘projections’, collective-cultural ‘attributions’, or psycho-spiritual ‘expansion’ of Human reality. The rules themselves are noted by a very few, logic or cosmology minded. In scientific domain, they are formulated with respect to spatial localisation, and in philosophy, with respect to the extension of Reality, which both are the object of cultural periodic reformulation at long intervals in history. The following extracts are examples of such explanations. For example:

‘There have been many theories of relativity throughout history, from Aristarchus to Einstein, each representing a profound re-interpretation of our experiences.’ (Maths Pages-1)

The meaning of these quotations may appear difficult to grasp for a reader not familiar with the fields in which they appear, or with the origins and developments of ideas since ancient times and prehistory. An easier approach is to look at the underlying, geometrically imaged rules they formulate (see <PPT7 Three nexial-topologic rules>).

### **Localisation**

- [...] we may also see how easily men may fall into grave errors...such as believing that extension must be localized...that it occupies more space at one time than at another.’ (Spinoza 1901 p.30)
- ‘The ether of the general theory of relativity therefore differs from that of classical mechanics or the special theory of relativity respectively, in so far as it is not “absolute”, but is determined in its locally variable properties by ponderable matter.’ (Einstein in Saunders 1991 p.18)
- ‘Recall Ptolemy’s arguments against a moving Earth, or the 19th century belief that electromagnetism necessitated a luminiferous ether, or the early-20th century view that Einstein’s special relativity could never be reconciled with gravity. In each case a truly satisfactory resolution of the difficulties was eventually achieved not by discarding relativity, but by re-interpreting and extending it, thereby gaining a fuller understanding of its logical content and consequences.’ (Maths Pages-2)
- ‘Gravitational energy is non-local, which is to say that one cannot determine what the measure of this energy is by merely examining the curvature of space-time in limited regions. The energy – and therefore the mass – of a gravitational field refuses to be pinned down in any clear location. [...]These

are hints that our treasured intuitive views as to the nature of physical reality are less close to the truth than one would have thought...such conclusions must already be drawn on the basis of classical theory.' (Penrose in Saunders 1991 p.24-25)

- 'Now the only function of the universal *epoché* is to establish the *Residuum Thesis*, which holds that the realm of (empirical) consciousness is "absolute" in that it does not depend on the existence of an external, spatio-temporal world (cf. *Ideas*, sec. 51, 55).' (Husserl, quoted in Beyer 2004).
- 'If the laws of positioning could not be influenced by physical factors....., and were given once and for all, such an ether would have to be described as absolute (i.e. independent of the influence of any other object).' (Einstein in Saunders 1991 p.14)
- 'At present [1933] it appears that two other very general mathematical disciplines will be used increasingly in the future. One of them is the *theory of groups*; the other is *analysis situs*. In the latter we study only these characteristics of figures that are unaffected (invariant) by continuous deformation produced without tearing. Two structural points are relevant for us in this connection: namely that the analysis situs is fundamentally a *differential* and also an *ordinal* discipline, based on asymmetrical relations. In the next chapter, as an illustration of the actional, behaviouristic, functional operational, differential, contact method a short account will be given of the way Einstein structurally treated "simultaneity".' (Korzybski 1933 p.658)
- 'Under such *natural structural* conditions it is a fundamental fallacy to ascribe to "lengths" or "shapes" or "times" any "absolute" significance. ... "matter", "space", and "time" ... appear as relations between events and some specified observer, and forms of representations. [...] We would evaluate the[se] *terms* as forms of representation, and non-objects.' (Korzybski 1933 p.664)

### **Rule of 90° : Vertical Axis**

- 'Spectral lines are split when there is an external magnetic field, and are circularly polarized. The lines appear as doublets in the direction parallel to the field, and as triplets perpendicular to the field. Lorentz's (1895) explanation led to a spectroscopic determination of the charge to mass ratio of the electron ...' (Saunders & Brown 1991 p.41)
- 'That this subject [imaginary numbers] has hitherto been surrounded by mysterious obscurity, is to be attributed largely to an ill adapted notation. If, for example, +1, -1, and the square root of -1 had been called direct, inverse and lateral units, instead of positive, negative and imaginary (or even impossible), such an obscurity would have been out of the question.' {Quotations by Gauss}
- '[...] many states of experience are inherently complementary to one another, and in various pairs embody the same type of mutual uncertainty or trade-off in precision of specification as do conjugate physical quantities. A partial list of such consciousness conjugates might include: analysis/synthesis; observation/participation; structure/function; goal/process; responsibility/independence; reasoning/intuition' or most generically doing/being. Note that in each case the two properties cited are not polar opposites, but are orthogonal in the sense that the degree of each must be independently specified to localize the experience in that subspace. As with the physical conjugates, there are basic limits to such localization, and hence questions of balance or optimization: [...] excessive reductionism or attention to detail erodes the holistic or aesthetic appreciation, but excessively diffuse or excursive perspective leads to chaos in implementation; [...] Like many other aspects of the metaphor, this concept of a consciousness uncertainty principle or complementarity has also been suggested by many others...' (Jahn & Dunn 1986 p.752)
- 'We have described processes that occur in dying stars and the formation of new planets...Similar processes with no atomic disassociation are a part of everyday life; in fact, nowhere are such phenomena more complex and more intricately related than in biology. Above all, the concept of ether engages a distinction that becomes yet more central, and more profound: the distinction between fundamental and phenomenological law.' (Saunders & Brown 1991 p.61)

### **Rule of 180° : reversal, inversion; Rule of 360° : 'turned around', 'inside-out'**

- 'Mass: Rhetorical allusions to the concepts of inertial or gravitational mass in the affairs of consciousness are common... we refer to a thought or experience as "heavy".... In extreme cases, we

acknowledge that... [they] are capable of distorting our consciousness perception grid and contextual framework. [...] The role of consciousness mass in the establishment of anomalous experiences appears somewhat paradoxical. [...] the oft-claimed inexplicable acquisition of information in crisis situations suggest that we should look to the high mass or “grave” end of the consciousness spectrum... [...] The analogy of general relativity would also imply anomalous experience in densely massive situations. Yet there is a countervailing body of impressionistic evidence that just the reverse may be the case – that it is a carefree attitude of “high indifference” which frees the consciousness from its normal context. [...] In holistic health care, for example, the therapeutic value of levity in emotional and physiological healing is now being advocated. It may be that both of the extremes of gravity and levity facilitate some form of resonance between consciousness and its environment that engenders anomalous effects.’ (Jahn & Dunn 1986 p.757) (see also in <Extract F6\ Brain Central Control>)

See also <Extracts F13\ San Jiao & principle of inversion>, and Berlan (2001), Robinet in Cazenave (1998 p.161), Despeux & Obringer (1997).

### ***Primus Movers* ‘turned around’ as ‘wind’, ‘sea’, or ‘negative sea of energy’**

- ‘The other great difficulty..., a null result to second order in powers of  $v/c$  on the detection of “ether wind”. The absence of first-order effects –... was well known; ...*no* experiment sensitive only to effects of first order could detect the ether wind.’ (Saunders & Brown 1991 p.41)
- ‘We cannot say that the conventional theory is equivalent in all respects to the canonical second quantized theory with respect to the particle complex structure; this is true only for a limited class of global operators (which preserve particle number). In particular, the equivalence does not hold for local multiplicative operators, for these connect positive-and negative- frequency states. (They are “odd” operators...) [...] For these the RHS of (14), if considered a perturbation, would induce transitions from particle to anti-particle states, which would be a complete disaster.’ (Saunders 1991 p.100)
- ‘We may conclude that the negative-energy sea is what the particle vacuum looks like using the wrong notion of complex numbers (the natural complex structure). If the particle vacuum is to appear really empty, then we must use the particle complex structure at the Hilbert space level.’ (Saunders 1991 p.106)
- ‘The Dirac hole theory was developed in response to a growing crisis over the Dirac theory of the electron. It predicts the existence of antiparticles in a relativistic quantum theory; the antiparticle came into existence as a ‘hole’ in a sea of negative-energy particles.[...] the phenomenology, of pair creation and annihilation processes, the basic mechanisms of relativistic dynamics. [...] If this concept was initially tied to the negative-energy sea, that is not the case any longer. The negative-energy sea remains a widespread heuristic device to introduce antimatter. But nowadays no one would claim that the negative-energy sea actually exists; it is no longer taken as a literal description of the vacuum.’ (Saunders 1991 p.65) [Note: it exists in the human domain, as negative effects of resonance.]
- ‘The definition of the “preferred basis” (the class of projections) at each time, is the business of decoherence theory. [...] Evidently further pursuit of this question will require a much more systematic discussion of the criteria that motivate medium decoherence in the first place; it is clear that on any evolutionary approach to the specification of a decoherent history space, constraints on what is to count as an information processing system are also constraints on what can reasonably be understood as an “epistemic community”. In other words the objection must be ceded, but the epistemological contrast at issue is actually built into theory *ab initio*, as constraints on information transfer and stability; if we are to live in Plato’s cave, at least we can understand how it is that we are confined there.’ (Saunders 1995 p.26)

### **Human non-locality of ideas about covariance of vertical axis and activity**

- ‘Relativity theory, as the mathematical statement of the covariance of physical laws, was proposed simultaneously by Einstein and Poincaré, and it was anticipated by Lorentz. [Note 13:] ... this paper of [Woldemar] Voigt, which contained... the proof of covariance, remained unknown throughout this period.’ (Saunders & Brown 1991 p.42)