Commentary on *Tao Te Ching* Interpretation

and the possibility of higher order patterning

This is a commentary on the *Tao Te Ching Interpreted Succinctly* (original order) and (alternative order)

Patterning possibilities are presented separately in detail in *9-fold Higher Order Patterning of Tao Te Ching Insights*

Navigational implications are explored in *Hyperspace Clues to the Psychology of the Pattern that Connects*

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There are many translations and commentaries of the classic Chinese book by Lao Tzu entitled the *Tao Te Ching*. This text has been translated more frequently than any other work except the *Bible*. [See resources]. In emphasis, they may be wise, scholarly aesthetic or otherwise. Scholars have said that the original *Tao Te Ching* is a poem. As a poem, it was not intended to be read in one session, but rather to be explored at intervals -- internalized and contemplated.

The exercise (presented separately) was based on the translation of Ursula Le Guin (*Lao Tzu -- Tao Te Ching: a book about the way and the power of the way*, 1997) who explicitly chose to give a poetic rendering into English in the light of 8 other English translations, including:

- Paul Carus. *Lao Tze's Tao-Teh-King*. 1898
- Gia-Fu Feng and Jane English. *Tao Te Ching*. 1972

Some translations are available online [see especially those available via *Translations of the Dao De Jing*], including those of James Legge, Lin Yutang, and Raymond Bernard Blakney. Peter Merel provides an online "interpolation" a version that he has adjusted by drawing several translations into "a consistent and accessible context" -- one which is "which is blunt, easy and useful to read within a modern context" [also by chapter]. Merel stresses that in English it is "cast into a language that is incapable of presenting its poetic structure and philological connections".

Interpretation rather than translation

The exercise (presented separately) that is the subject of this commentary is not however a translation. It does not aspire in any way to be a true reflection of the individual stanzas in the 81 chapters of the Ursula Le Guin version. The exercise is an attempt to reduce each such chapter (whatever its length) to a single extended phrase -- to a form of "abstract" that seeks to convey the essence of the chapter. It has been undertaken as an experiment -- an aesthetic challenge to facilitate a form of comprehension. In contrast to many other translators, Ursula Le Guin herself moves in this direction by proposing a "title" for each chapter -- a feature absent from the original. The phrase form in this exercise might then be understood as an amplification of the insight held by such a title.
It should however be stressed that words and phrases in the Ursula Le Guin version have only very occasionally been used in this exercise -- when they appeared especially apt as part of the phrase form. Such usage is in no way intended to suggest any endorsement by Ursula Le Guin of the resulting formulation which totally lacks the aesthetic dimensions that she emphasized. She herself explicitly makes use of the occasional phrase from other translations when appropriate.

**Attitude**

The problematic attitude involved in the "doing" of any such an exercise is of course the issue that is at the core of the theme of the original.

Such an exercise could indeed be seen to be both presumptuous and a totally inappropriate undertaking completely unworthy of the original -- even an insult to the many who value it highly. However any such criticism may itself be taking the exercise too seriously. It might be better to see it simply (and solely) as a whimsical personal adaptation -- whether or not it is of any value to others.

In addition there is also the subtle challenge of the attitude for anyone who would claim to be engaged in such interpretation for the benefit of others -- effectively laying claim to special knowing. There is also the implication that, through such an exercise, some high ground of wisdom has been discovered and occupied. The text is however focused in many ways on the identification of the characteristics of this challenge and the inappropriateness of any such agenda. Such concerns should therefore figure in the results of the exercise -- and they do.

**Disadvantages**

The exercise sacrifices the many advantages of the original's rich pattern of poetic associations and metaphors -- as well as the didactic reinforcement of particular understanding through various alternative formulations. Together these may all be essential to the intimate and subtle understanding that the original seeks to convey. The possibility of rendering some such pattern more explicit by other means is explored below.

The succinct mode chosen is indeed a crude and blunt use of contemporary language -- even jargon -- to point to a subtler mode of understanding -- given how inappropriate or offensive the language may be to traditional sensibilities.

The form raises the question as to whether there is indeed a unique and singular insight (a gestalt) associated with each chapter -- and to what extent its nature can be meaningfully intimated more briefly than in the original or through its many translations. The original may even be seen as indicating the folly of such an attempt. As an approach, the exercise may then be understood as inconsistent with the cautions that are a theme of the original.

**Form**

In addition to the artificial constraint of a single extended phrase, each phrase in the exercise deliberately starts with a word in gerund form. This device has been used to place the reader in an active, dynamic "how to" mindset appropriate to a world of change. This minimizes the use of injunctions, judgements and descriptive statements which may be more appropriate to commentary on how the mindset is to be held -- or "not held" -- in the spirit of the original.

In this sense the exercise may be seen as a member of a much larger class of sets of advice ("insight sets") of which some examples include:

- religious commandments
- sets of virtues (and their corresponding vices)
- beatitudes
- "manuals for princes"
- sets of aphorisms
- moral do's and don'ts
- friendly and consoling advice (as with Rudyard Kipling's *If...*)
- guidelines for the spiritual life
- pointers to good governance
- Kalak....

Some of those with a more cognitive dimension have been explored in a separate study (Navigating Alternative Conceptual Realities, 2002). With 81 insights, the *Tao Te Ching* may however be one of the most comprehensive.

This exercise was preceded by a more extensive undertaking by the author (first published in one form in 1980) to adapt a translation of the "sister" Taoist classic, namely the *I Ching* (or Book of Changes) into 7 parallel forms. The online version of that adaptation (Transformation Metaphors derived experimentally from the Chinese Book of Changes (I Ching), 1997) enables users to navigate between its application to: sustainable dialogue, vision, conferencing, policy, network, community or lifestyle. The latter exercise formed part of a more general exploration into Patterns of Conceptual Integration (1984) of which one practical outcome was the Functional Classification in an Integrative Matrix of Human Preoccupations (1982). The concerns were first articulated with respect to challenges of knowledge organization in a paper on Representation, Comprehension and Communication of Sets: the Role of Number (1978).

**Patterning**

The exercise with respect to the *Tao Te Ching* was however undertaken with a further purpose in mind, namely to explore the possibility...
that the 81 insights may in fact constitute a pattern that itself is a guide and container for the subtlety to which the original refers -- rather than being understood as a simple list of insights.

Such a pattern has often been explored with respect to the binary coding underlying the "sister" Taoist classic, namely the I Ching (or Book of Changes) -- notably with respect to its "inner structure" (cf Lama Anarika Govinda. Inner Structure Of The I Ching: The Book Of Transformations, 1981). Whereas the 64 (namely 2^6) hexagrams of the I Ching have been explored as an 8x8 pattern (of "houses"), the possibility of a 9x9 (namely 3^3) pattern in the case of the Tao Te Ching has not been a focus of attention. Why for example are there 81 insights -- not 78 or 85? What might be the relationship between the 2^6 of the I Ching and the 3^4 pattern of the Tao Te Ching? How might this relate to the explorations of Ernest G McClain (The Myth of Invariance, 1978)?

What kind of integrity and understanding might have 81 facets -- or require 81 facets to convey? In isolation such facets might be associated with particular "traps" or instabilities of awareness. Flying a helicopter, for example, calls for simultaneous control of 6 dimensions (cf Arthur Young. The Geometry of Meaning, 1978), with wider cognitive implications, as discussed elsewhere.

Can the 81 insights be represented in a meaningful 9-fold pattern of associations to be understood as a comprehensible whole? Would such a pattern constitute a kind of template, framework, or array to provide a focus for a form of transcendence? Or perhaps the insights together offer a perspective on a pattern of "engagements" with "reality"? Understanding the pattern might be assisted by recognizing a form of resonance between the insights -- as with any resonant pattern of associations essential to the integrity of a poem or a piece of music. It is then the overtones they engender that embody the subtler understanding signified by the pattern as a whole. The overtones emerge through the interplay between the particular insights. Perhaps the coherence of the pattern may be partly understood by analogy with what are known to chemists as "resonance hybrids".

Matrix: As a first step in this exploration, it was assumed in this exercise that this 9x9 pattern could be presented in tabular form (see Table 1). Reading the items in the rows of this table would then give rise to to the conventional ordering of items from 1 to 81. But reading the columns of this table would then give an alternative ordering of the same items.

Does this table highlight a periodicity to the pattern through which particular insights are exemplified? Would such a pattern offer the possibility of "tuning out" the inadequacies in the phrase formulation -- in relation to each other and in order to enhance the "tuning" of the pattern as a whole? In practice this would mean adjusting the emphasis of the wording choices made in each case. This might clarify insights of some chapters held by some translators to be somewhat "redundant" -- and simply repetitive of insights presented in other chapters.

Magic squares, cubes and hypercubes: In the search for higher order approaches to patterning the 81 insights in this exercise, the traditional association of the Lo-Shu order of numbers with Taoist explorations of such insights was explored separately (see 9-fold Higher Order Patterning of Tao Te Ching Insights) in terms of the much-investigated mathematics of magic squares, magic cubes and hypercubes [more]. As indicated, this rich source of patterns offers many possibilities. The challenge is to discover pathways through them that facilitate the ordering of insights to provide access to higher orders of meaning that may be associated with the Tao Te Ching.

Of particular interest is the properties of magic squares associated with the Lo Shu order. Thus although there is just one such 3x3 magic square -- with rotations and reflections, there are eight variations of what is essentially the same square. This might be understood to reframe the significance of the traditional compass directions that figure in Taoist texts which, rather than being interpreted symbolically, then suggest a more precise cognitive significance in navigating the 81 insights. Each of the 8 "directions" may then be a unique alternative cognitive configuration pathway.

The Lo-Shu order was traditionally compared to the markings on the back of a turtle. But here this pattern suggests a precise conceptual (rather than quaintly symbolic) justification for the understanding in a arrange of traditional cosmologies that the universe is supported on the "back of a turtle". The turtle was traditionally supposed to have emerged from a river -- Lo Shu also signifying River Map. In this context the river might be understood as the river of change -- in the sense implied by Heraclitus who expressed the notion of eternal change in terms of the continuous flow of the river which always renews itself.

Cognitive navigation through alternative pattern representations

The higher order patterns discussed above for the Tao Te Ching insights constitute a major challenge to comprehension -- especially when the favoured representation is mathematical, even if this includes geometric visualizations. These may indeed be represented through online dynamic and interactive displays (applets) as provided, and summarized, by Alex Bogomolny (The Tesseract, March 2000).

One challenge in taking the exercise further is the confusion arising from the traditional significance attached to the "magical" properties of such arrays. Clifford Pickover (The Zen of Magic Squares, Circles, and Stars: An Exhibition of Surprising Structures Across Dimensions, 2002), for example, has explained why Chinese emperors, Babylonian astrologer-priests, prehistoric cave people in France, and ancient Mayans of the Yucatan were convinced that magic squares -- as arrays filled with numbers or letters in certain arrangements -- held the secret of the universe. In all periods, people have invoked such patterns to ward off evil and bring good fortune.

Given that the emphasis here with respect to the Tao Te Ching is on the possibility of higher order patterning of insights that might be associated with such complex mappings, the central challenge -- building on such aids -- is how to facilitate comprehension of whatever may then be understood as "coherence". The emphasis here, in contrast with many studies of the Tao Te Ching and/or "magic" number configurations, is indeed on the cognitive implications. It may well be the case that such coherence, and the reinforcement of the insights, can be assisted by such complex mappings, but arguably, this may be better achieved for many by using them as templates for other modes of representation that may elicit such understanding.

One potentially interesting approach is through sound, music or poetry:
• **sound**: the use of sound to render complex patterns comprehensible is notably the focus of the *International Community for Auditory Display (Sonification Report: Status of the Field and Research Agenda)*.

• **music**: for musicians, the process of modelling a higher level object (a hypercube) into a lower level language (3D description) entails a series of issues similar to those of representing a musical sound on a score. The terms hypercube and tesseract have been enthusiastically associated with some music productions and their promotion, but it is unclear to what extent this is more than metaphorical and allusive -- or whether it has become the basis of (avant garde) musical research. Aspects of this approach will include musical explorations of "variations" (*Bach's Goldberg Variations*, etc.). Many of the speculative points made in this paper are related to knowledge organization given significance and legitimacy with respect to the role of music by the valuable study by David Rosenthal (Propositional music: on emergent properties in morphogenesis and the evolution of music, 1997). Given the comparisons made between the *I Ching* binary code and the genetic code (CF Martin Schönberger, Katya Walter, Derek Walters), and recent efforts to express the DNA structures in musical form through "protein music" [resources], it would appear possible to explore the *I Ching* and *Tao Te Ching* structures through music.

• **song**: where, as in this case, each insight is articulated in text form, this suggests their incorporation into a complex song (as reportedly explored by Russell Campbell within the framework of the New Religious Mode songs of the Institute of Cultural Affairs in the late 1960s). Such song might be structured in ways that contrast with more traditional chanted adaptations [more].

• **poetry**: as noted earlier, scholars have indicated that the original text of the *Tao Te Ching* is a poem. The question is whether the numerical relationships between the insights possess the poetic associations. Pointers in this direction are offered by poet-mathematician Cameron Jones, who suggests that: "The hypercube is a geometry that can take you anywhere. Multidimensional, trajectories with connections. Hypercubes contain hypercycles and can self-replicate to transmit information" [more] Such links could provide navigational templates between the organizational concerns of poetry-making and policy-making (see *Poetry making and Policy making: arranging a Marriage between Beauty and the Beast*, 1993)

• **drama**: an interesting case can be made for the mapping of a drama in terms of a board game like chess as with Shakespeare's *Tempest*. Such an approach could be used to express the interrelationship between the insights of the *Tao Te Ching*.

A different approach is through the use of games:

• these may include the many efforts to provide a web version of Herman Hesse's *Glass Bead Game*.

• another example is *Psyche* created by Armando Perez Morales. It is a game or system which combines the divinatory games of a number of ancient societies into one archetypal game with the added dimension of contemporary psychological paradigms. *Psyche* functions through the phenomenon of synchronicity (meaningful coincidence) as do its constituent games or systems which are: *I Ching*, *Leela*, *Asha*, *Patoli*, and *Magic Squares*.


Such tools could help to render more accessible, comprehensible and memorable the properties and coherence of the cognitive space within which the *Tao Te Ching* provides 81 mnemonic markers. The tools may also help in providing guidance as to the nature of the navigational pathways between such insight loci -- notably how alternative loci may "appear" as options from any locus within that space. Of particular interest is the manner in which the mathematical properties of complex objects (especially those that acquire their enhanced coherence through their "magie" properties) may have cognitive properties in relation to navigation -- as intimated by patterns of poetic associations. Related issues are discussed elsewhere (Navigating Alternative Conceptual Realities: clues to the dynamics of enacting new paradigms through movement, 2002)

The fundamental question is how such higher orderings in mathematical terms are to be understood as associated with increasing and sublimer qualities of cognitive association. The magic squares and cubes exemplify configurations of different numeric relationships. But it is possible to distinguish between their roles as:

• potentially interesting **coding systems** to order sets of conceptual objects (as an extension of work on knowledge organization)

• allusive **metaphoric orderings** that have inspired many in different cultures with their "magical" potential down the centuries (The numerical symmetries in "magic squares", symbolized a form of hidden knowledge to priests and mystics in many ancient cultures)

• valuable mappings of insights that can provide the **templates for exploratory performance art** (poetry, music, song)

• ways of describing (and possibly designing) the **configurations and flows of information** in more powerfully integrative forms of individuation or group organization

• **frameworks that can be cognitively embodied** in some way to enhance capacity to perceive and navigate alternative and subtler cognitive spaces (as explored in some cultures by variants of mandalas and sand painting)

The relevance of the last of these has been explored separately (Psychology of Sustainability: Embodying cyclic environmental processes, 2002; Enhancing the Quality of Knowing: through Integration of East-West metaphors, 2000; Knowledge Gardening through Music: patterns of coherence for future African management as an alternative to Project Logic, 2000).

As an example, for Marie-Louise Von Franz (Number and Time: Reflections leading toward a unification of depth psychology and physics, 1974), a fourfold approach appears "to constitute the fundamental minimum means for subdividing and thus classifying the circle or wholeness" (47, p. 121). "Two pairs of opposites, a quaternion, are required to set up a bodily unity" (47, p. 1 27). Below four the perception of wholeness is partly unconscious. As soon as the unconscious content enters the sphere of consciousness it has already split into four basic modes of awareness. "It is perceived as something that exists (sensation); it is recognized as this and distinguished from that (thinking); it is evaluated as pleasant or unpleasant (feeling); and, finally, intuition tells us where it came from and where it is going" (47, p. 121). As a minimum condition, if they are not incorporated into an "integrated" approach, they must necessarily be
projected onto competing approaches in the environment, with all the intellectual and institutional consequences for any harmonious integration. Such a fourfold approach is a necessary requirement for comprehending any "meta-answer". [more] Von Franz makes the point that the ancient Chinese applied squares in their music and dance -- given that in that culture the squares are symbolic of the underlying rhythm of the universe.

Of particular interest with respect to cognitive embodiment is the work of Jon and Maureen Jenkins (The Personal Disciplines of a Facilitator, 2002) in recognizing the 9 disciplines (or attitudinal postures) important to successful meeting facilitation. They are: detachment, engagement, focus, awareness, action, presence, interior dialogue, intentionality and a sense of wonder. In the 1960s, the Ecumenical Institute, forerunner of the Institute of Cultural Affairs, built a model it named the New Religious Mode that seems to provide a framework for an ongoing dialogue about the nature of human consciousness. This has been transposed to make it, hopefully, more accessible to today's facilitator.

An expression often used in Masonic circles is "to be on the square", meaning to be a reliable sort of person, and this has entered common usage. Given the square patterned layout of masonic halls over which rituals are conducted, it is possible that there is a special understanding of magic squares in freemasonry. The "square and compasses", tools of the masonic trade, are symbolically arranged to form a quadrilateral. It is possible that movement "over the square" can be understood by masons in psycho-spiritual terms.

Interlocked cycles

The patterns of Table 1 and Table 2 may assist in understanding the nature of the self-referential loops, inversions and redundancies that help to reinforce the understanding conveyed by the original. These issues may be further clarified by the various forms of "imperfection" of "magic" squares, cubes and hypercubes -- and the cognitive analogues they suggest.

In the light of the organization of the Periodic Table of Chemical Elements (with which it could be somewhat isomorphic, as discussed elsewhere), the patterns of Table 1 and Table 2 might be understood as 9 interwoven journeys of nine learning stages each. A journey may be understood as a sequence of reframings in which (ideally) earlier frames of understanding are seen to be aspects of (and essential to) understanding of a larger pattern. The classical Zen sequence of ox-herding images exemplifies such a journey [more | more | more].

Such journeys might be understood as 9 ways of answering the question "who am I". All of them are partial and problematic. Each offers something to cling to -- a clinging which can inhibit further insight. All of the journeys are cyclic -- returning to the point of origin so classically indicated by the poet T S Eliot: "We shall not cease from exploration / And the end of all our exploring / Will be to arrive where we started / And know the place for the first time" (Little Gidding, 1943).

The potential implication of such cyclic movement are well illustrated metaphorically by the physics of particle accelerators such as the cycko-synchrotron. In this case however, there are 9 interwoven cycles through which attention is "accelerated" to higher energy levels.

The use of hypercube structures in the exploration of high-performance network design is due to the advantages they offer to meet certain performance criteria under the constraints of a limited number of input/output channels per processor and a limited number of inter-processor communication links. The hypercube delivers high performance in networks and has been implemented in several commercial parallel computers. The question is whether the common network performance criteria (routing speed, bandwidth, richness of structure, i.e., ability to embed certain common communication patterns) are suggestive by analogy for an individual faced with insight processing challenges.

Reframing

As suggested above, the 81 insights might be usefully understood as contrasting frames through which "reality" may be "engaged". Transition between them would then be a question of reframing. The process might then be one of "donning" and "doffing" frames -- accepting that some may be preferred and even habitual, and others extremely challenging.

Such frames might be understood as various kinds of interface between "doing" and "not-doing" -- possibly different kinds of "lying" and "truth-telling". "Not-doing" might then be a form of avoiding engagement within a narrower framing -- thus giving it a hold, through giving it excessive importance. This is well illustrated by the classic Asian tale of the seven blind men each encountering different parts of an elephant (trunk, leg, tail, etc) -- and making conflicting assertions about it in the light of their limited experience.

One rich and comprehensive approach to such framing that may be consonant with the above pattern inquiry is that of the Social Process Triangles developed within the Institute of Cultural Affairs, notably by Jon and Maureen Jenkins [more].

Comprehension

It is widely held that the insights of the I Ching or the Tao Te Ching could be best explored singly and over an extended period of time. Whether any larger pattern emerges is then another matter. The focus here however is on the possible nature of such a pattern -- if articulated through any of a variety of forms. But whilst it may be possible to represent patterns that are suggestive of subtler insights, it is quite another matter again to understand them and to embody them in behaviour -- whether as an individual or as a group. As with making sense of a text in a poorly understood alphabet, it is worth reflecting on analogies to the challenges of learning to read and understand -- especially when the text refers to matters which may only be dimly recognized!

The communication implications for the higher dimensionality of cognitive space have been explored by mathematician Ron Atkin (Multidimensional Man: can man live in 3-dimensional space? 1981; reviewed in a separate document). This work provides vital insights into the nature of incommunicability, even when there is no language barrier.
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