



laetus in praesens

Alternative view of segmented documents via Kairos

27 May 2010 | Draft

Designing Global Self-governance for the Future

Patterns of dynamic integration of the netherworld

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Produced in celebration of the United Nations [International Year for the Rapprochement of Cultures](#) (2010) and the ever increasing development, manufacture and sale of arms by Permanent Members of the UN Security Council following the UN [Year of Dialogue Among Civilizations](#) (2001)

Introduction

This is the development of the argument in an introductory paper (*Tao of Engagement -- Weaponised Interactions and Beyond: Fibonacci's magic carpet of games to be played for sustainable global governance*, 2010). It continues the exploration of the possibility of providing a common framework for the huge global investment in weaponry -- and the binary logic associated with its use -- in relation to a variety of other more complex games and non-weaponised modes of interaction. The specific focus is on interrelating the associated "Western" and "Eastern" patterns of interaction and engagement with various existential challenges of "otherness" -- with or without metaphorical implications, whether manifesting as games or not. This emphasis follows from the case made in an earlier exploration (*Enhancing the Quality of Knowing through Integration of East-West metaphors*, 2000).

The argument developed here is that governance, and the strategic challenge of any integrative approach, is essentially a design challenge -- variously taking into consideration geometric constraints and possibilities, mnemotechnical issues, and the aesthetics conducive to psychoactive engagement, credibility and communication. Of specific importance is the use of design to enable and enhance comprehension of greater degrees of complexity and subtlety -- embodying and interrelating the greatest diversity of cultural associations.

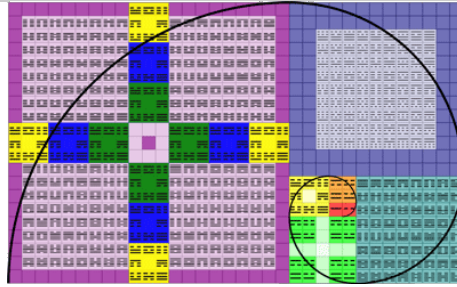
The prevailing fragmented approach, reinforced by the variety of disciplines and belief systems, has been widely recognized as undermining any coherent, integrative approach. In a political world governed by image, rather than rationality -- and in the absence of any inspiring global epic -- the challenge may be fruitfully considered as one of portraying a memorable, succinct narrative respectful, to the extent possible, of formal considerations.

Design considerations and possible implications

Fig. 7 uses Fibonacci spiral construction as a fundamental design metaphor within which to relate disparate strategic frameworks. The argument is that the pattern is significant to natural order and is therefore a probable approximation to what may prove of value to social design.

Fig. 7: Reduced version of Fig. 3 (in introductory paper)

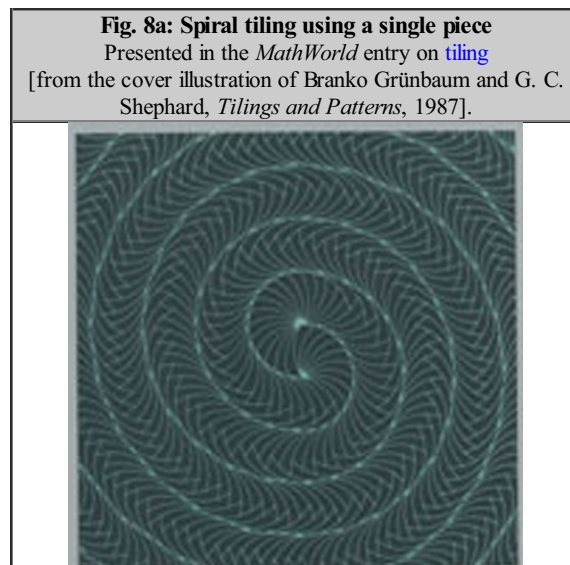
not including links from portions of the diagram to explanatory commentaries



The approach is partially inspired by the work of Christopher Alexander (*Notes on the Synthesis of Form*, 1964, *A Pattern Language*, 1977, and *The Nature of Order*, 2003-4), especially his current research emerging from that context (*Harmony-Seeking Computations: a science of non-classical dynamics based on the progressive evolution of the larger whole*, *International Journal for Unconventional Computing (IJUC)*, 2009; *New Concepts in Complexity Theory: an overview of the four books of the Nature of Order with emphasis on the scientific problems which are raised*, 2003). As discussed separately, of particular interest is Alexander's focus on "geometrical adaptation" (*Harmony-Comprehension and Wholeness-Engendering: eliciting psychosocial transformational principles from design*, 2010).

Given Alexander's own strong interest in carpet design, the strategic need has been separately articulated in terms of "magic carpets" as a design metaphor appropriate to a knowledge society (*Interweaving Thematic Threads and Learning Pathways: Noonautics, Magic carpets and Wizardomes*, 2010; *Magic Carpets as Psychoactive System Diagrams*, 2010). In this sense Fig. 7 can be considered as one approach to the design of such a "magic carpet" through its assembly of disparate arenas by which people are variously moved, whether for interpersonal relations, recreation, competition, gambling or decision-making in governance.

Packing and tiling: Whilst packing ([set packing](#), [sphere packing](#)) and tiling ([tessellations](#)) are well-recognized design preoccupations, both with a considerable mathematical literature, their relevance to social design does not appear to have been extensively explored. A case has however been separately made for their relevance to many territorial disputes, most notably in the Middle East (*And When the Bombing Stops? Territorial conflict as a challenge to mathematicians*, 2000).



The design of *sudoku* and crossword puzzles, as with carpet design, highlights distinctions between overall pattern and details. Alexander comments extensively on the 15 transformations or properties associated with the most powerful carpet designs. The question is how these may be understood with respect to governance (*Comprehending Alexander's transformation principles within the psychosocial realm*, 2010).

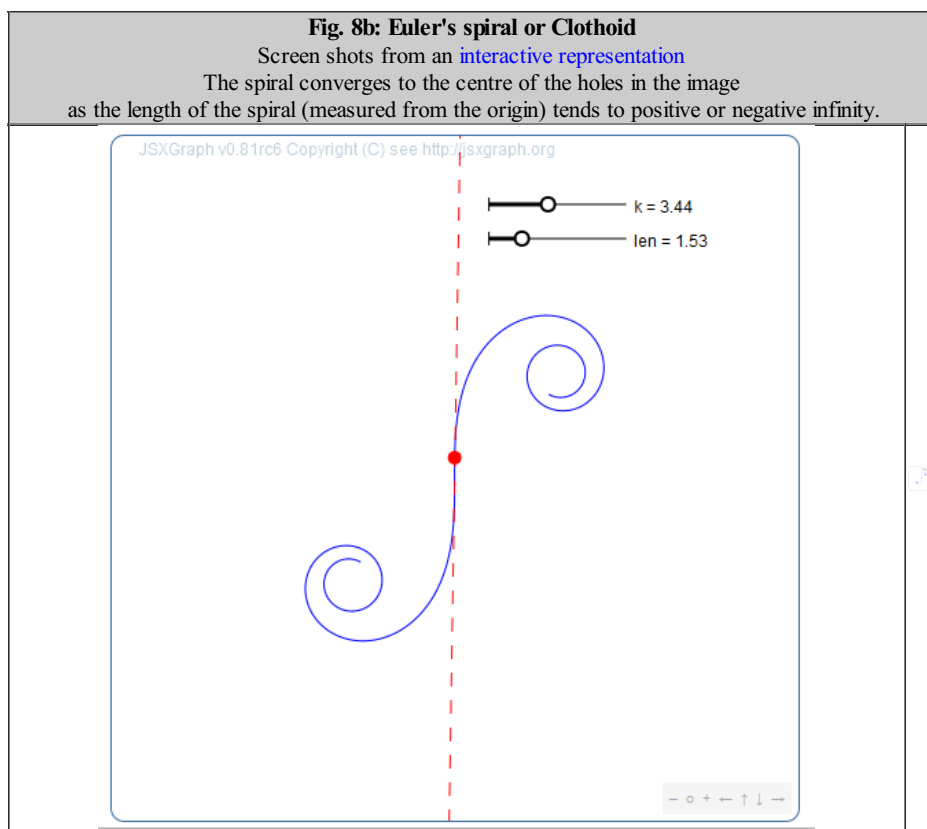
In designing the Fibonacci-based pattern (Fig. 7), the constitutive sub-elements pack fully only to a degree. Options have been chosen to "fit" larger and smaller patterns together to create a meaningful whole as represented above. Others could have been selected. Indeed, as argued below, the pattern appropriate to a magic carpet design may need to be essentially dynamic, namely involving a degree of alternation between such options. This is perhaps appropriately reminiscent (at the cognitive level) of the integrity of resonance hybrids at the molecular level -- as exemplified by the benzene molecule fundamental to organic molecules. Such animation may be used to reflect appropriately the alternation between *yin* and *yang* representations.

Also of relevance to the approach to such design may be the playful challenge popularised by [packing games](#) like *Tetris* (and its [variants](#)) and *Lumines*. As stressed below, it is not any particular design -- any more than any particular set of categories or types -- that is capable of carrying the dynamics of meaning. Rather than being locked into "frozen" categories, it is the continuing process of re-categorizing that is the challenge (*Framing the Global Future by Ignoring Alternatives: unfreezing categories as a vital necessity*, 2009; *Engaging with Globality through Playful Re-categorizing*, 2009).

Spiral: There have been a number of explorations of circular representations of the *I Ching*, notably that by [Robert Daoust](#) (*Map for an Algonomic Pain Management*, 2010). Various spiral-related possibilities merit consideration in relation to development of the design of the above diagram (Fig. 7), notably in the light of experiments in discussion fora by several authors with spiral representations of the *I Ching*: [resource1](#), [resource2](#), [resource3](#)):

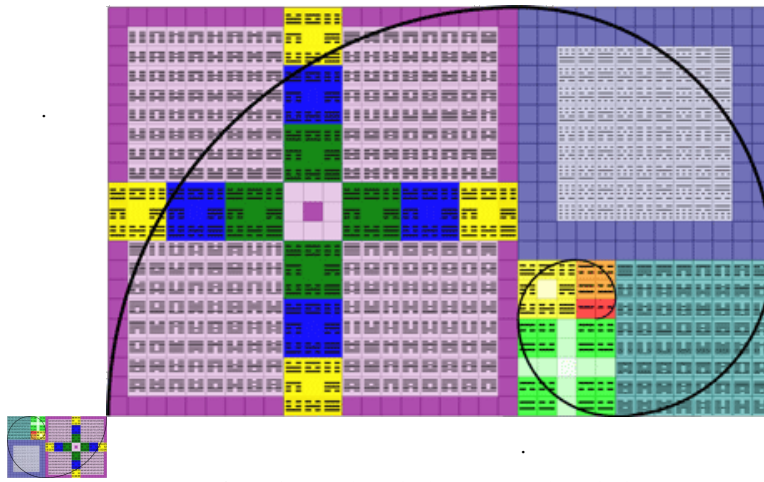
- **open-ended:** as an integrative framework the seemingly unconstrained, open-ended nature of the expanding spiral contrasts with many conventional frameworks
- **direction:** as presented, an alternative spiral construction is possible opening in the opposite direction -- giving both right-hand and left-hand variants
- **multiple spirals:** multiple spirals of different orientations can be constructed for both the right and left-hand variants, with their points of intersection offering specific positions in the diagram (as discussed in the [introductory paper](#))
- **distinct dynamics along the spiral arms:** the spirals may also be distinguished in terms of a movement to the centre (a form of vortex) and of a movement away from it -- effectively centrifugal and centripetal movements

Double spiral: The [Euler spiral](#) (spiro, clothoid or Cornu spiral) is a curve whose curvature changes linearly with its curve length. Such spirals are widely used as transition curves in railroad/highway engineering for connecting and transiting the geometry between a tangent and a circular curve. This suggests a degree of potential relevance to the challenge of smooth transition from "in-the-box" to "out-of-the-box" thinking. They also have applications to diffraction computations in optics -- suggesting a degree of potential relevance to the widespread use of "vision" metaphors in policy-making..



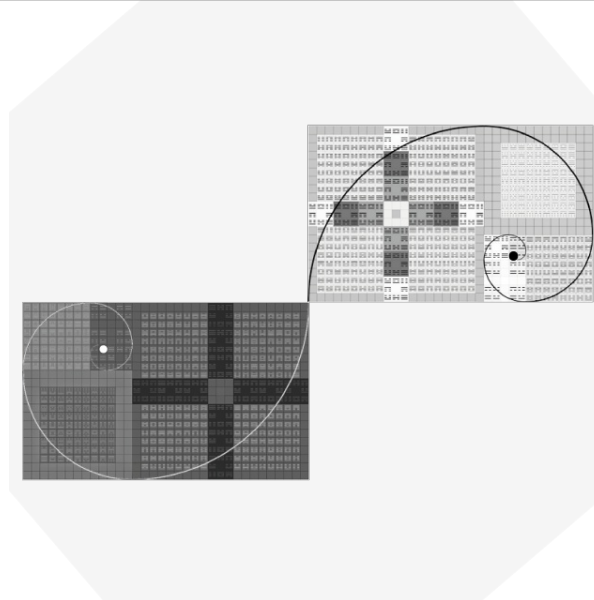
The double spiral suggests introducing a "reflection" of the basic design above (Fig. 7) to form a larger pattern, as indicated below. Of special interest is the effective displacement of the "origin" from the "originating centre" of the Fibonacci spiral to a position equidistant between the two terminating spirals. This suggests a cognitive challenge possibly acknowledged by the meditation disciplines aimed at "stopping the heart". An instructive equivalent in the case of governance might be seen in the effort of the International Red Cross in the Afghanistan arena to provide therapeutic care to both the wounded Taliban and the victims of "collateral damage" -- the former being condemned as inhuman "animals" (if not the embodiment of evil) unworthy of such care, and the latter resulting from the actions of those upheld as heroes embodying the highest values of civilization and acclaimed on their death as "loving their jobs" ([Red Cross gives first aid lessons to Taliban](#), *Guardian*, 25 May 2010).

Fig. 9: Simple mirrored reflection of Fig. 7 in the light of the pattern suggested by Fig. 8
 Note that one consequence of this reflection (as may be seen on close inspection) is that the line codes
 change their significance
 if those in the lower portion are read in the same direction as those in the upper portion.
 This points to the possibility of dynamic alternation between such readings



Alternation -- *That which is, is not. That which is not, is*
 -- perhaps indicative of the [holomovement](#) described by [David Bohm](#)

Fig. 10: Experimental black/white version of Fig. 9 with inversion of black and white in lower portion,
 exploring a graphic representation of a netherworld "inverted" perspective
 (exploring use of a Tao symbol as faint background)



Projections onto other surfaces and forms

Irrespective of the possible animations (discussed [below](#)), the above diagram is presented here in various static projections onto a two-dimensional surface. This distracts from other projections that may be of significance:

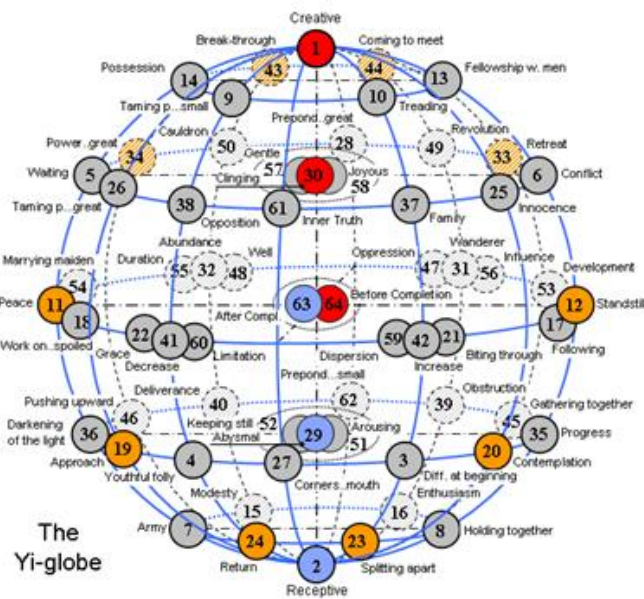
- **spiroidal shells:** The [conch shell](#) has been used by various cultures on diverse occasions through the ages. As noted by Saroj Kumar Rathi and P. C. Naik (*Fibonacci structure in conch shell*, *Current Science*, 88, 4, 25 February 2005), it has been described in the *puranas* and epics of India and is used in almost all Indian societies during auspicious occasions. The authors focus on its use as a musical instrument (of relevance to the discussion below). It suggests the possibility of a 3-dimensional spiral form of packing by analogy with *Tetris*. The conch shell is associated with the [horn of cornucopia](#) as a symbol of abundance, plenty, fertility and fortune.
- **three (and more) dimensions:** The sequence of Fibonacci numbers is studied in graph-theoretic mathematics in the context of [Fibonacci cubes](#), a family of [undirected graphs](#) with properties similar to those of [hypercube graphs](#), but with a Fibonacci number of vertices. Such cubes are now considered of relevance to the development of new kinds of fault tolerant technology (W. J. Hsu, *Fibonacci Cubes: a new interconnection technology*, 1993; Ali Karci, *New Interconnection Networks: Fibonacci cube and extended Fibonacci cubes based hierarchic networks*, 2002; Andrej Taranenko and Aleksander Vesel, *Fast Recognition of Fibonacci Cubes*, 2007). Their relation to resonance graphs in chemistry may also prove to be of relevance (Sandi Klavzar and Petra Zige, *Fibonacci Cubes are the Resonance Graphs of Fibonaccenes*). Such considerations raise the question of their relevance to organization in the psychosocial realm, as previously considered (*Polyhedral Empowerment of Networks through Symmetry: psycho-social implications for organization and global governance*, 2008).
- **correspondence to the double spiral of DNA:** Further to explorations of spiral projection onto a sphere is a degree of

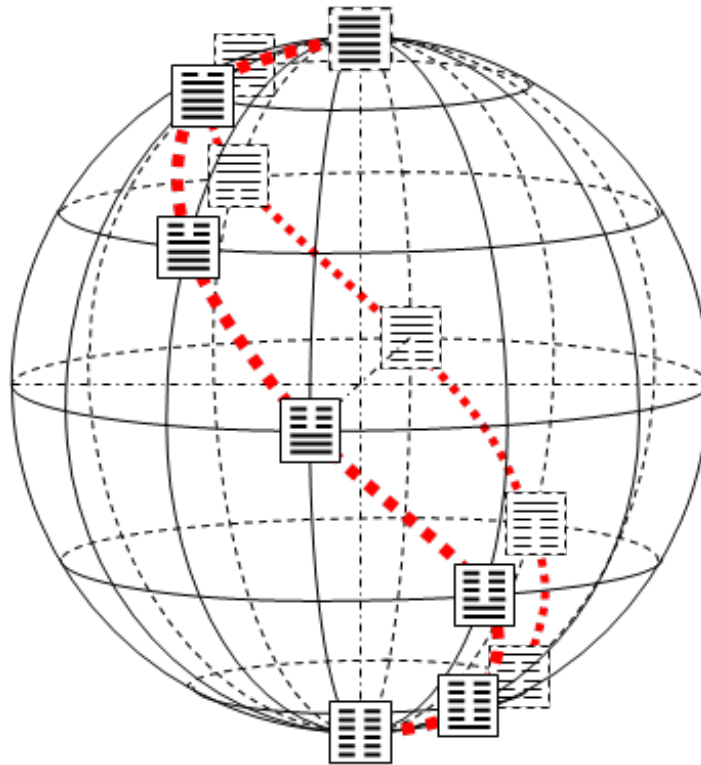
correspondence to the double spiral of DNA, with cognitive implications as previously discussed (*DNA Supercoiling as a Pattern for Understanding Psycho-social Twistedness*, 2004, with reference to *Engaging with Questions of Higher Order: cognitive vigilance required for higher degrees of twistedness*, 2004). This was also discussed with respect to the existential challenge of otherness so fundamental to dualistic thinking (*Archetypal otherness -- "DNA vs. I Ching"*, 2007, with reference to *Climbing Elven Stairways: DNA as a macroscopic metaphor of polarized psychodynamics*, 2007)

Projection onto the surface of a sphere: One intriguing possibility is to consider the spiral (as constructed by Fig. 7) as projected onto the surface of a sphere (or a hypersphere) with the origin of the spiral at one pole. The outer arm of the spiral might then be considered as effectively asymptotic to the circular circumference as seen from that pole. The possibility might be extended by considering that that arm is continued in a reverse spiral (as in the Euler spiral of Fig. 8), spiralling inward to a lower pole of that (hyper)sphere. Such a framing then relates to further possibilities:

- a sense of the relationship between a "white hole" and a "black hole", reminiscent of the discussion by Peter Russell (*The White Hole in Time: our future evolution and the meaning of now*, 1993; *Waking Up In Time: finding inner peace in times of accelerating change*, 2008)
- a means of distributing the conditions identified within the "arenas" (of Fig. 7) onto a (hyper)sphere, as suggested with respect to the *I Ching* conditions by the spherical representation of József Drasny (*The Image of the Cosmos in the I Ching: the Yi-globe*, 2007) based on a study of the traditional (King Wen) sequence of the 64 hexagrams and itself related to earlier representations by Lothar Teikemeier.
- a way of seeing the common two-dimensional symbol of the Tao as implying a (hyper)sphere, with the further possibility of that sphere being "tilted" such that the "poles" are what are termed the "eyes" of that symbol. A multidimensional representation of that symbol has previously been suggested as a valuable metaphor (*Snoring of The Other: a politically relevant psycho-spiritual metaphor?* 2006). This argument can be further explored in relation to the paradoxes of the Klein bottle (*Intercourse with Globality through Enacting a Klein bottle*, 2009).

Fig. 11: Selected images of the Yi-globe of József Drasny
reproduced with permission from *The Image of the Cosmos in the I Ching: the Yi-globe* (2007)





These images point to the possibility of a correspondence between the spherical organization of conditions of change and the more familiar understanding of how the Earth, as a globe, is exposed to light and darkness

Such possibilities raise the question of the implications for the organization and comprehension of categories (*Spherical Configuration of Categories to Reflect Systemic Patterns of Environmental Checks and Balances*, 1994; *Spherical configuration of interlocking roundtables: Internet enhancement of global self-organization through patterns of dialogue*, 1998; *Spherical Accounting: using geometry to embody developmental integrity*, 2004).

Polyhedral packing: A three-dimensional variant would enable reflection on how polyhedra could be packed into a spiral. Of particular interest in any consideration of an inverse world is the geometry of **duality**, and the associated significance.

Axes of aesthetic symmetry: Much is made of geometric symmetry, even with respect to aesthetic forms, as noted by Harold Osborne (*Symmetry as an Aesthetic Factor, Computers and Mathematics with Applications*, 1986):

In classical antiquity symmetry meant commensurability and was believed to constitute a canon of beauty in nature as in art. This intellectualist conception of beauty persisted through the Middle Ages with the addition doctrine that the phenomenal world manifests an imperfect replica of the ideal symmetry of divine Creation. The concept of the Golden Section came to the fore at the Renaissance and has continued as a minority interest both for organic nature and for fine art. The modern idea of symmetry is based more loosely upon the balance of shapes or magnitudes and corresponds to a change from an intellectual to a perceptual attitude towards aesthetic experience. None of these theories of symmetry has turned out to be a principle by following which aesthetically satisfying works of art can be mechanically constructed. In contemporary theory the vaguer notion of organic unity has usurped the prominence formerly enjoyed by that of balanced symmetry.

There is the intriguing possibility that the configuration of qualities in the Chinese system, most especially as represented by the *Ba Gua* coding, can be fruitfully understood as indicative of fundamental axes of aesthetic symmetry -- analogous to geometric symmetry. Such symmetry is then to be found as more **implicit** in the *I Ching* configuration and more **explicit** in the binary *yin-yang* configuration. Such symmetry is of course intimately related to the mnemonic associations of poetry and other arts and is presumably essential to comprehension of complex patterns.

Mirroring: The following figure uses the Fibonacci spiral (mirrored as shown in Fig. 9), to relate arenas which are variously explicit, denied, or of extreme existential subtlety. It also helps to clarify the archetypal associations of any "positive" initiative with an "upperworld" and its condemnation of opposing initiatives to a "netherworld". Useful examples are the attitudes of the World Economic Forum to the World Social Forum, and vice versa -- as previously discussed (*All Blacks of Davos vs All Greens of Porto Alegre: reframing global strategic discord through polyphony?*, 2007). This anticipates remarks below regarding representation through sound. A more tragic example is the "upperworld" style of US foreign policy with regard to any failure to accept its supposedly merits -- appropriately matched in the case of Islamic cultures, whose extremists regard it as exemplifying a "netherworld".

"Upper world" (above) **Past:** underlying, constitutive system of patterns of learnings, partially unconscious and held either to have been superseded or to represent the "heart of humanity"

Present: explicit system dynamics by which people are consciously confronted or challenged -- purporting to supersede underlying patterns as a model of "modern" society (denying the extent of the "Netherworld")

Future: aspiration to integrative transcendence of the problematic contradictions between "past" and "present" -- emergent, self-reflexive

healing patterns reflecting both conscious and unconscious dimensions

Stages: associated with "ages of man" in various traditions

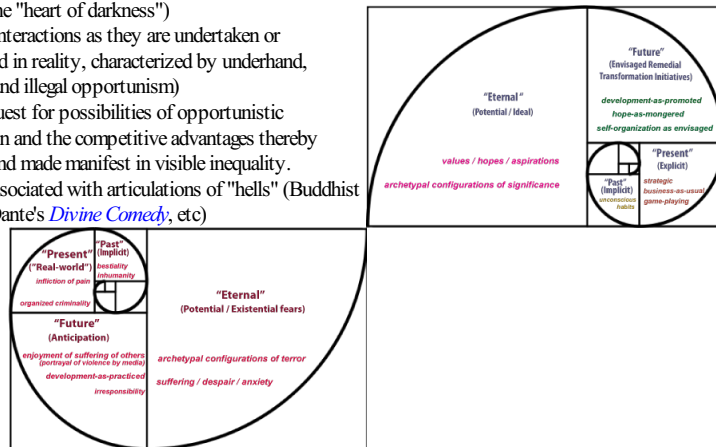
Fig. 12: Mirroring of "upper" and "nether" worlds using Fig. 9
 Indicating in each case a progression from a supposedly superceded "past", into a "present", anticipating an intangible "future", inspired by "eternal" subtleties.

"Netherworld" (below) **Past:** characterized by denial of any residue of inhumanity (typically framed by others as "evil" or the "heart of darkness")

Present: interactions as they are undertaken or experienced in reality, characterized by underhand, unethical and illegal opportunism

Future: quest for possibilities of opportunistic exploitation and the competitive advantages thereby achieved and made manifest in visible inequality.

Stages: associated with articulations of "hells" (Buddhist *Naraka*, Dante's *Divine Comedy*, etc)



The above image may be "distorted" to illustrate contrasting attitudes to global governance (as in Fig. 13 below). Fig. 13 could of course be subjected to other distortions to skew the spiral form in other ways.

Fig. 13: Distortions of Fig. 12 using spatial proportions to illustrate assumptions regarding global governance
 (the relative distortions could of course be even more exaggerated, varying over time)

.Fig 13a: "Negative" deprecation of "upperworld" governance in favour of "social realism"

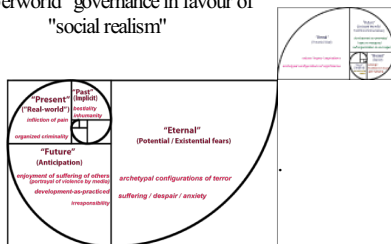


Fig 13b: "Positive" understanding of global governance, minimizing the existence of any "netherworld"

Cognitive embodiment of an "underworld" into governance

In a world much characterized by denial in many forms, distinct cases may be made for exploring "undersides" or the "unconscious", as variously argued (Elise Boulding, *The Underside of History: a view of women through time*, 1976; John Ralston Saul, *The Unconscious Civilization*, 1995), most notably by Carl Jung with respect to the **collective unconscious** and the individual "shadow", as previously argued (*Global Strategic Implications of the Unsaid: from myth-making towards a wisdom society*, 2003). The case may be extended to various forms of "Omerta", perhaps most recently and dramatically illustrated by the policies of the Catholic Church with respect to sexual abuse by clergy, widespread concern with the secrecy of tax havens, or the scientific neglect of a particular factor in consideration of climate change policy (*Mapping the Global Underground: articulating Insightful Population Constraint Consideration*, 2010; *Sins of Hot Air Emission, Omission, Commission and Promission*, 2009).

Curiously in astrophysics a version of the argument may be extended to include the challenge of recognizing "dark matter", "dark energy" and the like (*Epistemological Panic in the Face of Nonduality: does nothing matter?* 2010; *Import of Nothingness and Emptiness through Happening and Mattering*, 2008). The "panic" is of course justified -- as ably highlighted with respect to governance issues by John L. Farrands (*Don't Panic, Panic: the use and abuse of science to create fear*, 1993).

Within such a context, the question becomes how best to integrate that dimension of "darkness" into the design of global governance -- into its "geometry". One approach is to recognize the insights to be derived from what is so systematically ignored in conventional thinking, as previously discussed (*Enlightening Endarkenment: selected web resources on the challenge to comprehension*, 2005).

For a "futurist" of today, any such exploration can be usefully set within an historical context of a challenge faced by many civilizations over thousands of years. This has been courageously done, citing an extensive body of literature, by Robert Temple in an extensive study variously titled in distinct editions (*Netherworld: discovering the oracle of the dead and ancient techniques of foretelling the future*, 2002; *Oracles of the Dead: ancient techniques for predicting the future*, 2002). Although the title is technically appropriate it unfortunately disguises both the range of issues covered (with very extensive references) and the unconventional insights that Temple brings to the matter. The apparent emphasis presumably arises from conventional marketing considerations.

The study is introduced by the following statement, relevant to contemporary challenges to governance, to whatever degree that

relevance may be denied:

We do not know who we are; we do not know why we are here, and we do not know what will happen to us. In the midst of all this uncertainty it is not surprising that, during our history as an intelligent species, we have tried in various ways to escape from the suffocating helplessness of our ignorance. Today, most of our hopes rest on science. But before there was science, a branch of religion or philosophy existed for the purpose of helping man to step outside the confines of the present and to catch glimpses of the future.

Engaging with the future with insights of the past

In the current period when efforts are made by science to scope out the future as an aid to policy formulation, Temple considers the "underside" of man's history by surveying four major forms of institutionalised prophecy on which governance of the past was heavily dependent over thousands of years. Explicitly excluding astrology, he distinguishes:

- Western disciplines (primarily of the Mediterranean basis): oracles and divination by entrails (extispicy)
- Eastern disciplines (primarily of China): oracle-bone-cracking and the *I Ching* (Book of Changes)

These methods, and their current significance, are summarized in an Annex (*Engaging with the Future with Insights of the Past: consulting the dead, sacrifice, bone-cracking and divination*, 2010) under the following headings:

[Institutionalisation of "hell" and "consultation" with its inhabitants](#)
[Divination by sacrifice: entrails and extispicy](#)
[Oracle-bone-cracking](#)
[Divination through the I Ching](#)
[Science vs Imagination: another polarity to be transcended?](#)
[Weaponisation of the Heart: from pomegranate to hand grenade](#)
[Education and research as consultation with the dead?](#)

Temple interprets the two Eastern disciplines in the light of current scientific insights as indicating radically new ways of engaging with the dynamics of change. These possibilities are discussed below (*Dynamic structure of events within event-space*).

Possibilities of a dynamic perspective

Alternation: As argued above, alternation is inherent in the requisite design -- embodied in the oscillation necessary between *yin* and *yang* to engender and encompass variety (*Embodying Values Dynamically through Alternation: integrating sets of polarized static values through indicative metaphor*, 2008; *Complementary Patterns of Meaningful Truth and the Interface between Alternative Variants*, 2003). The alternation can be better represented through animations, as discussed below. However, more cognitively challenging is the shift between modes of knowing and the associated meaning and how this is embodied (*Stepping into, or through, the Mirror: embodying alternative scenario patterns*, 2009). This shift is necessarily more readily comprehended through metaphor (*Metaphors of Alternation: their significance for development policy-making*, 1984).

The relevance to governance has been previously argued (*Development through Alternation*, 1983; *Policy Alternation for Development*, 1984). Challenging such alternation is the extent to which alternation is avoided (*Framing the Global Future by Ignoring Alternatives*, 2009).

Typology of games: As highlighted in the introductory paper (*Tao of Engagement -- Weaponised Interactions and Beyond*, 2010), the question is whether the pattern in the diagram above (Fig. 7) can serve as some kind of taxonomy of "games" of increasing complexity -- including bureaucratic game-playing and the "blame game". By extension, are other modes of interaction to be understood as games, notably dialogues? Which games might then be considered as not included in the taxonomy and why? In particular, with how many parameters is such an excluded game associated?

The point was made that the design is an exercise in space-filling, most fruitfully understood as a cognitive analogue to *Tetris* with added flavours of *sudoku*, its associated magic squares, and the competitive challenge of an external "other" or "otherness" in the Fibonacci pattern (*Us and Them: Relating to Challenging Others*, 2009). The spiral form and its dynamic arenas may then lend themselves to being variously, and playfully, filled. The mention above of *gematria* -- as a form of game with potentially fundamental implications -- suggests a form of aesthetic association to what might be termed mathematical poetry or the poetry of mathematical relations. For example the mysterious 613, so fundamental to the Jewish worldview, might be understood as $5^4 - 12$, with all the cognitive associations of 12 -- notably the "Tribes of Israel" (*Generic Reframing of the 12 Tribes of "Israel"* 2009). How might it be "packed" into the arena of 34?

Rather than the implication of design as completion of a pattern -- closure understood **statically** -- the emphasis is shifted here to the ongoing **dynamic process** of designing. Designing is then to be understood as a game -- as with the "great game" (long associated with Afghanistan), the mythical "game of the gods", or the notion of an infinite game (James P. Carse, *Finite and Infinite Games: a vision of life as play and possibility*, 1994). Any particular emergent design (as with **Chladni patterns** and **cymatics**) is then an essentially temporary response to conditions.

More generally, the traditional use of the *I Ching* for purposes of divining the future might be fruitfully understood as a "game" comparable within its context to those "games" currently promoted by consultants in eliciting future "visions" from their clients, notably through **scenario analysis** and **scenario planning**, as previously discussed (*Stepping into, or through, the Mirror: embodying alternative*

scenario patterns, 2009). In this respect the degree or quality of authoritative determinism emerging from conditions and constraints within the game may itself be variable -- of relevance in comparing the "injunctions" of the *I Ching* with those of the *Mitzvot*, for example. Injunctions may be replaced by questions or other syntactical elements, for example -- as in the classic set of 48 *koans* of the *The Gateless Gate* (*Mumonkan*)

Also of interest is the nature of the attractor central to any game. What is the achievement or satisfier? What kinds of engagement does it elicit?

In speculating on what kind of intelligent design might most usefully survive many generations as a cognitive toolkit, games (notably board games) have proven capacity to communicate cognitive patterns through hundreds of generations (*Minding the Future: a thought experiment on presenting new information*, 1980). Those sensitive to the possibility of global civilizational collapse might fruitfully consider such design options for human cultural survival.

Persephone as the flow form of freedom: Within such a context the shifting patterns of the game as a whole might be fruitfully understood in the language of flow forms. Any momentarily emergent design is then a particular flow form, whether readily susceptible to comprehension or not -- now you see it, now you don't ! With respect to global governance "flow forms" are then confidence flows, exemplified by financial flows and by shifting patterns of public opinion. The patterns and their significance have been highlighted with respect to water, notably by the [International Flowform Association](#). They are a primary characteristic of Maori art and symbolism.

The mythical description of Persephone is then most appropriately described in the language of flow forms -- a language equally appropriate to any "definition" of freedom (*Comprehension of Appropriateness*, 1986). In this sense, whether as "Freedom" or as "Persephone", their significance is inadequately represented by a bronze "statue". Water, as in the world of the Maoris, offers many illustrations of the shifts between brilliant reflection of sunlight and potentially threatening darkness -- the extremes associated with Persephone. The challenge of freedom, and any "necessary darkness" associated with government efforts to "spread it", can be fruitfully seen in that light.

The argument for "water logic" of Edward de Bono (*I am Right, You are Wrong: from rock logic to water logic*, 1991) is indicative of the cognitive challenge for governance. Although now seen as a quaint notion, the annual movement of Persephone -- transcending sterile polarity -- may indeed offer a comprehensible, coherent "explanation" of the dynamic between polarity of "summer and winter", any quaternary pattern of "four seasons", and the associated unpredictability of any "rainy season", whether in physical or metaphorical terms. This points to the possibility of reframing the challenge of governance as enabling the movement of metaphor, as discussed below.

Animations: In the light of the above argument, and the nature of the above diagrams, the static representation is inadequate to the cognitive challenge and is therefore merely indicative of other possibilities. Steve Marshall (*Yijing Hexagram Sequences*, 2003) provides many useful demonstrations and commentaries on the nature of the relevant animations. Various web-based experiments have previously been undertaken:

- *Dynamic Exploration of Value Configurations: polyhedral animation of conventional value frameworks* (2008)
- *Animation of Classical Ba Gua Arrangements: a dynamic representation of Neti Neti* (2008)
- *Dynamic Exploration of Value Configurations: interrelating traditional cultural symbols through animation* (2008)
- *Sustainability through Magically Dancing Patterns: 8x8, 9x9, 19x19* (2008).

Some further experiments can be made with animating Figs. 7 and 9 (). This document includes a commentary on some of the technical issues in enabling such animation in order to ensure that the pattern dances in ways which can carry richer significance.

Notation and medium: beyond text vs. sound

Sound patterns: There is considerable acknowledgement of the widespread capacity to recognize patterns through sound. This is the central concern of [sonification](#) of the [International Community for Auditory Display](#). Given that complex patterns of associations may be more readily recognized and remembered through the symmetries offered by music, there is the possibility of treating the various patterns within the above design as tonal representations forming a kind of musical score. This would then be reminiscent of the understanding celebrated by Nobel Laureate [Hermann Hesse](#) in his variously titled magnum opus (*The Glass Bead Game, Magister Ludi*, 1943). Global society might even be held to be "hungering" for richer patterns through music -- possibly even to the point of "cultural starvation" as a consequence of "malnourishment". One possibility is the "translation" of text into music (*Conversion of Global Hot Air Emissions to Music*, 2009).

Many aspect of the arguments regarding ordering patterns in space have their equivalent with respect to patterns of tones over time, as notably articulated by [Ernest G. McClain](#) (*The Myth of Invariance: the origins of the Gods, Mathematics and Music from the Rg Veda to Plato*, 1976; *The Pythagorean Plato: prelude to the song itself*, 1978; *Meditations Through the Quran: tonal images in an oral culture*, 1981). Such insights can be fruitfully related to the books of songs of various cultures. One of the five classics of China, *The Book of Songs* (*Shi Jing, Shih Ching, Book of Odes*) is a collection of 305 poems, notably prefaced by Mao Tse Tung (Harrison Huang, *Shijing with Mao prefaces and Zhu Xi commentary*). The *Song of Songs* (*Shir ha-Shirim*), is a book of the Hebrew Bible. also known as *Solomon's Song of Songs*.

Epistemological relevance of sound: The question was previously raised as to whether hypothesized music, or singing, can be embodied in the moment to engender a more coherent and meaningful future (*Presenting the Future an alternative to dependence on human sacrifice through global pyramid selling schemes*, 2001). This is suggested by the work of the philosopher, Antonio de Nicolas (*Meditations through the Rg Veda: four-dimensional man*, 1978), using the non-Boolean logic of quantum mechanics (P. A. Heelan, *The Logic of Changing Classificatory Frameworks*, 1974) in exploring the epistemological significance of cognitive experience grounded in

tone and the shifting relationships between tone in the *Rg Veda*. As de Nicolas notes, it is through the pattern of musical tones that the significance of the *Rg Veda* is to be found:

Therefore, from a linguistic and cultural perspective, we have to be aware that we are dealing with a language where tonal and arithmetical relations establish the epistemological invariances... Language grounded in music is grounded thereby on **context dependency**; any tone can have any possible relation to other tones, and the shift from one tone to another, which alone makes melody possible, is a shift in perspective which the singer himself embodies. Any perspective (tone) must be 'sacrificed' for a new one to come into being; the song is a radical activity which requires **innovation** while maintaining **continuity**, and the 'world' is the creation of the singer, who shares its dimensions with the song (1978, p. 57)

This offers new cognitive dimensions to sacrifice that contrast with those required by contemporary economics but which relate closely to the significance of alternation (discussed below). The physical effects of resonance from sound are well known. In the light of Temple's arguments for hexagonal geometry, the role of resonance in the benzene molecule, what is to be understood from the use of **hexameter** in the articulation of riddles by the oracles of Delphi (Wolfgang Ohlert, 1912; Wolfgang Schultz, 1909-12; Raymond Theodore Ohl, 1928)? Given the association of sacrifice with such insights, what of relevance to governance is to be understood about the role of **haiku** in articulation of the subtlest values in Japan (*Ensuring Strategic Resilience through Haiku Patterns: reframing the scope of the "martial arts" in response to strategic threats*, 2006)? Can such psychological analogues be set up to engender the future and exert a time-binding force? Within such a context, can analogues to overtones serve as vehicles for particular forms of understanding?

Rather than transcending the mnemonic connectivity of sound vs. the alienating order of text, is the design challenge of governance one of **"neither rhyme nor reason"**? *Was there ever any man thus beaten out of season, When in the why and the wherefore is neither rhyme nor reason?* (Shakespeare, *Comedy of Errors*, 1590).

Playing capacity: As illustrated by a piano keyboard, the question with respect to any such design is whether any "map" of value to governance will only "work" if there is the knowledge and expertise to "play" it like a musical instrument (*Polarities as Pluckable Tensed Strings: hypercomprehension through harmonics of value-based choice-making*, 2006). The navigational value, and the ability of the map to "transport" its users, may be intimately associated not only with the ability to play the instrument but also with the dynamics and harmonies of the melodies played. The possibility has been explored in relation to the aesthetics potentially fundamental to sustainable governance (*Aesthetics of Governance in the Year 2490*, 1990; *Magic Carpets as Psychoactive System Diagrams*, 2010).

The credibility of such possibilities has been recently increased by the work of Dmitri Tymoczko (*The Geometry of Musical Chords, Science*, 2006) demonstrating how basic concepts of music theory can be transformed into the language of non-Euclidean geometry. The specific relevance to governance has been argued elsewhere (*A Singable Earth Charter, EU Constitution or Global Ethic?* 2006).

"Sound" declarations and manifestos": Such considerations challenge the assumed adequacy of "declarations", "manifestos", "credos" and "global plans" presented conventionally as "bullet points" and text on two-dimensional surfaces (*Interweaving Thematic Threads and Learning Pathways*, 2010; *Comprehension of Requisite Variety for Sustainable Psychosocial Dynamics*, 2006). With respect to *Beyond the plane: form and medium in terms of the calculus of indications*, the latter document discusses the arguments of Michael Schiltz (*Form and Medium: a mathematical reconstruction, Image [&] Narrative*, 6, 2003) in relation to the calculus of indications of **George Spencer-Brown** (*Laws of Form*, 1969/1994). Schiltz notes that the notion of "space" is the key to reflexivity appropriate to any discussion of form and medium:

It was our choice to write in a plane surface that has made that distinctions indeed do cut off an inside from an outside, that 'differences do make a difference' (**Gregory Bateson**). Covert conventions at a level deeper than the level of form, preceding the level of form, have determined what the form would do. There lies a chance for developing a medium theory here. In this concrete case: the medium of the plane surface makes the difference. And in general: the topology of the medium makes the difference between distinctions making a difference and distinctions not making a difference. 'It is now evident that if a different surface is used, what is written on it, although identical in marking may be not identical in meaning'... Spencer-Brown has shown us that the 'medium is the message'

Assumptions regarding text are effectively challenged by the role of music, together with (online) game-playing, increasingly to be seen can be seen as reframing that of text as the primary vehicle for communication of meaning and for engendering psychosocial coherence. Text is increasingly a playful, optional adjunct to games and interactivity, possibly even without any "manual" of guidelines and on unconventional surfaces.

Dynamic structure of events within event-space

Following his description of past methods of engaging with the future, most notably through the *I Ching*, Temple focuses on the possibility that the latter implies a mode of understanding the dynamic structure of events.

Cracking: Under the heading *The Oracular Hexagonal Lattice* (pp. 377-400) he relates modern representations of **decision trees** to **patterns of cracking**, as recently studied in a wide variety of substances. It is of course these patterns that are the focus of the interpretation of oracle bones. The relationship is provided through the hexagonal lattices on which cracking is now recognized frequently to occur. Temple notes that: *We regard cracks as as aberrations, insignificant and weak. Or we consider them simply beneath our notice* (p. 379). However in the light of research on pavement cracking and animal skin patterns, he notes the recognition by Japanese authors (Torahiko Terada and Teru Watanabe, 1935) that:

A crack or crease is one of the most characteristic phenomena in the domain of physics by means of which a macroscopic discontinuity is produced in the field which is apparently uniform and homogenous but subjected to microscopic fluctuations....

Temple points out that the universe is now recognized by modern relativity theory to be subject to microscopic fluctuations suggesting that the crack may therefore be of hitherto unrecognized significance. He cites the conclusion of the Japanese authors as having "metaphysical" implications:

In the domain of physics, cracks and creases are phenomena by means of which a discontinuity or a localization of energy may spontaneously be produced in an apparently uniform field, with homogenous distribution of matter and energy, in other words, something is produced out of nothing.

Hexagonal tessellation: Temple proposes that it was the original "proto-scientific" recognition of the significance of hexagonal cracking that was the inspiration for both the oracle bone and *I Ching* notations. He argues that the six sides of a completed hexagon can be considered as separate lines taken individually. He suggests that these lines are recognized as having different qualities, as with "dark and light" (*yin* and *yang*), suggesting their representation by broken and unbroken lines. A hexagram is then a perfectly adequate alternative representation of a hexagon -- as shown in an animation (*Mapping of I Ching hexagram coding onto Star of David*, 2008).

This argument links the hexagram notation to the recognized fundamental role of [hexagonal tessellation](#), notably its manifestation in benzene rings. Temple notes the distinction made in physics between hexagonal cracking and right-angled cracking and suggests (p. 398) that this may offer a way of understanding the dynamics of "**event-fields**" (on which he calls for research):

- hexagonal cracking is a situation in which the stress is the same in all directions. This corresponds to a static situation with little change and no flow in any particular direction.
- right-angled cracking is a situation where the stress is unequal, coming more from one direction than from another. This corresponds to a fluid situation where a distinct flow may be detected, change being unavoidable

Again Temple raises the question whether the Chinese recognized the nature of a genuine physical manifestation of such "event-fields". These contrasting modes of cracking then correspond to *yin* and *yang*. As he states: *the yin, being yielding, would give the hexagonal cracking, and the yang, being active, would yield the right-angled cracking.* (p. 400).

Appropriate to this argument, the structural metaphor indicative of the dilemma of the present time, is that which emerged as the intended product of the sesquicentennial symposium of Boston University (Lance Morrow, *Metaphors of The World, Unite!, Time*, 16 Oct. 1989). That meeting identified as the key metaphor a "tessellation" of disparate orders. Such tilings of zones of order, might also be understood metaphorically as paving stones separated by cracks of varying sizes.

Event structure: Temple uses this framework as the basis for a most insightful concluding section on *Higher-order Events* (pp. 401-478) in which he explores the possibility that **events have structure**. Recognizing that it has recently become scientifically respectable to accept that space itself has structure, he argues:

We all presume that space is neutral, just "there"...and when we at last realized it had structure and was a fluid which could be exploited, we were able to make aeroplanes fly. So perhaps if we realize that space too has qualities and is not just "there", we may make the equivalent of aeroplanes fly in it too. But something more surprising than aeroplanes. For I propose that it is not aeroplanes that fly in space, but events. In other words, events have shape because space has structure. (p. 401).

He cites Peter Stevens (*Patterns in Nature*, 1972) to the effect that:

The idea that space has structure may sound strange, since usually think of space as a kind of nothingness that is the absence of structure. We think of space as the emptiness within an empty container, as the passive backdrop for the lively play of all material things. It turns out, however, that the backdrop, the all-pervading nothingness, is not so passive. The nothingness has an architecture that makes real demands on things. Every form, every pattern, every existing thing pays a price for its existence by conforming to the structural dictates of space (pp. 4-6).

With regard to patterns of change, Temple cites (p. 342) Helmut Wilhelm (*Change: Eight Lectures on the I Ching*, 1960):

To recognize than man moves and acts, that he grows and develops, this is not a deep insight, but to know that this movement and development take place in typical forms and that these are governed by the laws of change, from which there is no escape, this is the knowledge that has fostered in early Chinese philosophy its gratifying integrity and lucidity. (p. 19)

Voids and void lattices: This leads Temple to a consideration of [voids in the structure of the universe](#) and in current notion of a void lattice in materials research, and notably their inherent capability for self-organization (K. Krishan, *Kinetics of void-lattice formation in metals*, *Nature*, 287, 420 - 421, 2 October 1980). Hexagonal lattices are the equivalent in three dimensions of hexagonal tessellations and have been discovered to be the important mediator in many crucial physical processes previously believed to have no underlying geometry. Temple uses the example of rock decay over time:

Patterns emerge from the rock's decay which are a kind of super-lattice or hyper-lattice which has stood "behind" the rock, and

transcended its material constitution. How like what I envisage for events! For if one grants the premise that events have structure, then the change of event-structures would involve the transformations of event-cells and would result in "walls" and "shapes" emerging as event succeeds event. Cracks and creases in space and time would succeed one another, yielding succession of patterns, lattices and "weathering". These hyper-patterns might well influence material objects within the field of events, and directly influence cracking of materials. (p. 408-9).

Event-space: Temple notes that the sense in which structures change was the essence of what preoccupied the Chinese. In modern terms this is explored in terms of [phase transition](#), as from ice to water -- with some melting solids passing via a [hexatic phase](#) involving a hexagonal lattice shift. Cracking patterns may therefore be interpreted as indicative of "the way things are tending". He cites examples from the structure and growth of biological cells and tissues and summarizes the situation in the following terms:

The general question of "links" and communication channels between entities of whatever kind merits careful reconsideration. Let us take stock, then: communication channels manifesting hexagonal lattices link all but a tiny specialized minority of living cells in the world. These links appear to be the mediating factor in how entities grow into differing shapes...If we extend such ideas to our postulated event-structures, we may conceive of geometrical cracking patterns as mediating event-cells in higher space, which we could call "event-space". And these patterns are involved with the differential growth and shapes of events -- why some enterprises fail and die, while others thrive and mushroom with profuse growth (p. 441).

The argument would notably be relevant to current social and conceptual organization in cyberspace (*Polyhedral Empowerment of Networks through Symmetry: psycho-social implications for organization and global governance*, 2008; *Dynamically Gated Conceptual Communities*, 2004). Of interest is the emphasis placed by Temple on recognizing the extent (and the necessity) of voids in any healthy psychosocial event-space -- a concern close to that of Christopher Alexander. It could be argued that conventional explanations are cognitively problematic to the extent that they seek either to avoid recognition of voids or to fill them by a form of cognitive space-filling (through close-packing) -- effectively "enclosing the commons". It is such voids which constitute the "space" for questions and the emergence of new possibility -- a "convection current" of potential. The void framed by any hexagonal structure of a situation is then effectively framing a question, as with a hexagram.

Consideration of voids leads Temple into a discussion of [closest packing of spheres](#), notably referring to the work of [R. Buckminster Fuller](#) on the structure variously known as the vector equilibrium or [cuboctahedron](#) which he calls a hyper-hexagon. Fuller considered its transformational potential, widely animated as a [jitterbug](#), to be of vital significance (*Vector Equilibrium and its Transformation Pathways*, 1980). Temple notes that the structure is the three-dimensional result of the intersection in ordinary space of the twelve three-dimensional spaces of a four-dimensional figure known as the [24-cell](#) ([David Hilbert](#) and [S. Cohn-Vossen](#), *Geometry and the Imagination*, 1952).

Temple concludes by pointing to another promising way of looking at the alternatives of "stagnant" and "flow" event situations, as defined by hexagonal and right-angled structures. This is the work of Olive Whicher (*Projective Geometry: creative polarities in space and time*, 1971). Irrespective of its significance for anthroposophy, Temple argues that the approach gives a possible means of envisaging the "truncating" of a cubic spatial formation to render it "hexagonal", by turning a cube into a cuboctahedron. Whicher gives a wholly different way of generating both hexagonal tessellations and those of quadrangles, through the emanation of straight lines which intersect. As summarized by Temple:

... the two kinds of "event-space, stagnant and changing -- i.e. hexagonal and quadrangular -- can be generated at a distance by intersecting emanations from simple sources. We are thus able to conceive of the "event-spaces" as being remotely generated arrays rather than as inherent standing fields...The emanations can thus be projections emanating from what physicists love to call "initial conditions", the variations in which can be caused by what physicists equally love to call "perturbations". This brings us straight into the field of chaos theory and... "the butterfly effect".

By looking at "event-fields" in this way, we might avoid the necessity of postulating actual large-scale standing "event-fields" at all...By adopting the projective geometry approach, we might be able to accommodate countless simultaneous "event-fields" in the same region of space...all generated by harmonically resonant frequencies of intersecting world-lines of initiated events. (pp. 475-7).

Possible moves in game-space: From this perspective game-playing in any arena can be understood as occurring within an event-space, in other words in a "game-space". The various kinds of "cracking" are then to be understood as possible "moves" in a game situation, whether "plays", "passes", or the *katas* of martial arts (*Clues to Movement and Attitude Control*, 2002). The eight directions of the *Ba Gua* system (see *Eight Directions Feng Shui*) clearly influenced the eight [personality types](#) of Carl Jung (*Psychological Types*, 1971), as discussed by Peter D. Loly (*A Logical Way of Ordering the Hexagrams of the Yijing and the Trigrams of the bagua*, *The Oracle; the Journal of Yijing Studies*, 2, 12, January 2002). The eight types are : *Extraverted sensation*, *Introverted sensation*, *Extraverted intuition*, *Introverted intuition*, *Extraverted thinking*, *Introverted thinking*, *Extraverted feeling*, *Introverted feeling*. Less evident is the characteristic cognitive process, cycle or movement with which each is associated.

Dance notation, as in the [Laban Movement Analysis](#), offers one approach to understanding the set of possible moves. Of interest then is how the set of such moves is understood -- as in the case of fencing with its nine types of thrust (see also *Eight Directions Saber*). According to Harold Hayes (*Strategic Balance in Chess and Fencing*, 1991):

Education in the art of fencing prepares the fencer to sustain a rational dialogue with the opponent in the language of struggle. In that language there are many dialects, and many universal themes. Fencing itself is perhaps the king of those dialects, and chess is perhaps the queen. The education of a fencer develops familiarity with the many types of part/whole relationships that may exist among fencing actions and the infinite variations that link them together.

As discussed with respect to *Conformality of 7 WH-questions to 7 Elementary Catastrophes* (2006), games like chess and *go* are frequently associated with comments concerning the distinct "energy" or tensions characteristic of certain strategic conditions. A valuable description of this subtle perception is provided (in translation) by Michel Bruneau (*Dynamic Chess Classification -- Chess Theory*) which explicitly acknowledges how difficult it is to explain the meaning of "energy" in chess. The document distinguishes, and comments on, 7 game conditions: "*Quick divergency*", "*Slow divergency*", "*Damped divergency*", "*Unstable*", "*Balanced*", "*Exhausted*", "*Aborted*".

The document states that "chess energy" or "tension" is the result of various imbalances appearing on the chessboard during the unfolding of the game. Their brief description, in energy terms, of each condition -- as a discontinuity -- suggests an intriguing resemblance to geometrical descriptions of the 7 catastrophes. Their descriptions might be usefully refined by a chess-playing mathematician familiar with catastrophe theory. Such descriptions might also be usefully confronted with analogous descriptions by *go*-playing mathematicians (cf David H. Stern et al. *Modelling Uncertainty in the Game of Go*; Bruno Bouzy and Tristan Cazenave, *Computer Go: an AI oriented survey*, 2001).

The potentials of the game naturally acts as a container for uncertainty and might be said to embody it -- to the point of being a form of strange attractor. The uncertainty regarding the moves of the "other" in the game is then central to decision-making. As mentioned, Temple notes the emergence of chess from a form based on the *I Ching*. There are six types of chess piece, each with characteristic moves in the 8x8 array.

Although explicitly excluded from Temple's review of methods of engaging with the future, astrology offers a sense of possible patterns of relationship which correspond to his focus on hexagonal and right-angled cracking, namely recognition of quadruplicity and triplicity. Whether deprecated or not in conventional belief systems, astrology remains of vital significance worldwide in determining auspicious and problematic conditions in the future. (*Nancy Reagan and Astrology*, *Time*, 16 May 1988)

Timeships vs Spaceships: Temple's exploration of event-space was inspired by the possibility (mentioned above) that events travel through it much as aeroplanes travel through space as we choose to comprehend it. The fundamental space-time polarity is of course of continuing interest to physicists, variously "transcended" in notions of *spacetime*. These studies have not led to comprehensible or explicable ways of engaging cognitively with spacetime as such. Temple highlights the fundamental nature of hexagonal organization, echoed in the *I Ching* hexagram, and the polyhedral extensions into three (and more dimensions). He makes no specific reference to what might be understood as a polyhedral organization of time, complementary to that of space, all that might be considered implicit in any focus on a transcendent spacetime and on comprehension of the *I Ching*.

There is therefore a case for speculating on the nature of events as "timeships", analogous to spaceships. This was done in a four-part commentary on the mindset potentially relevant to the governance of viable communities of the future, using the *Federation of Damanhur* as an example (*Renaissance Zones: experimenting with the intentional significance of the Damanhur community*, 2003):

- *Imaginal education: Game playing, science fiction, language, art and world-making*
- *Complementary patterns of meaningful truth and the interface between alternative variants*
- *Timeship: Conception, Technology, Design, Embodiment and Operation*
- *Embodying a Timeship vs. Empowering a Spaceship*

The metaphor of "space" vs "time" is used in this context in order to raise the question as to whether mainstream, and especially western, thinking is not locked into a form of "space-based" thinking. This might be understood as distorting recognition of any "time-based" thinking that could be vital to meaningful development of society. The question posed in this way follows from previous explorations of the way in which thinking might be locked into a "static" approach, when a "dynamic" approach might be more fruitful (*From Statics to Dynamics in Sustainable Community*, 1998). A specific criticism has been made of Project Logic, notably in relation to the challenge for African cultures (*Knowledge Gardening through Music: patterns of coherence for future African management as an alternative to Project Logic*, 2000).

It is an historical irony that the extensive temple complex of Damanhur was constructed underground in the greatest of secrecy over the recent decades in which the subterranean "Hades" was being rediscovered at Baia -- both being located in Italy (Esperide Ananas, *Damanhur: Temples of Humankind*, 2006). At the time of writing, following the historical pattern, the underground temples of Damanhur are being visited by representatives of the Club of Rome -- as the most distinguished advisors to governments.

"Divination" and "wisdom"

A sense of the future: This argument then offers insights into how the dynamic structure of events is "sensed", as commonly articulated by expressions such as:

- having a sense of "how things are going", or of "the way things would go"
- having a sense of future possibilities
- having a sense of the "flow of events"

Such expressions are encountered in the language of entrepreneurs, of skilled game-players, of experienced diplomats, of experienced

community activists, of therapists, and the like. Reference may of course be made to "**intuition**". The capacity for such a "sense" is a mark of experience. It may be recognized as "wisdom" in leaders of various kinds as well as being acknowledged in "canny" people of the land.

The question is of course how people are able to engage cognitively in this way with the dynamic structure of events. The process might be described with terms such as "attuning" to **geometry of higher dimensionality**. The capacity to "feel" such geometry has been usefully described by mathematician **Ron Atkin** (*Multidimensional Man; can man live in 3-dimensional space?*, 1981), previously summarized (*Social organization determined by incommunicability of insights*, 1995).

It is curious that notions of "divination" continue to be used to describe this capacity, most notably in game-playing, through expressions such as "divining the intentions of the opponent" -- meaning a form of intuitive "anticipation" of the probable future course of events. This capacity is notably valued by many gamblers and financial investors. This implies that "divination" is somehow a form of **engagement with a higher order of reality** as previously discussed (*Hyperaction through Hypercomprehension and Hyperdrive: necessary complement to hypertext proliferation in hypersociety*, 2006).

"Divining" and "divinity": Such considerations are of course irrespective of any implication of any "divinity" associated with such higher-dimensionality -- however intriguing may be understandings that "divining" is indeed a process of ensuring such an association, as was traditionally assumed in **determining the "Will of God"**. It is curious that the past processes of determining any divine will for the future, as documented by Temple, have been replaced by interpretation of sacred texts and the assumption by the religious that the "Will of God" is indeed known if not pre-determined -- even at the highest levels of governance and especially for "chosen" people (*Future Challenge of Faith-based Governance*, 2003). More intriguing is the manner in which alternative modes are effectively re-emerging, as documented by Erik Davis (*Technognosis: myth, magic and mysticism in the age of information*, 1998) and by Robert D. Romanyshyn (*Technology as Symptom and Dream*, 1989).

More provocative is the significance of "divining" if "divinity" is to be considered a **verb** rather than a **noun**, as some have argued (R. Buckminster Fuller, *God is a Verb, Whole Earth Catalog*, Fall 1968; David A. Cooper, *God Is A Verb: Kabbalah and the Practice of Mystical Judaism*, 1997). Such considerations make problematic any engagement with divinity defined in static terms -- as a "statue". Equally provocative under such circumstances is the sense of identity of some as verbs rather than to be usefully considered as nouns (R. Buckminster Fuller, *I think I am a verb*). Any dynamic implied by such a verb may well have cyclic implications (*Emergence of Cyclical Psycho-social Identity: sustainability as "psychically" defined*, 2007).

Divine illumination: With respect to "divine illumination" in the past, Temple cites **Plutarch** (a High Priest of Apollo at the **Oracle of Delphi**) with regard to the esoteric Greek religious tradition and the idea of the liver as reflecting divine images through the process of extispicy (p. 284):

...the thoughts of daemons are luminous and shed their light on the daemonic man. their thoughts have no need of verbs or nouns, which men use as symbols in their communication, and thereby behold mere counterfeits and likenesses of what is present in thought, but are unaware of the originals...

The reference to the widespread belief in the assistance provided by **daemons** (in total contrast to **demons**) is possibly now best understood in current references by artists to their guiding "muse", with those of religious persuasion referring to various forms of "guidance". The high value attached to the subtly transformative aesthetic experience of **duende** in Spanish culture can be traced back to daemon (*Daimon, Djinn, Muse and Duende: variations on a timeless experience*, 2007).

Temple argues for recognition of a "**hidden observer**" lying beneath the level of rational thought, standing outside time as it is known in daily existence. This recalls the argument of **Ken Wilber** for recognition of **Turiya** (Witnessing consciousness) and **Turiyatita** (Nondual consciousness) in the Vedanta system (Bina Gupta, *The disinterested witness: a fragment of Advaita Vedanta phenomenology*, 1998). For Temple:

I believe this level of mind can be tapped, and that this was done by the posing of riddles by the ancient oracular establishments. they were trying to speak to the core of the human being by circumventing the logical mind; but they did so in a sensible way which, while non-rational, was nevertheless reasonable. I believe that the "hidden observer" inside us has a kind of hyper-rationality which seems to incorporate non-rational thought as well, or at least sees the two in joint perspective. (p. 162)

Engaging a new gear to navigate the adaptive cycle

Many references are made to the need for "new thinking" and for a "paradigm shift", but with little articulation of what this might mean -- other than being different. One exception is the efforts of **Edward de Bono** to establish a **World Centre for New Thinking**.

The component spaces of the above diagram may be fruitfully understood as analogous to "cognitive gears", with the two-fold challenge of the adequacy of the "gearbox" and the capacity to "change gear" in response to circumstances -- in response to the terrain. A related metaphor was used in an introductory paper (*Cyclic adaptive resilience*, 2010) with regard to the recognized need for the design of new wheels appropriate to extraterrestrial vehicles -- for travel on the Moon or Mars. A spiral-based design was one option explored. The suggestion there was that governance now needed a "new set of wheels" for the new terrain of a turbulent future reality (*Navigating Alternative Conceptual Realities: clues to the dynamics of enacting new paradigms through movement*, 2002; *Adaptive Hypercycle of Sustainable Psychosocial Self-organization: designing a mapping of a Chinese metaphorical pattern language*, 2010).

The widely recognized function of a **gearbox** and changing gear is currently matched by a recognition for the need of "engagement"

whether in terms of attitude, motivation or resources -- namely the need for "traction". The question is what the metaphor offers, how the design above might constitute a gearbox, and what "changing gear" might then mean. Some of the considerations were explored previously with respect to [conceptual gearboxes](#) (in: *The Future of Comprehension: conceptual birdcages and functional basket-weaving*, 1980).

Curiously the phrases "changing gear" and "getting new gear" are also widely used in relation to fashion, namely changing clothes or getting new clothes -- especially to respond more appropriately to circumstances and to re-invent oneself in relation to new challenges. In the above argument the concern is with how any "cognitive habit" might be changed -- of how one might "shift" a mindset (Antonio T. De Nicolas, *Habits of Mind: an introduction to the philosophy of education*, 1999). The geometry of a gearbox suggests the possibility of exploring the cognitive geometry required to gain traction in relation to globality (*Metaphorical Geometry in Quest of Globality*, 2009).

These metaphors recall the earlier concern with "frozen categories" and how they might be "unfrozen". In the gearbox case, this process is achieved in [unsynchronized manual transmission](#).systems by use of the "clutch" ([double clutch](#), double declutch) -- charmingly reminiscent of calls for "detachment", notably within Buddhist practice. Less evident is the process of engaging with a new pattern -- as is so readily done in the case of gear change in a vehicle.

The process is implicit in that variously advocated by [Edward de Bono](#) (*Six Thinking Hats*, 1985), especially in its more generic form (*Six Frames For Thinking About Information*, 2008). It is also associated with recognition by any leadership of the validity of the inputs of 8 (later 9) contrasting (but complementary) team members, as notably articulated by [Meredith Belbin](#) (*Management Teams*, 1981 and in the *Belbin Team Inventory*). Related insights are associated with the [theory of multiple intelligences](#) ([Howard Gardner](#), *Changing Minds: the art and science of changing our own and other people's minds*, 2004), with the [enneagram](#) ([Anthony Blake](#), *The Intelligent Enneagram*, 1995), and with the variety of ways of engaging with the world ([Peter Worsley](#), *Knowledges: culture, counterculture, subculture*, 1998). Typically there are many configurations of modes of knowing (*Systems of Categories Distinguishing Cultural Biases*, 1991).

With regard to any such articulation of modes of knowing, it is important to distinguish:

- their recognition as distinct types, without any concern for the processes associated with such modalities
- recognition of the complementarity of such modes of knowing, if only in principle, rather than any tendency to accord primacy to one or the other
- their functional integration, namely the capacity to shift between them, perhaps to be described as "polyocular vision" involving the "donning" and "doffing" of mindsets in response to circumstances ([Magoroh Maruyama](#), *Polyocular Vision or Subunderstanding? Organization Studies*, 25, 2004, pp. 467-480)
- inclusion of senses other than vision, if only metaphorically, to enable a degree of polysensual or polysensorial knowing perhaps to be described as synaesthesia (*Cyclopean Vision vs Poly-sensual Engagement*, 2006)

De-signing and re-signing: alternation fundamental to sustainable global significance

There is widespread concern with planning the future as envisaged, or planning to enable emergence of a desirable future. There are many "global plans", as with those profiled in the [Global Strategies Project](#). These may be articulated in terms of goals (as with the [Millennium Development Goals](#) of the United Nations), or as projects (as with the US neoconservative [Project for a New American Century](#)).

Designing?: Of interest here is the process and understanding of design in relation to the challenges of global governance. The theme was partially evoked by the *Workshop on Who is Designing the 21st Century?* (Buffalo, September 1995) of the Center for Integrative Studies and under the auspices of the [World Academy of Arts and Science](#) (WAAS). In response to some of the contributions, the concern was raised at how categories and boundaries were defined in that process (*Definitional Boundary Games and De-signing the 21st Century*, 1995):

A comparison has been made between French and Japanese cooking in the following terms. The most eminent French chef is known by what he does to the food. He is recognized by the tastes he adds to it in the form of sauces -- in which his hand is to be experienced at every turn. By contrast a Japanese chef is known by the impossibility of distinguishing his hand in the food that is offered. His work is to reduce the interface between the eater and the food to the strictest minimum -- allowing the flavours of the food to emerge of their accord. The question is whether the designers of the 21st century are to be of the first kind or of the second.

This question was evoked in envisaging an integrative future (*Self-reflexive Challenges of Integrative Futures*, 2008). Challenged in this way, designing can be understood as:

- removing the significance of the underlying experience of nature. In this way architects and planners have eliminated the experience of nature. Essentially they are of the French school, and the influence of French planning after the Revolution is not incidental to the recent history of urban planning. In this way it may be understood as de-signifying.
- removing the architectural graffiti imposed by architects and planners on nature. Production of graffiti is a way for some to impose their tag or sign on any available surface. In this way de-signing may be understood as the removal of such defacement, namely of the artificial signs imposed upon nature rendering it invisible.

The 21st century will undoubtedly witness the battle between these two schools of thought -- and presumably there will be others. Whilst nature may be affected by this process, it will adapt in its own way.

Denotation vs. Connotation: In the realm of religion, with all its implications for global governance, [Joseph Campbell](#) (*Thou Art That: transforming religious metaphor*, 2001) makes a strong case for distinguishing connotation from denotation, especially given the consequences for religious belief and interfaith dialogue down the centuries:

The metaphorical languages of both mythology and metaphysics are not denotative of actual worlds or gods, but rather connotative levels and entities within the person touched by them. Metaphors only seem to describe the outer world of time and place. Their real universe is the spiritual realm of the inner life... The problem...is that these metaphors, which concern that which cannot in any other way be told, are misread prosaically as referring to tangible facts and historical occurrences.... There can be no real progress in understanding how myths function until we understand and allow metaphoric symbols to address, in their own unmodified way, the inner levels of our consciousness. (pp. 7-8)

It might then be asked what such an argument implies for appropriate cognitive engagement with any requisite design for sustainable global governance -- especially in a period when attitudes to environment or peace are increasingly difficult to distinguish from belief, as with science itself.

With respect to the above argument, the Chinese hexagrams notation is used to denote qualitative distinctions in the pattern of change, however the challenge lies in their connotation (as with the associated metaphors). The connotative dimension is then potentially vital to the comprehension, coherence and credibility of whatever may be denoted with respect to global governance and strategic initiatives.

There is a great deal of irony to the failure to acknowledge the importance of this distinction when widespread use is made of expressions relating to "crushing", "killing" or "slaughtering" opponents in the competitive situations seen as essential to healthy economic growth. Of continuing relevance to the theme of this paper -- the "weaponisation of interactions" -- is the failure of the international community over many decades to agree on a definition of "[aggression](#)". The lack of definition is perceived as advantageous to all who engage in it or wish to accuse others of doing so. As noted in 1928, such a definition is held to be a "trap for the innocent and a signpost for the guilty" (*An Argument worth Avoiding*, *The Economist*, 29 May 2010).

In relation to his discussion of signs and portents, Temple (pp. 163-229) draws attention to the historical importance of the *Doctrine of Signatures*, summarized by [Jacob Boehme](#) (*The Signature of All Things*, 1621) as: *The whole outward visible world with all its being is a signature, or figure of the inward spiritual world*. This has effectively been reformulated by a number of modern authors, as previously discussed (*Existential Embodiment of Externalities: radical cognitive engagement*, 2009). It is the theme of Joseph Campbell in echoing the adage *Tat Tvam Asi* from the *Chandogya Upanishad*.

The dangers of denotation are also evident in the tendency to label, as highlighted by Martin Kettle (*With no common culture, a common history is elusive*, *The Guardian*, 4 June 2010):

There are two overriding objections to modern culture's eagerness to put labels on people. The first is that, often intentionally and sometimes merely carelessly, a label diminishes the complexity, nuance and uncertainty of the person on whom it is stuck. The second is that the label provides a lazy excuse to stop thinking about what the neatly labelled person is actually saying.

Seven centuries ago, the Arab polymath [Ibn Khaldun](#) put all this far more poetically. *If the soul is impartial in receiving information," he wrote, "it devotes to that information the share of critical investigation the information deserves, and its truth or untruth thus becomes clear. However, if the soul is infected with partisanship for a particular opinion or sect, it accepts without a moment's hesitation the information that is agreeable to it.*

Prefix traps: Given the "significance" of "design", conventionally understood, it might be asked whether other traps are to be found in the unexamined prefixes used to qualify the associated insights (*New Paradigms via a Renewed Set of Prefixes? Dependence of international policy-making on an array of operational terms*, 2003)? How seriously should the following then be considered as potential traps when unexamined, especially in relation to designing global governance:

- signing: as an indication (or affirmation) of meaning, consent, commitment or identity
- de-signing: in the above sense of withdrawing attributed significance
- as-signing: as the allocation of responsibility, or possibly its withdrawal
- co-signing: as an indication of shared commitment
- counter-signing: as a validation of the action of another, or possibly its invalidation
- under-signing: as in subscribing to an initiative
- re-signing: as a dissociation from an initiative, or a reattribution of significance

Signing: The core process of "signing" is clearly fundamental to governance through its legal implications -- in signature of treaties, resignations, contracts, authorizations or confessions. It is intimately related to affirmation and recognition of identity, claiming ownership of property, and prevention of "identity theft". As the most formal of indications, it is potentially subject to the many considerations of the rich literature on the "calculus of indications" as articulated by G. Spencer Brown (*Laws of Form*, 1969).

In these various senses, "signing" is the essence of definition and reification (of "rock logic") at a time when greater flexibility and fluidity ("water logic") may be vital. There is therefore a case for considering the above prefixes as indicative of the possibility of cognitive **processes** counter-balancing the **stasis** implied by design and the outcome of designing -- namely a case for a cognitive "pre-fix" to enable the "fixing" of viable global governance.

The various prefixes to "signing" are then indicative of the variety of processes between which alternation is healthy. "Signing" (or "designing") is then appropriately followed by "de-signing". "Re-signing" may appropriately follow "resigning". Aspiration to a single,

unifying global plan to which all sign up is then inappropriate to the requisite dynamic of any viable global governance. Given the problematic nature of "development", such an argument has been speculatively explored with respect to a compensatory need for "veloping" -- although "veloping" might also be understood as the dysfunctional process which developing aspires to remedy (*Veloping: the art of sustaining significance*, 1997). As with the possible readings of "de-veloping", a case may be made for corrective "de-describing" in the case of denotation, namely "de-noting". This has been explored with respect to "unsaying" and **apophasis** (*Being What You Want: problematic kataphatic identity vs. potential of apophatic identity?* 2008). More fundamental are existential assumptions associated with pro-ject, ob-ject, sub-ject, re-ject, for example (Max Deutscher, *Subjecting and Objecting: an essay in objectivity*, 1983).

More generally, is the "beating heart" of global governance to be understood in terms of the paradoxical polarity at the core of the *I Ching* as represented above within the Fibonacci spiral -- challenging "one plan" declarations and credos as experimentally explored (*Distinguishing Levels of Declarations of Principles*, 1980)? Is the Fibonacci sequence indicative of possible stages of formulation of intent of relevance to global governance?

Alternation: signs and notations: Such processes are reflected in the existentially challenging patterns of alternation (described above) and indicated by the alternation between *yin* and *yang* in the above design. This is perhaps best understood in terms of "rippling" (as with waves on the surface of a lake) and is succinctly described by *Neti Neti* (Not this, Not that). With the noted reference by the poet John Keats to **negative capability**, this might be echoed by the phrase on his tombstone: *Here lies one whose name was writ in water* (Ailing Zhang, *Written on Water*, 2005).

In this light, seemingly missing from Campbell's own argument, is a recognition of the nature of the essential dance between denotation and connotation. Ironically, as a consequence it lends itself to interpretation in terms of the problematic dynamics of dualistic thinking -- with denotation acquiring the characteristics of "evil" and connotation being "good", and the reverse being inferred by his critics. His approach is to focus on the manner in which Eastern belief systems transcend this duality by integrating what the West finds so problematic in "evil" -- but without recognizing the challenge of that dynamic :

There are two orders of religious perspective. One is ethical, pitting good against evil. In the biblically grounded Christian West, the accent is on ethics, on good against evil. We are thus bound by our religion itself to the field of duality. The mystical perspective, however, views good and evil as aspects of one process. One finds this in the chinese yin-yang sign, the *dai-chi*. (p. 16)

This argument is of course itself trapped in the paradox of Campbell's dualistic dissociations: religion vs. mysticism, denotation vs. connotation. It calls for the kind of self-reflexivity explored by Douglas Hofstadter (*I Am a Strange Loop*, 2007; *Gödel, Escher, Bach: an Eternal Golden Braid*, 1979) with its implications for global governance (*Engendering the Future through Self-reflexive Group Initiatives*, 2008). A distorted interpretation of Campbell's "Thou Art That" is that communication of its insights reduces to a matter of intellectual property and the sense in the world of fashion in which the "clothes maketh the man".

"Netherworld" as a world of connotation?: In the light of the earlier argument regarding the cognitive integration of an "underworld", it is intriguing that Campbell's strong argument for the connotation of metaphor implying the "inexplicable" nature of any such world might well be understood as highlighting a "netherworld" of meaning and engagement with reality.

It is then useful to reflect on the contrast between:

- an instrumental approach to reality as one chooses to recognize it, effectively defining "notes" on various scales, composing "melodies" based on them, and "playing" them
- assuming that one is a victim of forces that escape ones definition and control -- submitting to the denotation of others -- being effectively "played" by a global context larger than one's comprehension

This contrast suggests a variant of the adage regarding political processes: *If one does not take care of globality, one will be taken care of -- by globality*. Failure to integrate the netherworld has had exactly that consequence in the form of the problematic dynamics of global governance. Controversially Campbell infers that the evident challenges of the **Promised Land** (so evident in the case of Israel) are due to the focus on denotation:

It has puzzled me greatly that the emphasis in the professional exegesis of the entire Judaeo-Christian-Islamic mythology has been on the denotative rather than on the connotative meaning of the metaphoric imagery that is its active language.... The same...is true of the metaphor of the Promised Land, which in its denotation plots nothing but a piece of earthly geography to be taken by force. Its connotation -- that is, its real meaning -- however, is of a spiritual place in the heart that can only be entered by contemplation. (p. 7).

There is a high degree of irony to the fact that -- in the light of the above argument regarding the denotative function of *I Ching* **hexagrams** -- the "sign" so emblematic of the Promised Land in contemporary politics, namely the **Star of David**, is effectively a "frozen" **hexagram**. In this sense both "East" and "West" use a geometrically related denotative device. Rather than using the *I Ching* "hexagrams", the 64 conditions of change denoted may also be mapped by the Star of David (*Mapping of I Ching hexagram coding onto Star of David*, 2008, illustrating its animation). Any "Promised Land" -- of which sustainable global governance is but one facet -- then lies in the connotations of that dynamic. The connotations are notably acknowledged in the metaphoric commentaries on the *I Ching* and emphasized by the "rippling" patterns of change (the English title is *The Book of Changes*). Temple notes (p. 302) the classical remark of a Taoist monk:

The fundamental idea of the I Ching can be expressed in one single word, Resonance [Kan] (Joseph Needham, Science and Civilization in China, 1956, p. 304)

It is profoundly curious that the viability of organic life is based solely on the dynamic resonance of the benzene molecule. This is a dynamic hexagon formally equivalent to the hexagram and to the Star of David, thereby raising questions as to how these are to be understood in relation to global governance. The conventional representation of the hexagonal benzene molecule, implying "rigid" molecular bonds, offers an appropriate metaphor for the conventional view of the denotation of "Israel" by the Star of David -- paradoxically even by zionists -- in comparison with the connotation implied by the [molecular dynamic resonance](#) (as elucidated by [Linus Pauling](#)). That resonance is then to be more appropriately comprehended as a [standing wave](#), although tonal patterns offer a richer articulation (Ernest G McClain, *The Myth of Invariance*, 1976). Of potential relevance is the discovery by astronomers in 2007 of a [polar hexagonal standing wave pattern on Saturn](#). This is consistent with Temple's own discussion (p. 414-5) of the relevance of hexagonal [Bénard cells](#) associated with convection. "Convection currents" in the "whether patterns" of "event-space"?

Language for globality: Temple argues (pp. 170-1) that in the absence of a language for dynamic forces, capable of explaining the dynamics of events, people have recourse to myth with its dynamic narrative. Given the range of current and expected crises, can science be said to have provided explanations adequate for global governance? Why the widespread recourse to myth and other stimulants for the imagination? With regard to the excluded middle, characteristic of polarity (and aspirations to global governance), [Erik Davis](#) (*Technognosis: myth, magic and mysticism in the age of information*, 1998):

This excluded middle is where the postmodern Hermes is born: a sacred ironist or a visionary skeptic, dancing between logic and archaic perception, myth and modernity, reason and its own hallucinatory excess. And it is precisely this tension, and not some abdication of critical intelligence, that now leads so many intelligent and curious minds to conspiracies, alternative histories, paranormal phenomena, and pop science fiction. They sense that merely modern skepticism has had its day, that it is precisely our rational detachment and liberal common sense that blinds us to the subliminal workings of things. For our monsters are not just bred by the sleep of reason -- they are also spawned by the lies of reason, by the coercive rationality that lurks under cover and under our skin, darkly dreaming of total control.

Only by carefully integrating the imaginal pathways of the postmodern mind, with its symbolic and visionary modes of processing information, can we come to recognize the divine intercessors and the destructive archons for what they are: liminal figures lurking both inside and out. (p. 279)

Rather than treat denotation vs. connotation as again exemplifying the problematic dynamics of dualistic thinking, there is a case for using the insights of physicist [David Bohm](#) regarding the cyclic relationship between the explicate (denotative) and implicate (connotative) order, in what he termed a [holomovement](#) (*Wholeness and the Implicate Order*, 1980) [see also *Implicate and Explicate Order according to David Bohm*]. It is this dynamic that remains to be appropriately integrated into engagement with globality and the challenges of governance -- whether explicit or implicit.

Of relevance to such insights are the arguments of [Giambattista Vico](#), as summarized by Lief H. Carter (*Law and Politics as Play*, *Chicago-Kent Law Review*, 2008) in considering two competing ways of knowing: Cartesian rationality versus the poetic world of the ancients:

Vico suggests that the visceral experiences of competitive human play can, and in fact do, displace the political and social conditions and practices that commonly trigger brutal human behavior.... Vico believed that all great human action is necessarily passionate and creative; our proto-Cartesian methods -- formal theory and moral philosophy, for example -- cannot access this reality. Reality is sense and experience, not analysis.... This essay proposes that humans learn how to keep the peace not by obeying the norms, rules, and principles of civil conduct but by learning how to play, and thereby reintegrating the mind and the body. People do law, politics, and economic life well when they do them in the same ways and by the same standards that structure and govern good competitive sports and games. The word 'sport' derives from 'port' and 'portal' and relates to the words 'disport' and 'transport.' The word at least hints that the primitive and universal joy of play carries those who join the game across space to a better, and ideally safer, place -- a harbor that Vico himself imagined.

At a time when humanity is challenged by the problematic effects of its actions on nature, Temple calls for recognition of the insight that may have been associated with those who endeavoured to divine the future in the past, most notably through the *I Ching*:

Those ancient thinkers were close to nature in a most intimate way which we can hardly understand today... What I am referring to is a very deep communion with nature which is essentially mystical in its intensity, and basically scientific in its structure.... I really do believe that if we ourselves could think like this once in a while, and apply the fruits of it to our own world, we might achieve a higher intellectual synthesis. Can we not salvage these lost ways of thinking, combine them with our contemporary modes, and make breakthroughs which are otherwise unobtainable? (pp. 352-3).

Is it possible that the cognitive implications of this "intimate way" are encoded in the eightfold resonance of the *Ba Gua* pattern -- as widely intuited through the attractions of *feng shui* and psychological engagement with the weather -- but whose epistemological relevance to the dynamics of coherent global governance is yet to be appreciated?

Conclusion

Rather than "designing" the future, who then is "de-signing" the future, for whom, and to whom might that be of relevance? How will individual and collective identity be challenged by the process?

In a period of change of climate and rising sea levels, metaphors of the highest significance in their own right, it is only the likes of [King Canute](#) who lay claim to governorship of the waves or the circadian rhythm. "Full spectrum global dominance" of the waves of change? Ironically, like the sacred texts of the religions he criticizes, the dissemination of Campbells's own "insights" is constrained by the legalities of intellectual property rights -- as with the "product" of most denotation in the current economic system. Denotation has become the means of staking a claim to intellectual property.

The omnipresent institutional commitment to denotation ("rock logic") -- reinforced by the "frozen categories" of the worlds of academe, religion and intellectual property -- is echoed in the degree to which nature is now permanently replaced by concrete. The tendency to a high degree of urbanization might then be understood as matched by the emergence of a "built cognitive environment" (the "[social construction of reality](#)") with which individuals have narrowly formalized possibilities of interaction ([Peter L. Berger](#) and [Thomas Luckmann](#), *The Social Construction of Reality: a treatise in the sociology of knowledge*, 1967; [Paul Watzlawick](#), *The Invented Reality: how do we know what we believe we know?*, 1984).

A change of climate is however evident in the explosion of global connectivity and the thirst for connotative significance -- exemplified by the "water logic" of the internet, social networking, and their association with music and visual media. This situation is paradoxically echoed in both the increasingly critical shortage of fresh water and in the flooding upheld as portents of rising sea levels -- by those who claim to divine the future. "Groundswells" of emotion worldwide, in contrast to movements of public opinion identified as various "winds of change"? Curiously, with the loss of credibility of climate change initiatives, enthusiasm has been transferred to biodiversity and dependence on threatened ecosystemic connectivity -- without recognizing the insights of indigenous peoples ([Darrell A. Posey](#), *Cultural and Spiritual Values of Biodiversity: a complementary contribution to Global Biodiversity Assessment*, 1999)

"Glacial logic" might be said to be "melting", threatening dependent mindsets and belief systems. There is an emerging "re-cognition" of the "re-sonance" between individual health and that of the planet ([Cognitive Implications of Lifestyle Diseases of Rich and Poor: transforming personal entanglement with the natural environment](#), 2010; [Implication of Personal Despair in Planetary Despair](#), 2010). Such dualistic distinctions, at the heart of global understanding and governance, as yet fail to embody healthier patterns evident in the multi-phase processes of nature -- the interrelated "logics" of rock, air, heat and water that enable life as it is known, potentially implied by the *Ba Gua* pattern of *feng shui*. Reference to the "heat" modality is of course frequently made in the case of the heat of politics and economic competition -- to say nothing of the "fire logic" of the military and insurgents, and its "scorched earth" consequences.

Worldwide enthusiasm for every kind of game -- enhanced by telecommunication -- indicates that there is in fact an intimate "re-cognition" (if only intuitive) of the requisite dynamic complexity appropriate to global governance. But, as with water, their dynamics in the moment are dissociated from their enduring global significance. Even those with the highest public responsibility now struggle willingly, as part of their "re-creation" (and during "bored meetings"), with the riddles of solving complex puzzles -- crosswords, *sudoku*, Rubik's cubes, and the like ([Patterns Essential to Individual and Global Health?](#) 2010). This is consistent with the strategic questions posed by the dynamics of the more complex "arenas" through which the Fibonacci spiral is constructed. The challenge of collective intelligence and global governance would appear to be implicit in enabling the fruitful transitions between the "arenas" of that spiral, associated with successive existential challenges of "otherness" of greater complexity and subtlety -- especially with respect to the patterns of dialogue capable of sustaining significance and coherence.

There is much to be learned from nature -- even from marine animals such as the spiral-shelled nautilus, which has successfully embodied its own development over millions of years, denoting its journey with a remarkable pattern of *nacre* (an elegant description of individual life history). It might be said to have demonstrated the capacity to navigate the adaptive cycle that is now a challenge to governance ([Adaptive Hypercycle of Sustainable Psychosocial Self-organization: designing a mapping of a Chinese metaphorical pattern language](#), 2010). The challenge would seem to be one of eliciting the requisite variety -- a long enough baseline -- by which to resolve the subtlest of relevant insights. Rather than any static pattern, these might be best reflected in a dynamic pattern to which the iridescence of nacre is a design pointer -- "whether patterns" of governance.

The challenge is usefully modelled by that of detecting the [Monster](#) of greatest multidimensional complexity, symmetry and significance for global order -- hidden in the netherworld of mathematics ([Mark Ronan](#), *Symmetry and the Monster: one of the greatest quests of mathematics*, 2006). The Monster may well prove to be of fundamental significance to global governance ([Potential Psychosocial Significance of Monstrous Moonshine: an exceptional form of symmetry as a Rosetta stone for cognitive frameworks](#), 2007). The detection process has indeed been described in terms of [monstrous moonshine](#), arising from the recognition by mathematicians of the totally unexpected connectivity between the monster group and modular functions ([Marcus du Sautoy](#), *Finding Moonshine*, 2008). This process of engaging with moonshine raises many useful questions concerning the relationship between complexity, coherence, confirmation, comprehension, confidence, credibility, correspondences, and their communication in the realms of governance -- especially with regard to connectivity between the sciences and the arts ([Theories of Correspondences -- and potential equivalences between them in correlative thinking](#), 2007).



Weaving a Pattern of Contextual Associations



This exercise was conceived and developed in [Arrowtown](#) (Aotearoa, "Land of the Long White Cloud"), renowned in the late 19th century as one of the world's richest sources of



alluvial gold, and as such notably attracting many Chinese miners. Appropriate to the theme developed here, the town is alleged to have gained its name from its rapid running waters rather than from any direct association with weaponry. The numerous rock-filled rivers fully justify the insight embodied in the flow forms characteristic of the many Maori symbols.

The Arrowtown area later provided many locations for the filming of *Lord of the Rings*. No Rhine Maidens were in evidence, however the cloudless skies on this occasion were strikingly complemented by the spreading cloud of ash from the eruption of the [Eyjafjallajökull volcano](#) in Iceland on the other side of the world. Aotearoa itself lies on the [Pacific Ring of Fire](#).



The notorious description of its more northerly neighbour, by its own Prime Minister, as "[the arse end of the world](#)" (rather than simply "[down under](#)") raises the question of how the even more distant Aotearoa identifies itself, especially when its westerly neighbour, "Van Demon's Land". was once known as a "hell hole", even "[hell on Earth](#)". Curiously the latter, and Aotearoa, are now readily seen as idyllic, if not as a "[lifestyle superpower](#)", from the northern perspectives from which these judgments originate -- where having one's "[backside to the future](#)" is not uncommon at the highest levels of governance.

But, from a Maori perspective, their cultural identity is intimately associated with the emblematic *tiki*, variously indicating: [carved human figures](#) (marking sacred places), the [first man](#) (descendant of the gods, from the stars), male and female genitalia, and procreation itself. The latter indications justify the consideration here of a "netherworld" -- in the light of a book of that title found in Aotearoa by chance, remaindered in an alternative market.



As pendants (*heitiki*), akin to the jade of China, *tiki* designs may represent the unborn human embryo or symbolize various fundamental values, notably fertility. Some (*koru*) take the form of double or triple spirals (reminiscent of DNA), indicative of new life, perpetual movement, and a return to the point of origin. This spiral theme, in the form of the marine [nautilus](#), has become the symbol of *The New Zealand Curriculum Framework*. With respect to governance, its symbolism is a key to the Pacific-based [Nautilus Institute for Security and Sustainability](#).



The nautilus shell may have as many as thirty chambers, a new chamber being created as it outgrows each existing one, with the successive chambers forming a logarithmic spiral common in nature -- the whole aesthetically marked by iridescent patterns of [mother of pearl](#) (common in the jewellery of Aotearoa and considered by Polynesians to be the marine reflection of divinity, the "smile of the gods"). As such the nautilus is a metaphor for intellectual and spiritual growth, as suggested by [Oliver Wendell Holmes](#) -- noting that people outgrow their protective shells, discarding them as they became no longer necessary:

One's mind, once stretched by a new idea, never regains its original dimensions.



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