



laetus in praesens

Alternative view of segmented documents via Kairos

25 April 2011 | Draft

∞ Defining the objective ∞ Refining the subjective ?!

Explaining reality ∞ Embodying realization

-- / --

Annex of *Massive Elicitation of Psychosocial Energy: Requisite technology for collective enlightenment* (2011)

Introduction

Requisite complexification of knowing

Learning as "seeing-squared"?

Configuring modes of "seeing"

"Seeing" as implied by the Fibonacci spiral

Configuring learning-action cycles

Constrained comprehension

Planning and the "infinite plane"

Cognitive containers

Toroidal cognitive container?

Embodying realization through waveforms

Meta-challenges of pattern questing

Introduction

As presented in the [Introduction to the main document](#), this continues the speculative exploration of $e = mc^2$ as a pattern, and the cognitive implications associated with the nuclear technology based upon that insight. [Bibliographical [references](#) are listed in the main document].

The suggestion made there is that technology is the art of benefitting from differences. It is emphasized that society is indeed much challenged by fundamental differences and disagreements. The question explored here is whether there is a form of technology, from which energy can be derived, associated with reframing what is maximally different -- as distinguishable by human patterning capacity.

[Christian de Quincey](#) (*Radical Nature: rediscovering the soul of matter*, 2002) argues the need for a new cosmology story. His framing of the "new thinking", for which many quest, is stated in a conclusion entitled *Stories Matters, Matter Stories* where he indicates:

We need a new way to envision our relationship to the full parorama of the crawling, burrowing swimming, gliding, flying, circulating, flowing, rooted, and embedded Earth. We need to be and to feel, as well as to think and believe, differently. The direction philosophy and science will have to take to extricate us from the Cartesian mind-sbody split and its pathological consequences... will involve a radical redefinition of both mind and matter...

The solution of the mind-body problem, then, begins by recognizing that mind and matter are not distinct substances.... Consciousness and matter, mind and body, *li* and *ch'i* always go together. They are a unity, a nondual duality. The paradox is that we must speak of this unified reality of "body-mind", of "form-process" in dualistic terms. The singular nature of the ground of being is, ultimately, unrepresentable and ungraspable...Yet it is all we have and are.

Requisite complexification of knowing

The symbols included in the title of this document -- the infinity sign and the complementarity implied by the question mark and its inversion -- emphasize the paradox of how knowing might be fruitfully constrained, especially when the infinity sign is understood through the topology of a [Möbius strip](#).

The Möbius strip recognizes the cognitive "twistedness" which may need to be embodied ([Engaging with Questions of Higher Order: cognitive vigilance required for higher degrees of twistedness](#), 2004). Related issues have been extensively explored by [Douglas](#)

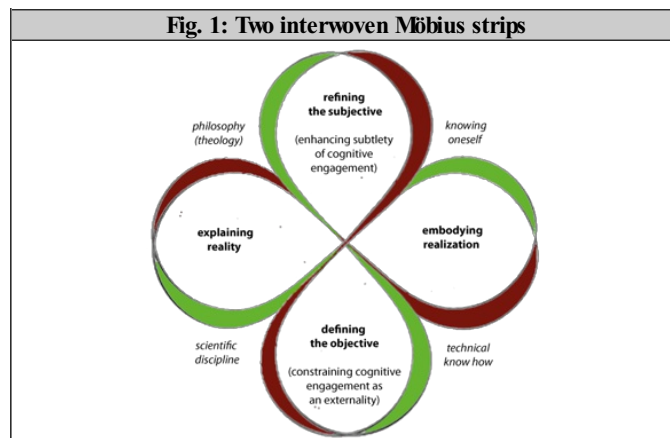
Hofstadter (*I Am a Strange Loop*, 2007; Gödel, Escher, Bach: *an eternal golden braid*, 1979), as previously discussed (*Sustaining a Community of Strange Loops: comprehension and engagement through aesthetic ring transformation*, 2010).

For the purpose of this argument, the infinity symbol (or lemniscate) ∞ may be usefully contrasted with that of the ampersand &, as more commonly used in document titles and in formal logic as a binary operator (denoting AND). Of special relevance is use of the ampersand in computer coding and telecommunications as an escape character, invoking an alternative interpretation on subsequent characters in a character sequence (a form of equivalence). It is a particular case of a metacharacter. The infinity symbol might then suggest a more powerful form of "meta-escape" than the ampersand. The visual representation of the latter is possibly to be "re-recognized" as a conjunction, as with the proportionality symbol \propto , which is "less complete" or "less complex". In the case of the infinity symbol, the Lorenz attractor is recognized as a three-dimensional version of the lemniscate. [Such alternatives to & are indicative of richer ways of understanding the dynamics of interpersonal relationships, recalling the symbolism suggested by "tying a knot"]

The inverted question mark is used to begin interrogative sentences in written Spanish and related languages. It can also be combined with an inverted exclamation mark to express the combination of a question and surprise or disbelief. Both are used in the title as a "reminder" of the possible need to call into question the conventional mindset and assumptions of discourse in English through a perspective that may be held to be "upside down" -- implying a degree of surprise. Of related interest is the use of the interrobang, an uncommon typographical superimposition of question mark and interrogation mark -- asking a question with excitement, with disbelief, or rhetorically. Both Fukushima and the Arab uprisings call for recognition of surprise and the need for interrogation. Use of such devices recalls the provocation of lateral thinking through use of "po", as advocated by Edward de Bono (*Po: Beyond Yes and No*, 1990) and discussed as a de-patterning device for international organization descriptions (*Categorical Straightjackets: PO*, 1974).

The contrasting prefixes in the title, and the cognitive dynamic implied by use of the gerund, follow from earlier arguments (*Exploration of Prefixes of Global Discourse: implications for sustainable confidelity*, 2011; *Freedom, Democracy, Justice: Isolated Nouns or Interwoven Verbs?*, 2011).

The following argument might be usefully summarized by interweaving the elements of the title in a schematic based on two Möbius strips presented orthogonally. As a form of reminder, this is intentionally misleading as presented, since the apparently opposite sides of each strip (distinctly coloured) are not distinct (and cannot be distinctly coloured), that being the nature of any Möbius strip. Use of the two apparent loops in each strip enables the illusory cognitive implication to be highlighted that the two apparently distinct zones indicated as being within each loop are indeed only apparently distinct. The representation is consistent with the experiential challenge of liminality, as separately discussed (*Living as an Imaginal Bridge between Worlds: global implications of "betwixt and between" and liminality*, 2011).

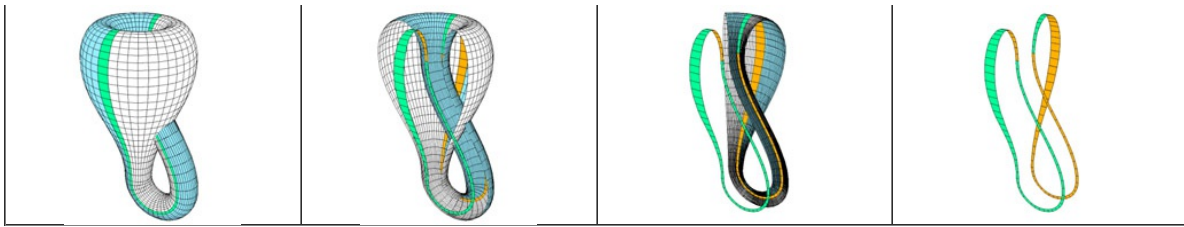


In a world of "spin" and "smoke and mirrors", the argument is fruitfully anticipated by the classic remark of Chuang-tzu (*The Pivot*):

Tao is obscured when men understand only one of a pair of opposites, or concentrate only on a partial aspect of being. Then clear expression also becomes muddled by mere wordplay, affirming this one aspect and denying the rest. Hence the wrangling... each denies what the other affirms, and affirms what the other denies. What use is this struggle to set up "No" against "Yes," and "Yes" against "No"?... When the wise man grasps this pivot, he is in the center of the circle, and there he stands while "Yes" and "No" pursue each other around the circumference.

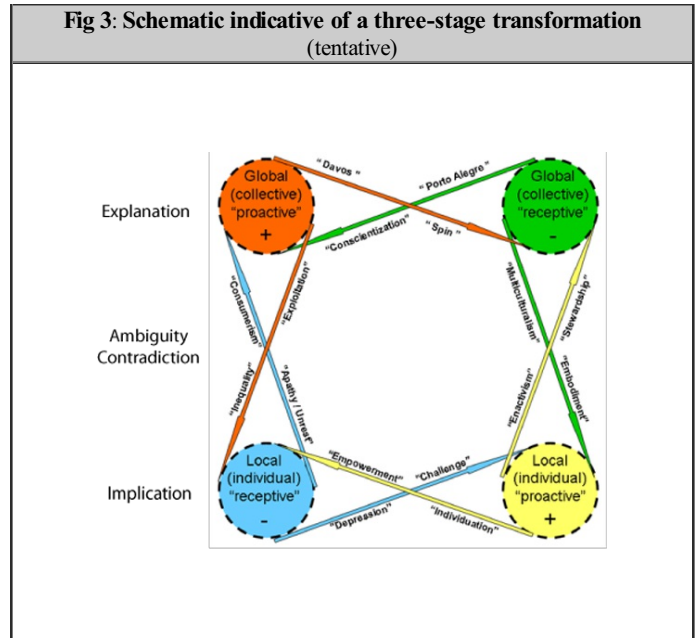
This is suggestive of the need for the higher dimensionality associated with a more appropriate cognitive "container" achieved by conjoining two such strips -- namely a Klein bottle, in which "inside" and "outside" are not conventionally distinguished. The relevance of such forms is separately discussed (*Intercourse with Globality through Enacting a Klein bottle: cognitive implication in a polysensorial "lens"*, 2009).

Fig. 2: Relationship between Klein bottle and Mobius strips
 Images by Konrad Polthier (*Imaging maths: inside the Klein bottle*, + *Plus magazine*, #26)
 The two Möbius bands of a Klein bottle are connected by an ordinary two-sided band whose back and front sides are colored white and blue respectively (see *animated version* (364K))



<http://school.maths.uwa.edu.au/~mike/PURE/gizmo1.html> ***

The Fig. 1 schematic follows from that of an earlier exploration (*Psychosocial Energy from Polarization within a Cyclic Pattern of Enantiodromia*, 2007) in which a version of the following schematic appeared.



Both Fig. 1 and Fig. 3 may be compared with various 4-fold schematics, including the [AQAL framework](#) of [integral theory](#).

Fig. 4: Diagonally inverted representation of the AQAL system of Ken Wilber
to demonstrate correspondence to organization of Fig. 3
(which emphasizes the cultural development over time from left to right)

	Exterior	Interior
Collective	Exterior-Collective Social ("Its") AQAL Lower-Right Quadrant (LR) e.g. Marx	Interior-Collective Cultural ("We") AQAL Lower-Left Quadrant (LL) e.g. Gadamer
Individual	Exterior-Individual Behavioral ("It") AQAL Upper-Right Quadrant (UR) e.g. Skinner	Interior-Individual Intentional ("I") AQAL Upper-Left Quadrant (UL) e.g. Freud

Learning as "seeing-squared"?

"Seeing": The [comments in the main document regarding light as a metaphor](#) avoided reference to the special insight embodied in $e = mc^2$, namely that "c" is "squared" -- having an [exponent](#) of 2.

This suggests that any clue to a metaphorical relationship of "mass-energy equivalence" requires a more insightful metaphorical understanding of light -- although it may well be the case that this understanding is effectively buried or implicit in ways of currently using the metaphor. Looking for further clues in relation to how light is used with respect to those described as "brilliant", an interesting characteristic is that their thinking is above all recognized as non-linear. While much is made of light travelling in a straight line, the diffusion of light from a stellar source (metaphorical or not) is typically spherical.

The process of "learning" might be compared to discovering correlations across an "area" or "field" -- exemplified in the resolution of a crossword puzzle or sudoku (*Patterns Essential to Individual and Global Health?* 2010). Closely related processes are evident in the quest for patterns in the risk-taking characteristic of many forms of speculation and gambling. Is making sense to be compared with completion of a jigsaw puzzle?

It is the cross-linking between two "dimensions" -- a form of triangulation -- which is fundamental to the learning process and the build-up of knowledge (*Sustainability through Magically Dancing Patterns*, 2008). As exemplified by surveying, internalizing the map of a city is of this nature. A related process is fundamental to [mobile phone tracking](#). A fundamental form of learning is evident in the process of scanning the field of view through [eye movement](#), by which visual stimuli are acquired, fixated and tracked.

In this sense learning is strangely associated with c^2 -- perhaps mnemonically then to be described (in English) as "**seeing**", conveniently conflating processes identified as **correlating, comprehending, communicating, conceiving, considering, contrasting, completing and contemplating**. Such **conscious** "seeing" is what enables "potential" to be detected -- as is often celebrated in the slogans of major corporations. It is a more comprehensive or deeper form of "knowing", perhaps to be understood in relation to recognition of [entelechy](#) (*Entelechy: actuality vs future potential*, 2001). [David Brooks](#) (*The Social Animal: the hidden sources of love, character, and achievement*, 2011) argues that the things that really account for who succeeds and who does not happen below the level of awareness. Specifically it is:

Who can look at a situation that's complicated and pick out a gist. Who can combine two gists.... It's [pattern recognition](#). (*CNN interview*, 24 April 2011)

Such "seeing" may engender a form of confidence, discussed below in relation to "confidelity" as a container. Confidence implies a manner of "seeing" especially characteristic of optimism.

In the case of a spherically symmetrical diffusion pattern, and the structures which it may enable, [R. Buckminster Fuller](#) has argued extensively regarding the fundamental importance of triangulation of their outer surface as the basis for their stability, notably with respect to his application to geodesic domes (*Synergetics: explorations in the geometry of thinking*, 1975).

"Speed of light": This suggestion highlights the significance of the absolute nature of the "speed" of light as determined by physics -- but far from obvious in ordinary assumptions about light, except through its apparent instantaneity. However this absolute speed could be elegantly consistent with affirmations of the fundamental equality of humans. Is there a sense in which the speed of "comprehension" is then to be considered constant for all? (cf *Quest for a "universal constant" of globalization? Questionable insights for the future from physics*, 2010).

How is this to be reconciled with recognition that the thinking speed of some is readily compared to the "speed of light" -- as with the "lightning calculations" of some [savants](#) recognized as [prodigies](#) ("savant prodigies")? Others however are readily categorized as "slow" of thought and comprehension.

A clue may lie in the constancy of the speed of thought/comprehension as **experienced by each for themselves within their own frame of reference** -- irrespective of how that "speed" may be rated by others from other frames of reference, or sensed by each person by comparison with the speed of the thought of others. It is curiously associated with the essence of subjectivity. The matter is of increasing interest in comparing the digitally enabled with the late adopters, as in an account by [Jemima Kiss](#) (*How I kicked my digital habit*, *The Guardian*, 24 April 2011):

Breaking away from my connected life, I could feel how the compulsion, the divided attention, the multitasking has permeated my way of being. Early adopters, the heavy technology users who throw themselves at every new device and service, will admit to an uncontrollable impulse to check email, tweets or Facebook. Researchers have called this "variable interval reinforcement schedule"; we have in effect been trained into digital message addiction because the most exciting rewards are unpredictable. We're no better than slot-machine addicts. The hustle we develop as we struggle to keep up with the pace of digital information has produced a restless, anxious way of engaging with the world.

Use of computers offers an array of insights (*Computer Use as Philosophy in Operation: metaphors of the innergame*, 2003). [Kiss](#) cites the philosophical responses to new technology throughout time by [William Powers](#) (*Hamlet's Blackberry: a practical philosophy for building a good life in the digital age*, 2011) who notes:

The more we connect, the more our thoughts lean outward... There's a preoccupation with what's going on "out there" in the bustling otherworld, rather than "in here" with yourself and those right around you. What was once exterior and faraway is now easily accessible and this carries a sense of obligation or duty....In less-connected times, human beings were forced to shape their own interior sense of identity and worth.

One can wonder at the thinking of a "slow" genius -- perhaps echoing the values and practices of the [Slow Movement](#), the [Desert Fathers](#) and [Desert Mothers](#), or practitioners of meditation ([Zazen](#), yogis, etc). Reminiscent of the traditionally recognized role of the "seer", an emphasis on the art of "seeing" was a focus of the various accounts by [Carlos Castaneda](#) (*A Separate Reality*, 1971; *The Power of Silence*, 1987; *The Art of Dreaming*, 1993). These were much valued by the [counterculture movement](#) (1956-1974)

Of even greater relevance is the speed of thought of everyone -- "unre-cognized" by others. How does "speed" of thought relate to what is understood as "wisdom" (*The Isdom of the Wisdom Society: embodying time as the heartland of humanity*, 2003; *Strategic Embodiment of Time: configuring questions fundamental to change*, 2010; *Timeship: conception, technology, design, embodiment and operation*, 2003) ??

Diamond faceting: But the recognition of "brilliance" suggests a further line of inquiry through its association with highly valued "[precious stones](#)", especially the diamond. Is the path and interrelationship of thought and comprehension to be fruitfully compared with

that of the movement of light within a faceted crystal? This may be understood as a form of cognitive container (discussed below).

Such an association is recognized to a degree in [Diamond Way Buddhism](#) and, more generally in the references to enlightenment of the mind (Rob Nairn, *Diamond Mind: a psychology of meditation*, 2001; *Shobogenzo: On Giving Rise to the Enlightened Mind*, Shasta Abbey Buddhist Monastery). The nature of the "space" within the metaphorical diamond, through the untrammelled "movement" of the light is variously enabled, is associated with efforts to cultivate the "emptiness" of the mind (Jeffrey Hopkins, *Meditation on Emptiness*, 1996; Dalai Lama, *The Union of Bliss and Emptiness*, 2009; Adyashanti, *Emptiness Dancing*, 2006; Geshe Tashi Tsering, *Emptiness: the foundation of Buddhist Thought*, 2009).

The relationship has been further explored with respect to whatever might be implied by "eng lightened" dialogue (*Patterning Archetypal Templates of Emergent Order: implications of diamond faceting for enlightening dialogue*, 2002). [As discussed below, a meeting may also constitute a cognitive container]

Degrees of coherence: Any such concentration of light in a diamond, raises the further question of its role as a metaphor for degrees of such concentration, exemplified by the distinctions made in the "brilliance" of various precious stones -- or the "qualities" of diamond (and the skill by which its facets have been "cut", namely variously oriented one to the other). Are degrees of "brilliance" in thinking to be associated with the way in which thought moves between facets of appropriately oriented knowledge -- correlating them into higher orders of comprehension by enhancing their coherence?

It is interesting that the notion of "faceted classification" is significant to one approach to the organization of knowledge -- but unfortunately not extended into understandings of integrative thinking, as might have been the case (*Spherical Configuration of Categories to Reflect Systemic Patterns of Environmental Checks and Balances*, 1994). It is also central to enabling an understanding of higher dimensionality in mathematics. How might this then be related to the variety of ways in which people are held to be "reborn" into higher orders or degrees of comprehension and coherence (*Varieties of Rebirth: distinguishing ways of being born again*, 2004)?

Applied to a poem, a work of art or music, or any invention, how is "brilliance" then to be understood in terms of the coherence implied therein -- inviting perception to "traverse" the work in ways which reinforce insight into its exception degrees of integrity (John D. Barrow, *Cosmic Imagery, key images in the history of science*, 2008; Michel Random, *L'Art Visionnaire*, 1991).

Reflection, refraction and focus: How "seeing" is enabled is further highlighted in the diamond metaphor by a range of optical phenomena. Of these both reflection and focus are also used to describe thinking and concentration. However, although reflection is extensively used, refraction is not -- perhaps an invitation to further reflection ! By what is vision "bent"?

Potentially of greater relevance to "seeing" is consideration of "self-reflexivity" as a form of reflection -- especially within a faceted container like a diamond. This can be fruitfully related to issues of mirroring (M. H. Abrams, *The Mirror and The Lamp*, 1953; Paul Demiéville, *The Mirror of the Mind*, 1947). These have their strategic implications (*My Reflecting Mirror World*, 2002; *Looking in the Mirror -- at Josef Fritzl ? global conditions on reflection*, 2009). These raise the question of the appropriate design of such a cognitive mirror, as with the design of telescopes and microscopes (*Geometry as a metaphorical magic mirror of thinking*, 2009).

Inversion and self-reflexivity: Again limited consideration is given to the cognitive and collective implications of such mirroring (*Engendering the Future through Self-reflexive Group Initiatives*, 2008; *Consciously Self-reflexive Global Initiatives: Renaissance zones, complex adaptive systems, and third order organizations*, 2007). The importance of reflexivity has been stressed by Hilary Lawson (*Reflexivity: the post-modern predicament*, 1986).

Potentially provocative, for example, are the implications of the mirror test for self-awareness as might be applied to humans by extraterrestrials (*Self-reflective Embodiment of Transdisciplinary Integration (SETI): the universal criteria of species maturity?* 2008).

Beyond the optical technology of telescopes, the need for detecting the patterns of larger systems through understanding at the micro-level may offer guidance as suggested by Joël de Rosnay (*The Macroscope*, 1979). This approach was a stimulus to the study of Luc de Brabandère (*Le Latéroscope: systèmes et créativité*, 1989; *The Forgotten Half of Change: achieving greater creativity through changes in perception*, 2005).

In the light of such possibilities -- and a potential extraterrestrial mirror test -- there is a case for exploring the possibility of a cognitive technology which would enable recognition of fractal patterning of significance, as suggested by the Mandelbrot set (*Psycho-social Significance of the Mandelbrot Set: a sustainable boundary between chaos and order*, 2005; *Sustainability through the Dynamics of Strategic Dilemmas: in the light of the coherence and visual form of the Mandelbrot set*, 2005). This would respond to the human tendency, individually or collectively, to identify preponderantly with a central domain and effectively to reframe it as a "world" or a "universe". More poetically the device should enable the paradoxical capacity to which William Blake alludes in *Auguries of Innocence* (1863):

*To see a world in a grain of sand,
And a heaven in a wild flower,
Hold infinity in the palm of your hand,
And eternity in an hour.*

Image and imagination: Whilst light metaphors are readily associated with imagination, as noted above, they are also central to understandings of image (Kenneth Boulding, *The Image: knowledge in life and society*, 1956). As implied by their etymology, the two are strangely intertwined:

- *Living as an Imaginal Bridge between Worlds: global implications of "betwixt and between" and liminality*, 2011
- *Imagining the Real Challenge and Realizing the Imaginal Pathway of Sustainable Transformation*, 2007
- *Imaginal Education: game playing, science fiction, language, art and world-making*, 2003

- *Magic, Miracles and Image-building: poetry-making and policy-making*, 1993

But all such optical metaphors in relation to faceted containers raise the question as to where the light comes "from" -- thus enabling "brilliance" and the experience of it.

The very extensive development of sophisticated optical systems of lenses and mirrors (and of their electromagnetic equivalents) suggests that these be explored as a comprehensive metaphorical "language" through which "object" and "subject" may be related for various purposes and philosophies. With respect to image, for example, this could encompass both "real" and "virtual" images. This exploration could even extend to modelling socio-political processes of "objecting" and "subjecting" (Max Deutscher, *Subjecting and Objecting: an essay in objectivity*, 1984).

Polyocular and polysensorial "vision": More curious is the fundamental importance in strategic thinking of a range of "vision" metaphors through which the future is "envisaged" -- even to the exclusion of other valuable sensory metaphors (*Metaphor and the Language of Futures*, 1992; *Strategic Challenge of Polysensorial Knowledge: bringing the "elephant" into "focus"*, 2008).

This bias is epitomized in a remarkable new high-tech museum in Tasmania, appropriately located at what might be termed the "arse end" of what [Paul Keating](#), a former Australian prime minister, famously characterized as the "*arse end of the world*" (a phrase celebrated in the musical *Keating!*). The intentionally [provocative displays](#) of the [Museum of Old and New Art \(Mona\)](#) include, in a section on "sexually explicit and potentially confronting artworks", an array of what one journalist described as *150 porcelain sculptures of anatomically correct representations of women's nether regions (politely titled C*nts and other Conversations)* (Gabriella Coslovich, *Hobart's infamous son plays to the gallery*, *The Age*, 22 January 2011). An awesome installation by [Greg Taylor](#) (and friends) -- which few museums elsewhere would dare to present.

However, despite a separate display of appropriately smelling excrement production (Wim Delvoye, *Cloaca Professional*, 2009), the assumption is reinforced that there is no other major distinguishing characteristic of the vaginas -- which a dog, for example, would consider of far greater significance. As with the vaginas, it is assumed that people are to be adequately distinguished by visual (or text) profiles, notably excluding any distinguishing dynamic. Most [scientific collections](#), through which the body of knowledge is allegedly articulated, reinforce this static, monosensorial assumption. Briefly stated, museums don't do smells -- they may be caricatured as promoting the hygienic "voyeurism" similarly evident in the presentations of magazines such as *Playboy*. Is it to be assumed that extraterrestrials would share this bias (*Communicating with Aliens: the Psychological Dimension of Dialogue*, 2000)?

The point is otherwise made by the widely-cited message of Emperor Napoleon Bonaparte to Josephine de Beauharnais (at then end of a military campaign): *Will return to Paris tomorrow evening. Don't wash*. This implies a capacity for "seeing" otherwise, presumably valuable to his renowned strategic capacity. Well-presented strategies are also distinguished in practice by their "smell" -- if not their "stench" -- and despite the extensive use of public relations techniques as a "deodorant".

This argument suggests that "seeing" should be understood as including the insights derived from the other senses -- notably to compensate for the potential dysfunctions of any one of them, of which strategic myopia is the only one occasionally cited. There is clearly a case for metaphorical recognition of [olfactory dysfunction](#). The argument then raises questions as to the nature of the "observation" that would be of greater generality than the visual recording of measurements on which insights and explanations of the theory of relativity are based. As currently "envisaged", the global internet-based knowledge society is mono-sensory, hygienic and "smell free".

Configuring modes of "seeing"

Diversity of modes of "seeing": What is not relevant to me ("us") that others ("they") find meaningful? How to learn from it -- by "seeing"? How to configure what diverse constituencies find relevant? Why do others ("they") not agree with me ("us")? (*Us and Them: Relating to Challenging Others*, 2009).

Approaches to such questions are offered by a range of authors, as previously summarized (*Systems of Categories Distinguishing Cultural Biases*, 1993). These include the [multiple intelligences](#) identified by [Howard Gardner](#).

In the light of the argument above regarding the value of focusing on **maximally diverse images of reality**, another approach is to explore *Examples of Integrated, Multi-set Concept Schemes* (1984) from disparate domains in a quest for *Patterns of Conceptual Integration* (1984). In the light of a constraint on the number of elements distinguished, these may be experimentally configured as a set (*Distinguishing Levels of Declarations of Principles*, 1980).

Another approach is suggested by the 8 classic metaphors distinguished by Gareth Morgan (*Images of Organization*, 2007) -- summarized as *The Eight Metaphors of Organization* (2010) -- and to reframe them as metaphors applicable to contrasting ways of "seeing" reality:

- *reality as machine*
- *reality as organism*
- *reality as brain*
- *reality as culture*
- *reality as political system*
- *reality as psychic prison*
- *reality as system of change and flux*
- *reality as instrument of domination*

This approach is especially suggestive in the light of the study by [Stephen Prothero](#) (*God is not One: the eight rival religions that run the*

world and why their differences matter, 2011)

Richer diversity of modes of "seeing": Potentially more relevant is to assume that the reason physics currently engages with reality in terms of the complexities of [string theory](#) is that such complexity is held (subconsciously) to be of an order necessary to integrating (namely "healing") the diversity of psychosocial insights. In that sense, Morgan's metaphors are then best understood as too simplistic and therefore inadequate to the challenge. Richer contrasting cognitive possibilities might then be associated with the dynamics of:

- participating cognitively in the environment and its embodiment ([Henryk Skolimowski, *The Participatory Mind: a new theory of knowledge and of the universe*, 1995](#); [David Abram, *The Spell of the Sensuous: perception and language in a more-than-human world*, 1997](#); [George Lakoff and Mark Johnson, *Philosophy In The Flesh: the Embodied Mind and its Challenge to Western Thought*, 1999](#))
- playing with cognitive possibilities ([Humour and Play-Fullness: Essential integrative processes in governance, religion and transdisciplinarity](#), 2005; [Enacting Transformative Integral Thinking through Playful Elegance](#), 2010; [Engaging with Globality through Playful Re-categorizing](#), 2009)
- imaginative magic (mentioned [above](#)), notably as enabled by modern media effects
- [enantiodromia](#) through the cyclic drama of learning experience ([Psychosocial Energy from Polarization: within a cyclic pattern of Enantiodromia](#), 2007) -- as suggested by the lemniscate
- [uncertainty](#), as considered by various authors ([Garrison Sposito, *Does a generalized Heisenberg Principle operate in the social sciences? Inquiry*. 1969](#); [Michael Smithson, *Ignorance and Uncertainty*, 1989](#); [Dennis V. Lindley, *Understanding Uncertainty*, 2006](#))
- complementarity ***
- [closure](#), notably in the form of so-called "[poetic justice](#)" or "[just deserts](#)" ([Hilary Lawson, *Closure: a story of everything*, 2001](#); [Orrin E. Klapp, *Opening and Closing: strategies of information adaptation in society*, 1978](#)). The sense of "just deserts" has notably been a focus of a recent research project on an explanation of religion ([Explaining Religion Project Overview](#), 2011)
- questioning and "putting to the question" ([Abuse of Faith in Governance: Mystery of the Unasked Question](#), 2009)
- catastrophe theory, notably in the light of its potential relation to questions ([Conformality of 7 WH-questions to 7 Elementary Catastrophes: an exploration of potential psychosocial implications](#), 2006).
- paradox ([Snoring of The Other: a politically relevant psycho-spiritual metaphor?](#) 2006)
- mirroring and self-reflexivity (as noted [above](#))
- ignorance, the unknown and the unexpected, as highlighted by various authors, as separately discussed ([Engaging with the Inexplicable, the Incomprehensible and the Unexpected](#), 2010; [Unknown Undoing: challenge of incomprehensibility of systemic neglect](#), 2008)

Quest for the meta-pattern that connects: Understood as disparate "dimensions" of some understanding of cognitive dynamics, the question is the nature of the pattern by which they are connected. As described by Gregory Bateson ([Mind and Nature; a necessary unity](#), 1979), and noted in the main document:

The pattern which connects (all living creatures) is a meta-pattern. It is a pattern of patterns. It is that meta-pattern which defines the vast generalization that, indeed, it is patterns which connect. (p. 11)

Borrowing again from the requisite complexity of any such pattern of fundamental "theories", as currently understood by physics, it might be asked whether the integration offered by [M-theory](#) is the best that is available at this time. M-theory is an extension of string theory in which 11 dimensions are identified. Because the dimensionality exceeds the dimensionality of [superstring theories](#) in 10 dimensions, proponents believe that the 11-dimensional theory unites all five string theories (and supersedes them).

Given the case made by such as [Alan Sokal](#) for the nonsensical nature of any such borrowings from physics (as noted in the main document), and the assumptions variously made by the natural sciences that the governance problems of society are "too complex" to warrant their attention, the challenge for those sciences is to offer an indication of how that complexity might be encompassed -- if M-theory (for example) is not to be considered an indicative approximation. The challenge can be presented diagrammatically, borrowing from the complexity sciences ([Imagining the Real Challenge and Realizing the Imaginal Pathway of Sustainable Transformation](#), 2007).

Given the current importance of the "string" metaphor to fundamental physics, and of the "thread" metaphor to (internet) discourse, it might be provocatively asked what vital insights into divisive discourse in society would emerge from applying the string metaphor in that context ([Interweaving Thematic Threads and Learning Pathways](#), 2010).

"Seeing" as implied by the Fibonacci spiral

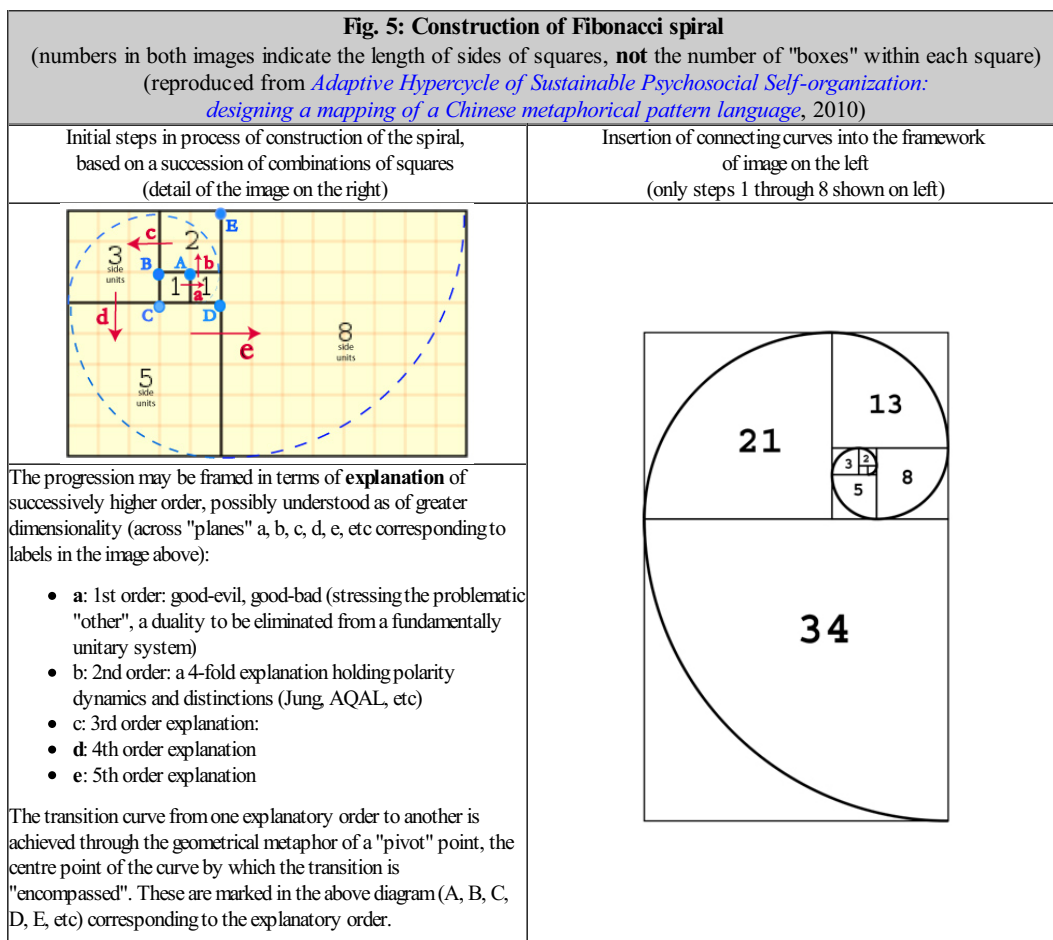
Learning in a Fibonacci spiral: The Fibonacci pattern is well-known in nature. It is an approximation to what is known in mathematics as the [golden spiral](#). Extreme examples frequently cited are the marine [nautilus](#) and the arms of some [spiral galaxies](#) (see [morphological classification of galaxies](#)). Appropriate to this argument is the use of the nautilus as a symbol of the learning process. In the case of its adoption by the [The New Zealand Curriculum Framework](#), it is stated:

In real life, the nautilus is a marine animal with a spiral shell. The shell has as many as thirty chambers lined with nacre (mother-of-pearl). The nautilus creates a new chamber as it outgrows each existing one, the successive chambers forming what is known as a logarithmic spiral. This kind of spiral appears elsewhere in nature, for example, in sunflower and cauliflower heads, cyclones, and spiral galaxies. Physician, writer, and poet Oliver Wendell Holmes (1809-94) saw the spiral shell of the nautilus as a symbol of intellectual and spiritual growth. He suggested that people outgrew their protective shells and discarded them as they became no longer necessary: *One's mind, once stretched by a new idea, never regains its original dimensions*. It is as a metaphor for growth that the nautilus is used as a symbol for the New Zealand Curriculum.

However, in relation to this argument, it is the method of construction of the spiral -- based on a nested succession of squares -- which is suggestive of how growth occurs by "seeing". The implication is that by "encompassing" the dynamics associated with each square, this serves as a foundation for the next stage of learning. As highlighted by the following illustrations, this argument has been extensively developed as a suggestive key for governance (*Tao of Engagement -- Weaponised Interactions and Beyond Fibonacci's magic carpet of games to be played for sustainable global governance*, 2010; *Designing Global Self-governance for the Future*, 2010).

A number of board games based on squares are renowned for the insight they offer in support of strategic learning (chess, go, [damah](#), etc). Potentially of more fundamental strategic relevance as a pattern is the recent conclusion, a decade after the [Human Genome Project](#) unravelled the genetic code. Earlier assumptions in that regard are now challenged by the recognition that **the genome is more like a complex board game -- seemingly chaotic, but with subtle patterns that are more perplexing than anyone imagined**, as reported by Jon Cohen (*Snakes and Ladders, Cosmos*, April/May 2011).

*** Adam Rutherford, *The Human Genome Project was just the starting point*, *The Guardian*, 21 April 2011) A gene for this and a gene for that? No - we're only beginning to unravel the complex genetics of human characteristics



Engaging with the underside -- the unknown netherworld: Reference was made in the main document to the challenge of ignorance in the light of the dark matter and dark energy believed to compose 96% of the universe. This was related to the implication of the "unsaid" in society and to various understandings of an "underside", especially as a consequence of implicit preferences for a planar perspective.

The argument for learning in the light of the Fibonacci spiral can be fruitfully extended to "integrate" the "nether parts" of such a

"netherworld" -- effectively by connecting it to an inversion of the spiral as suggested by [Euler's spiral](#) (or clothoid).. This is consistent with mythological accounts of the benefits of "descending" into such a netherworld in quest of "enlightenment" ([Designing Global Self-governance for the Future: patterns of dynamic integration of the netherworld](#), 2010; [Enlightening Endarkenment: selected web resources on the challenge to comprehension](#), 2005). The point is made by [Nicholas de Cusa](#) ([Dialectical Mysticism](#)) in relation to learned ignorance:

How needful it is for me to enter into the darkness, and to admit the coincidence of opposites, beyond all the grasp of reason, and then to seek the truth where impossibility meeteth me.

Further to the discussion above regarding development beyond the "technology" suggested by Joël de Rosnay ([The Macroscope](#), 1979) and Luc de Brabandère ([The Forgotten Half of Change](#), 2005), these considerations imply the possibility of a form of "**netherscope**" or "**underscope**", beyond the approaches of the past ([Engaging with the Future with Insights of the Past: consulting the dead, sacrifice, bone-cracking and divination](#), 2010).

How might such scoping relate to the challenge of detecting that which is the the subject of systemic denial? (cf [United Nations Overpopulation Denial Conference](#), 2009; [Lipopproblems: Developing a Strategy Omitting a Key Problem](#), 2009). The issue is the focus of current debate in the UK with regard to [superinjunctions](#), a form of legal [gagging order](#) in which the press is prohibited from reporting even the existence of any such injunction, or any details of it (James Robinson, [How super-injunctions are used to gag investigative reporting](#), *The Guardian*, 13 October 2009). Who could prove that such legal provisions (notably including the [DA-Notice](#)) do not ensure that democratic governance is unable to consider 96% of the relevant information?

Configuring learning-action cycles

Valuable clues to further thinking on these matters are offered by the articulation of [Arthur M. Young](#) ([Geometry of Meaning](#), 1978). As the designer of the original Bell helicopter, he makes deliberate use of an array of 12 formula vital to its control in flight. He later aspired to the adaptation of this thinking to understanding of the operation and control of a "psychopter".

As discussed separately ([Functional Complementarity of Higher Order Questions: psycho-social sustainability modelled by coordinated movement](#), 2004), Young presented the generalization of his insights as an explication of the learning-action cycle, expressed in 12 phases. He associated each of these with one of 12 measure formulae fundamental to dynamics of piloting a vehicle. He notes that of the twelve, 10 (recognized by physics) are used to analyze the dynamics of a moving body, whilst 2 are "not presently recognized in physics textbooks, but used in engineering".

Generation of Measure Formulae (according to Arthur Young)				
Group I		Group II	Group III	
L = position	x M =	ML = moment	x L =	
L/T = velocity		ML/T = momentum		ML ² = moment of inertia
L/T ² = acceleration		ML/T ² = force		ML ² /T = action (rate of change of inertia)
L/T ³ = control		ML/T ³ = mass control		ML ² /T ² = work
			ML ² /T ³ = power	

Young himself focuses at length on the nature of the learning cycle in elaborating what he terms a "Rosetta Stone" of meaning. This is "not just a translation of meaning, but is a generation of meaning. It is the relationships between the words we must use, not their definitions, that give them their meaning" (p. 38). With respect to the learning cycle, he distinguishes four basic categories of **act**, **relationship** and **state** that he interrelates as follows:

Basis of Rosetta Stone of Meaning (according to Arthur Young)		
Relationship	Act	State
<i>impulse (purpose)</i>	<i>spontaneous act</i>	<i>being</i>
<i>faith</i>	<i>change (reaction)</i>	<i>transformation</i>
<i>knowledge (form)</i>	<i>observation</i>	<i>significance</i>
<i>fact</i>	<i>control</i>	<i>establishment</i>

A commentary on learning cycles is provided elsewhere ([Cycles of dissonance and resonance](#)). This pattern has been tentatively adapted and developed, notably in relation to [Clues to integrating movement through kinetic intelligence](#) (in [Navigating Alternative Conceptual Realities: clues to the dynamics of enacting new paradigms through movement](#), 2002):

- [Typology of 12 complementary strategies essential to sustainable development](#)
- [Typology of 12 complementary dialogue modes essential to sustainable dialogue.](#)

Easily lost through such an articulation is the engagement required of the pilot of a vehicle like a helicopter. This is to a very important degree an "embodiment" of the 12 modalities. Mere observation of the movement of those engaged in kinetic acrobatics in no way implies the understanding required to execute those movements intentionally in a controlled fashion. This recognition is, to a degree, a feature of [action research](#) -- and contrasts with the widespread proclivity for model building and its limited understanding of the additional skills required to embody the model in practice. It is in this respect that the widespread marginalization of social experiments (in comparison with the facilitation of technology R and D) is much to be regretted ([Social Experiments and Sects: beyond category manipulation by advocates and opponents](#), 1997).

The succession of challenges in configuring cycles of psychosocial relevance has been discussed separately, in contrast to conventional linearity (*Engaging with Globality through cognitive lines, circlets, crowns or holes*, 2009):

- *Engaging with Globality through Cognitive Realignment: Making points and aligning a target*
- *Engaging with Globality through Cognitive Circlets: Learning/Action cycles*
- *Engaging with Globality through Cognitive Crowns: All-encompassing, well-rounded experience*
- *Engaging with Globality through Knowing Thyself: Embodying engagement with otherness*

The latter stage was presented in the light of the arguments of enactivism (*Intercourse with Globality through Enacting a Klein bottle: cognitive implication in a polysensorial "lens"* 2009) -- perhaps to be recognized as an exemplification of "seeing squared".

Constrained comprehension

"Seeing", in the sense of comprehension capacity, is constrained in ways which effectively ensure that it is to a degree self-contained -- bounded such as to constitute a "container" in its own right. Whilst "light" may indeed travel linearly, it is "bent" in response to such constraints. The argument can be clarified by reference to those of physicist [David Deutsch](#) (*The Beginning of Infinity: explanations that transform the world*, 2011).

Explanations: Deutsch emphasizes the quality of the explanations of science as fundamental to the ever-extending descriptions of the world. However, he argues, since there is no apparent limit to what can be explained, explanations are therefore infinite. Good explanations in this view inform moral and political philosophy as well as aesthetics. He holds this understanding to be consistent with the quest of physics for a Theory of Everything. The future may smile at the title of an article by Deutsch summarizing his worldview (*Why science is the source of all progress*, *New Scientist*, 23 April 2011).

Society has been exposed to "good explanations" for the viability and appropriateness of nuclear technology -- typically arrogantly presented. Such "arrogance" is a characteristic of silo thinking and conceptual gerrymandering -- equivalent to a form of gravity, as mentioned in the main document.

Consistent with such presentation, Deutsch (2011) seemingly fails to address issues such as the following:

- the **incapacity of the individual human mind** to encompass and comprehend an infinite number of explanations -- presumably also true of a finite collective, even of civilization as a whole
- the **diversity of appreciation of explanations** -- valued ("infinitely") by some, but rejected by others as inadequate (or "bad") in preference for those they consider more appropriate (possibly, in turn, to evoke similar rejection)
- the **status of explanations on whose "badness" there is a degree of consensus** -- possibly in an infinity of explanations, or in cases where the "badness" may only later emerge. The point is well explored by Ryan T. McKay and Daniel C. Dennett (*The Evolution of Misbelief*. *Behavioral and Brain Sciences*, 2009)

These issues are partially highlighted by legal texts interpreted as "explanations" of the contractual relationships defining conventional social reality. For example, the constitutional treaties governing the European Union (consequent on the Lisbon Treaty of 2009) number more than 3,000 pages. Few would seek to comprehend such explanations governing a democratic society -- irrespective of how fundamental they are upheld to be. It is appropriate to note that a mathematical "proof" -- confirming the existence of the [Monster group](#) -- takes the form of 10,000 pages spread across 500 journals, requiring months for their verification. Curiously, following that process, their validity is then necessarily taken "on faith" in a manner reminiscent of the attitude to sacred scriptures by religion.

Rejected nonsense: Especially intriguing is the manner in which "bad" explanations are effectively "deleted" and consigned to a kind of "recycle bin" -- or perhaps cast "over the edge of the world" envisaged as planar (as central to the cult movie *The Gods Must Be Crazy*, 1980). [Note the discussion by physicists of *The psychology of labelling others as crackpots*, *Physics Forums*, 27 December 2007]

The assumption that such explanations are "nonsense" -- as science perceives religion to be -- is curiously reminiscent of the challenging cognitive status of the "dark matter" and "dark energy" of astrophysicists (as discussed in the main document). Reciprocated categorizations as "nonsense" made between belief systems -- incapable of encompassing otherness? Each is much comforted by the unquestionable fact that they possess the truth, or the best method of acquiring it. A characteristic of 'arrogance' as a manifestation of "cognitive gravity"?

In such a context it is curious that politicians have agreed to funding, through the European Commission, of a scientific project on [Explaining Religion](#) by the the Oxford Centre for Anthropology and Mind -- seeking to understand both what is universal and cross-culturally variant in religious traditions as well as the cognitive mechanisms that undergird religious thinking and behaviour (*The Good God Guide: tentatively, scientists are asking: exactly what is religion, and what is it for?* *The Economist*, 20 April 2011).

As a philosopher, [Nicholas Rescher](#) (*The Strife of Systems: an essay on the grounds and implications of philosophical diversity*, 1985) responded to the distinctly unintegrative conflict amongst disciplines by concluding:

For centuries, most philosophers who have reflected on the matter have been intimidated by the strife of systems. But the time has come to put this behind us -- not the strife, that is, which is ineliminable, but the felt need to somehow end it rather than simply accept it and take it in stride. To reemphasize the salient point: it would be bizarre to think that philosophy is not of value because philosophical positions are bound to reflect the particular values we hold.

The possibility is excluded that the "sense" of "nonsense" may only become apparent at some later stage -- when modern science may well be understood to be to a degree outmoded, or "nonsensical", in its turn.

More intriguing is **the implicit relationship between "ex-planation" and "under-standing"**. How is understanding enhanced with the exponential increase in the number of explanations? Does Deutsch's infinity of explanations imply a commensurate increase in understanding? And if not? By what proportion of the population will a Theory of Everything be understandable -- whatever the efforts to inculcate that understanding, following the pattern of religion? Assuming a satisfactory explanation of a "planar worldview", might "under-standing" imply some kind of cognitive ability to "stand" underneath it -- even "upside down" on its "underside"?

The larger challenge is then how to learn, as archaeologists have demonstrated, from what has been declared irrelevant and cast out onto a collective "midden". However, given that each sector of society effectively considers others to be "middens", the challenge is somewhat more complex. The paradox is reminiscent of the topology of the **Klein bottle** (mentioned above) -- one in which there is a form of continuity between the inside and outside of the cognitive container -- through a higher dimension, as discussed separately (*Intercourse with Globality through Enacting a Klein bottle: cognitive implication in a polysensorial "lens"*, 2009).

Is there a paradoxical framework within which both "sense" and "nonsense" can be contained together -- my "sense" and the "nonsense" of others?

Engendering ignorance: If explanations are the most significant product of scientific endeavour then, to the extent that they are not widely (or "universally") understood, science must necessarily be recognized as engendering ignorance on a massive scale -- especially if the explanations are infinite in number. More provocatively, in terms of the argument here, if knowledge implies "energy" of some kind, and ignorance implies "massive inertia" of some cognitive form, would this then be consistent with $e = m$?

Planning and the "infinite plane"

Beyond mere wordplay there is an intriguing possibility of cognitive reinforcement between "flattening" (as noted above), a potentially infinite plane of "ex-planations", and approaches to planning as currently practiced. The evident existing challenge for planning is to ensure appropriate integration across the plane, variously explained -- but from what explanatory perspective? The further challenge is popular reaction to any requirement to "get with the plan" -- effectively to live on the plane defined by the "ex-planation" of some.

Within such a flat worldview it is worth considering the further implication that the plane is layed out and settled by a myriad of explanatory habitats of similar design -- necessarily reminiscent of suburbia everywhere -- benefitting appropriately from "services".

This integral perspective implies a form of "seeing". Is this possibly to be understood by an interpretation of the mutual entanglement of explanations -- "explanation squared" -- and their embodiment?

Evident constraints: The striking phenomena that merit recognition to reframe such issues are:

- the increasingly evident preference for **brevity** in the face of information overload
- the challenges to **memory** (for sustainable understanding), whether individual or collective, notably as exacerbated by aging (especially of leading decision-makers and their increasingly aging supporters)
- the **learning time** (and energy) required for the acquisition of any insight or "explanation" (perhaps to be compared with that required to achieve escape velocity to acquire an "orbital" perspective) -- again problematic in an aging society
- the evident preference for immediately apparent **relevance** in allocating attention and memory capacity

These are variously noted separately (*Societal Learning and the Erosion of Collective Memory: a critique of the Club of Rome Report on "No Limits to Learning"*, 1980; *Memory Challenges at the Edge of the World*, 2008; *Emerging Memetic Singularity in the Global Knowledge Society*, 2009; *Limits to Human Potential*, 1976). The point with regard to erosion of collective memory has been strikingly made at the time of writing by the widely headlined discovery of hundreds of 600-year old warning stones in Japan regarding areas beyond which construction was vulnerable to tsunamis (*Tsunami warning markers go unheeded*, *Nippon-Sekai.com*, 9 April 2011; *Japan Tsunami Warnings From Ancestors Were Forgotten*, *The Huffington Post*, 6 April 2011).

Curiously issues relating to the accessibility of explanations are seemingly not factored into reflections on the nature of the body of knowledge (notably in the case of Deutsch's infinity of explanations). This is despite the possibility that inaccessibility may preclude many from exposure to them and may well ultimately consign those insights to "oblivion". Issues include:

- **cost of access**, in conventional tokens of collective confidence
- **copyright constraints**, reflecting understandings of intellectual property within the collective (*Future Coping Strategies: Beyond the constraints of proprietary metaphors*, 1992)
- **technological constraints** on access, as with accessibility via electronic media, the comprehension of such facilities, and the security vulnerabilities of that context
- **accessibility of information in supplementary links** from an accessed document, as required for access to confirmatory or explanatory material. This highlights the question of the number and chaining of such citation steps held to be feasible and tolerable for comprehension of the argument. This then raises the question of the extent to which an argument should embody such "external" material to avoid the need to access it -- a measure which necessarily lengthens the argument to a degree which may render it unreadable. *[The dilemma is well-illustrated by this document]*

How might a global knowledge society recognize its increasing loss of coherence from the advance of a collective form of **Alzheimer's disease**? An increasing prevalence of "dark matter" -- perhaps in the form of secrecy or inability to access insight ? (cf *Feeling particularly gullible lately?* *News.com.au*, 18 April 2011).

The need for such self-reflexive considerations in the quest for a Theory of Everything is suggested by the dramatic **presentation** by **Terry Pratchett**, of his friend Graham Doggett -- both diagnosed with a form of that disease. As a former quantum chemist and author of three books on the topic, Doggett is in the later stages of the disease -- and described as "unable to tie his own shoelaces".

Visibility of "stars": In this context, if immediately visible, the significance of "stars" -- whether physical or metaphorical -- can be upheld as momentarily to be admired but insignificant to daily life -- especially if invisible. Indeed, as with physical stars (in their billions), what is acclaimed as "brilliant" may follow a developmental pathway analogous to that described by the [Hertzsprung-Russell diagram](#) (in plotting the effective surface temperature of the star on one axis against its luminosity on the other) used in descriptions of the [evolution of stars](#).

Of relevance to any metaphorical understanding is their evolution to [stellar remnants](#) of three possible forms (depending on their original mass): [white dwarfs](#), [neutron stars](#) or [black holes](#). Given media recognition of the "visibility" of human "stars" at any one time as being "hot", "big" ("massive") or "spent" ("has been") -- the metaphor clarifies the challenge of the relative (in)visibility of "luminaries" across the knowledge/communication universe, whatever their subsequent influence over time.

Endurance vs. Nowness: The phenomena above are intertwined in the increasing preoccupation with "nowness" and living in the moment -- "living in the now" in the moment of "happening". This is evident in the widespread attraction of "happenings" as a focus for experience in the moment. It is also recognized in modern variants of the mystical tradition of living in the present moment ([Eckhart Tolle, *The Power of Now: a guide to spiritual enlightenment*, 2004](#)). This suggests an experiential relationship between "happening" and "mattering" ([Import of Nothingness and Emptiness through Happening and Mattering](#), 2008).

In reader responses to the query [How long is a moment?](#) ([The Guardian](#), 23 February 2011), two complementary suggestions were offered:

- According to [Miroslav Holub](#) ([The Dimension of the Present Moment](#), 1991), based on some psychological evidence and a knowledge of poetry, the human consciousness can be held to live in a present that is a few seconds long - about the time it takes to read an averagely long line of verse.
- In the middle ages, an hour was considered to be made up of 40 minutes, with each minute divided into 40 moments. Disregarding the elastic notions of time then prevailing, and allowing 3,600 modern seconds to the hour, that gives us 90 seconds to each minute. These minutes would contain 40 moments of precisely 2.25 seconds each.

These considerations are remarkably reinforced by texting, exemplified by the technical constraints of 140 characters on the length of a tweet in [Twitter](#) -- the length of "an averagely long line of verse" ! This justifies the possibility of [Re-Emergence of the Language of the Birds through Twitter?](#) (2010). A compensatory phenomenon, beyond the exploding appreciation of images ("worth a thousand words"), is the technological support for emotional interjection ([Interrelating Emotive Interjections in Response to Integrative Failure: binary coding of pattern-breaking interjections and expletives](#), 2010).

These phenomena are reminiscent of the widespread recognition of "[attention deficit hyperactive disorder](#)" (ADD), considered pathological. Such "deficiency" may limit attention span to a matter of seconds. More generally these phenomena are characteristic of the "blip culture" named by [Alvin Toffler](#) ([The Third Wave](#), 1980). Strategically this is neatly epitomized by the vast array of pills on offer as targeted remedies for personal ills.

What forms of dynamic coherence might be expected to emerge from a "blip culture" (of instant forgetability) -- a "tweet culture"? How might they be recognized and by whom, given the challenge of a possible memetic singularity ([Emerging Memetic Singularity in the Global Knowledge Society](#), 2009)? A delusional form of coherence is suggested by [Evgeny Morozov](#) ([The Net Delusion: the dark side of internet freedom](#), 2011). Is the dynamic to be compared with a form of memetic [Brownian motion](#) within cyberspace -- within the noosphere -- rather than with the patterns of animal flocking behaviour? ([Dynamically Gated Conceptual Communities: emergent patterns of isolation within knowledge society](#), 2004).

Cognitive centre of gravity: Presented in this way, the slogan-like power of the "bullet point" in [PowerPoint](#)-style presentations, used in making a strategic argument, is understandably preferable to an extended text articulation of the "line" of argument potentially associated with each such point. Any such lengthy argument must necessarily be curtailed by the above constraints -- effectively "bending" it to a degree reminiscent of the bending of light.

In the light of other possible metaphors, the set of bullet points might be more fruitfully arrayed as a planetary system having an inherent dynamic and a variety of gravitational pulls ([Interweaving Thematic Threads and Learning Pathways](#), 2010). This contrasts curiously with the sense in which bullet "points" are effectively "holes" in the plane of reality rather than potential worlds in their own right.

It is the cognitive "centre of gravity" around which the bending takes place that is of concern -- the sense of "me" or "us" that functions like a cognitive [gravitational well](#) in "communication space-time", perhaps to be fruitfully understood as a focus of "wellness". In the main document, the point was made that the associated "arrogating" of righteousness is a form of "gravity" Also of interest is the manner in which that bending defines a container, as noted above -- a container recalling the dynamics of the [event horizon](#) around a black hole. The information silo noted above may be understood in this light.

The problem with any such set of bullet points is that they are then relatively incomprehensible to others -- in the absence of the very explanation which may be alienating and call for sustainable learning. This is even more the case with a single bullet point serving as a slogan, whether "democracy", "peace", or the like -- the strategic "silver bullet" that would be a panacea for the ills of civilization, namely the "nail in the coffin" of its complex of problems.

It is intriguing that the collective quest for a "now", in which discordance is resolved, may be variously focused on not-too-distant events, such as periodic conferences, competitions or games. Especially striking is the current widespread focal appeal of events such as the [2012 phenomenon](#) associated with the [Mesoamerican Long Count calendar](#).

This is reminiscent of the circularity of [eternal return](#), central to many worldviews and symbolized by the [Ouroboros](#). Ironically the technology of such "junction" is perhaps exemplified by the "Freudian" encounter between [probe and drogue](#) in [air fuelling](#). More poetically it is expressed by the much-cited verse of [T. S. Eliot](#) ([Little Gidding](#), 1942):

*And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.*

Cognitive containers

Prior to the articulation of a strategy, the process of "[conceptual gerrymandering](#)" implies (ironically) a preliminary investment in the "technology" of constructing an "[information silo](#)" to enable the "silo thinking" essential to the implementation of the strategy. It is through this process that a coherent system is defined and bounded -- effectively to exclude troublesome externalities. Unfortunately the process effectively "designs out" sensitivity to warning signals from beyond the system boundary. 'Seeing' in relation to externalities is inhibited.

The "silo" is designed as a secure environment to be impervious to unwelcome communications -- whatever means are adopted to handle and reframe them by public relations, media "spin" and the "containment" of whistleblowers. The latter point is well-made by the complementarity between the *naked* [Bradley Manning](#) and the *well-cloaked* [Statue of Liberty](#). (Ed Pilkington, *Bradley Manning: top US legal scholars voice outrage at 'torture'*, *The Guardian*, 10 April 2011).

From a more philosophical perspective, any decision as to what "is" as a system then effectively defines a cognitive container. The constraining function of "is" was central to the preoccupations of [Alfred Korzybski](#) (*Science and Sanity: an introduction to non-Aristotelian systems and general semantics*, 1933) and of [Gregory Bateson](#) (*Angels Fear: towards an epistemology of the sacred*, 1987).

As an assertion of incontrovertible fact, "is" is a source of potential disaster -- especially when it excludes emergence of other possibilities, as illustrated by Fukushima. The argument is of special relevance through the process of psychosocial identification with what is bounded by the assertion of what "is", as partially discussed in relation to the cognitive challenges of [apophasis](#) and "unsaying" (*Being What You Want: problematic kataphatic identity vs. potential of apophatic identity?* 2008) .

Think tanks and incubators: Framed otherwise, a cognitive container may take the form of a "[business incubator](#)" -- possibly promoted as a "centre of excellence", as with the [European Union Centres of Excellence](#). It may be more commonly named as a "[think tank](#)", itself potentially constrained conceptually ("[Tank-thoughts](#)" from "[Think-tanks](#)": *metaphors constraining development of global governance*, 2003). The sense of a container for creativity may be more evident as a [design studio](#), or its equivalent for the other arts -- all typically acclaimed as "hot house" environments. Less evident with respect to cognitive dynamics, the container may be recognized as a laboratory, workshop or studio.

Conferences as containers: As a widespread process, with which many have experience, there is a strong case for exploring conferences as containers for cognitive processes, whether in terms of energy (in "mobilizing" resources) or in terms of an optical metaphor (especially as arenas for collective "reflection"):

- *Energy Patterns in Conferences: weaving patterns of information as a context for higher levels of integration*, 1988)
- *Conference Transformations: Maturing the reflective, focusing and transformative power of large-group conferences, especially in response to conditions of social upheaval*, 1982 [Meeting focus: a description](#) / [Focus : a checklist](#) / [Losing focus](#) / [Focus subtleties I: public relations](#) / [Focus subtleties II: meeting magic](#))

It is of course the case that conferences can be considered as the "laboratories" or "workshops" of those sharing a concern. This is especially the case with intentional communities and more controversially with those framed as "cults" and "sects" -- extending to those of which social elites are typically members, such as the Freemasons (*Social Experiments and Sects: beyond category manipulation by advocates and opponents*, 1997). A "team" may be understood in this light -- thereby offering all the insights from team dynamics on the emergent sense of integrity (Jon R. Katzenbach and Douglas K. Smith, *The Wisdom of Teams*, 1991).

Virtual containers in cyberspace: Communication technology has evolved over the past decades to enable the creation of a multiplicity of what are effectively virtual containers replacing the need for collective face-to-face encounters in conferences. Conference environments may even be simulated (in virtual worlds). With the associated role of social networking facilities, there is an increasing sense of a global communication space -- promoted by some as an emergent planetary consciousness or global brain.

Of increasing interest is the manner in which virtual environments can function as containers for discourse and creativity. Whether within cyberspace (as with social media) or not, the container may well be defined dynamically, as with the above-mentioned flocking and swarming of animals (*Dynamically Gated Conceptual Communities: emergent patterns of isolation within knowledge society*, 2004).

Implicit in these developments are various understandings of emergent organization interrelating them as an encompassing container (*From Information Highways to Songlines of the Noosphere: Global configuration of hypertext pathways as a prerequisite for meaningful collective transformation*, 1996; *Simulating a Global Brain: using networks of international organizations, world problems, strategies, and values*, 2001).

Interweaving threads: It is useful to recognize the traditional art of weaving in creating containers of cognitive significance. This is more evident in basket weaving but is potentially a vehicle of greater significance in the case of tapestries and carpets (*The Future of Comprehension: conceptual birdcages and functional basket-weaving*, 1980). The argument may be generalized from bullet points, through [threaded internet exchanges](#), into hypothetical three-dimensional, web-enabled structures (*Interweaving Thematic Threads and Learning Pathways*, 2010; *Warp and Weft of Future Governance: ninefold interweaving of incommensurable threads of discourse*, 2010).

These may then be understood as weaving patterns of information and insight, potentially to be understood as the construction of vehicles (*Magic Carpets as Psychoactive Systems Diagrams*, 2010). The latter notes the significance attached to carpet patterns by

Christopher Alexander (*The Nature of Order*, 2002-2004). Such patterns all serve to elicit a form of "seeing" through the manner in which attention is drawn around the pattern and focused by it -- as with the traditional mandala or yantra.

As mentioned above, there is the provocative possibility of exploring the "threads" of discourse through the higher dimensional ordering possibilities of "string theory".

Containers for meditation: Prior to the development of various forms of think tank, there has been the long (and continuing) tradition of meditation and retreat centres, possibly to be extended to include the temples and churches of the many faiths. Various efforts have been made to understand these as containers for cognitive processes and their enhancement -- within the individual or for those gathered there.

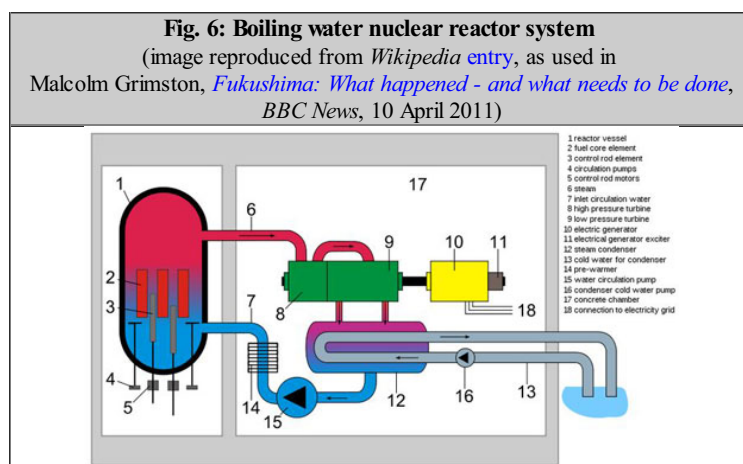
Through the tradition of [alchemy](#) there is an overlap between the functions of an alchemical laboratory, its vessels and its furnace ([athanor](#)), and the cognitive processes for which they served as metaphors. The athanor was also named the philosophical furnace. The [Taoist alchemy](#) of China is noted for its treatment of the human body as an alchemical laboratory incorporating such a furnace.

Perhaps more prosaically, the metaphor is used by [Diane Ackerman](#) (*An Alchemy of Mind: the marvel and mystery of the brain*, 2004) noting:

Creative ideas are forged in an alchemy of mind, as the brain uses electrochemistry to confect ideas, and then more electrochemistry to think about those ideas, and so on in an endless hall of mirrors. This rarely happens in a tidy sequence. The brain can hold an idea in its stockroom for years, occasionally checking to see if it has changed at all, revising it a little, and then putting it back on the shelf, taking it down again when it seems to have evolved like a lemur from its original form.

Industrial reaction vessels: It could be a fruitful exercise to compare the functioning of the above containers as systems with the functioning of the succession of containers associated with industrial development (furnace, steam, reactor, etc). Each has been explored as a source of metaphor. Many have their familiar equivalents in the home (kettle, boiler, etc). The industrial sequence of course currently terminates with the nuclear fusion reactor -- possibly to be followed by the nuclear fission reactor.

How is collective learning and the emergence of collective intelligence to be understood within any such container -- and especially the nuclear reactor?



Although the above system diagram can be understood purely as a representation of the well-defined nuclear reactors used so disastrously at Fukushima, it may also be explored as a cognitive container -- as one in which the fail safe systems failed by failing to fail safe, as previously argued ([Anticipating Future Strategic Triple Whammies: In the light of earthquake-tsunami-nuclear misconceptions](#), 2011).

It is intriguing that the disaster relates to the container of a "nuclear" process deriving from the insight that $e = mc^2$. The latter is interpreted to mean that both the total mass and the total energy inside a totally closed system remain constant over time, as seen by any single observer in a given inertial frame of reference. The disaster associated with failure of the container then raises contextual questions regarding assumptions and implications of:

- the "total closure of a system over time" -- especially in the light of management closure to earlier warnings regarding systemic vulnerabilities,
- the nature of an "inertial frame" -- especially in the light of subsequent references to strategic "inertia" in response to potential vulnerabilities
- the notion of a "single observer" -- especially given any assumed dependence on information processes enabling the collective intelligence (and confidentiality) capable of "singular observation" with respect to the preceding issues

The failure can then be understood as the failure of a cognitive system in which the "objective" was "de-fined" as an overly narrow pursuit of "energy" -- an exercise in [reductionism](#). The failure is then a challenge to the silo thinking through which that system design emerged. It thereby effectively excluded relevant contextual factors -- as might be challenged by the [comprehensivism](#) advocated by R. Buckminster Fuller: *Man is designed to be a comprehensivist* ([Calling for Silo-Busting Comprehensivists](#), 2009; Justin T. Sampson, [Comprehensivism](#), Sampson Synergetics, 2000). As indicated in the main document, **the challenge is then how to "re-fine" that**

thinking through embodying a subtler "subjective" insight in some way.

As a metaphor, the initiative culminating in the Fukushima disaster may be fruitfully explored as a mirror of the current capacities of human collective intelligence. As stated by Gregory Bateson in concluding a conference on the effects of conscious purpose on human adaptation: *We are our own metaphor* (1972, p.304). Unfortunately we have over-identified with the metaphor and have been unable to see ourselves in perspective. Similarly the cited argument of Kenneth Boulding The comment of [Kenneth Boulding](#) is significant in this regard:

Our consciousness of the unity of self in the middle of a vast complexity of images or material structures is at least a suitable metaphor for the unity of group, organization, department, discipline or science. If personification is a metaphor, let us not despise metaphors -- we might be one ourselves (*Ecodynamics; a new theory of social evolution*, 1978)

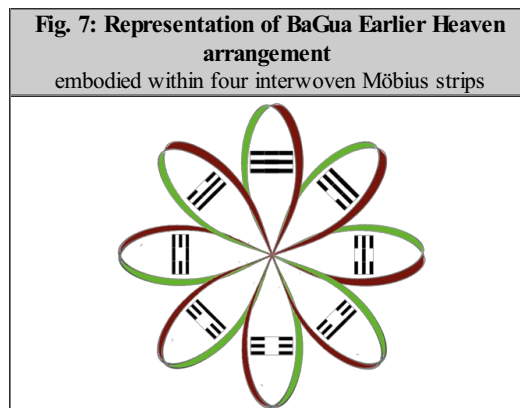
Confidelity container: The fundamental importance of confidence to the viable dynamics of the global financial community suggests the recognition of a form of subtle cognitive container for it -- notably in terms of the notion of confidelity ([Varieties of Confidence Essential to Sustainability](#), 2009; [Primary Global Reserve Currency: the Con? cognitive implications of a prefix for sustainable confidelity](#), 2011).

BaGua configuration as container: In the spirit of the argument of Susantha Goontalika (*Toward a Global Science: mining civilizational knowledge*, 1999) it is appropriate to explore the classical Chinese configuration of [BaGua](#) as a cognitive container. This consists of "eight symbols" used in Taoist [cosmology](#) to represent the fundamental principles of reality, understood as a set of eight concepts -- but better understood through the dynamics of their interrelationship than through any conventional interpretation as static, isolated concepts. Each is denoted by three lines, each line either "broken" or "unbroken", representing *yin* or *yang*, respectively (A C Graham, *Yin-Yang and the Nature of Correlative Thinking*, 1986).

This coding system might be used (tentatively) to represent and interrelate the following

energy	mass	knowing	sense	connectivity	conscious	seeing
dark energy	dark mass	unknowing	nonsense	disconnectivity	unconscious	(un)seeing

Using the method of Fig. 1 of configuring Möbius strips together, the approach may be extended to hold the 4 pairs of contrasting symbols of the BaGua pattern. As indicated in the commentary to Fig. 1, embedding each pair within a Möbius strip then fruitfully illustrates both their complementarity and the fundamentally illusory nature of their distinction.



The BaGua pattern may be fruitfully explored for insights relative to the current "crisis of crises": [Animation of Classical BaGua Arrangements: a dynamic representation of Neti Neti](#) (2008), [Conditions of Objective, Subjective and Embodied Cognition: mnemonic systems for memetic coding of complexity](#) (2007).

Given the preponderant role of religion in relation to conflicting understandings of global governance, the argument of Stephen Prothero (*God is not One: the eight rival religions that run the world and why their differences matter*, 2011) merits careful consideration in the light of such a pattern (as mentioned above). With each addressing distinct problems, seemingly requiring a distinct mindset, assumptions regarding a unique solution are as questionable as in mathematics. The differences are therefore to be understood as "necessary" -- in order to constitute requisite variety. It is in the paradoxes of the meta-pattern that the inferred connectivity might then reside.

Toroidal cognitive container?

The above argument questions any sense in which an infinity of explanations might be understood as on an infinite flat plane -- a planar cognitive universe. The implicit challenge in that context thus being framed as one of "fitting" the pieces together, as with a jigsaw puzzle (or an electronic equivalent like Tetris). Rather, it is the manner in which the cognitive analogue to space-time is curved, notably by the gravitational wells of "arrogant" beliefs that is then of interest. Possible guides to further reflection on the knowledge/communication universe are provided by hypotheses regarding the toroidal form of the astrophysical universe.

However, present observations cannot exclude the possibilities that the universe has more dimensions and that its spacetime may have a multiply connected global topology, in analogy with the cylindrical or [toroidal](#) topologies of two-dimensional [spaces](#) (Robert Grace, *The Toroidal Universe*, 2002; Paul Halpern, *Is the universe a doughnut?* *Cosmos*, 6 September 2007; *Toroidal Universe N-Body Simulation*, YouTube, 15 January 2011; *Toroidal universe????* *Physics Forums*, 4 March 2010)

Form and medium: As previously discussed (*Beyond the plane: form and medium in terms of the calculus of indications*, 2006), of more immediate relevance are 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). In contrast to the plane surface of a simple matrix, a torus holds an interesting position in the discussion of the relationship between form and medium as fundamental to advanced theories of communication. This notably featured in the work of Niklas Luhmann (*Die Gesellschaft der Gesellschaft*, 1997).

Schiltz notes that form/medium is "the image for systemic connectivity and concatenation", as described by [Humberto Maturana](#) and [Francesco Varela](#). Schiltz notes, that the notion of "space" is the key to reflexivity appropriate to any discussion of form and medium, citing Spencer-Brown as follows:

In all mathematics it becomes apparent, at some stage, that we have for some time been following a rule without being aware of it. This might be described as the use of a *covert convention*. [...] Its use can be considered as the presence of an arrangement in the absence of an agreement. For example, in the statement and theorem... it is arranged (although not agreed) that we shall write on a plane surface. **If we write on the surface of a torus the theorem is not true** [...] The fact that men have for centuries used a plane surface for writing means that, at this point in the text, both author and reader are ready to be conned into the assumption of a plane writing surface without question. But, like any other assumption, it is not unquestionable, and the fact that we can question it here means that we can question it elsewhere [...]

A somewhat related point has been made by R. Buckminster Fuller (*Bias on One Side of the Line* In: *Synergetics: explorations in the geometry of thinking*, 1975, #811.00). What are the implications of the added emphasis above for elaborating psychosocial development strategies?

Explanation on a plane surface: Schiltz then comments (in language that calls for a longer quotation to convey the richness of the subtle argument -- **emphasis added**) :

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' ([Marshall McLuhan](#))....

Spencer-Brown's solution to the problem of many-valued functions is well-known. He constructs a tunnel 'subverting' the plane, and connects the distinguished sides. As hinted to above, the topological qualities of space are thus altered. We are now writing in a space that grants a form the possibility of access to itself, yet denies the possibility of identity with or presence to itself (Michael Schiltz and Gert Verschraegen, *Spencer-Brown, Luhmann, and Autology*. *Cybernetics and Human Knowing* 9, 2002, 3-4). Hence, **we are writing in a space that connects the level of first-order (operand) and second-order (operator) observations. That space is a torus. If considered operationally, distinctions written on a torus can subvert their boundaries and re-enter the space they distinguish, turning up in their own form.** The marked state cannot be clearly distinguished from the unmarked state anymore, leading to the 'indeterminacy' of the form. As the calculus explains, the state envisaged as such is a state not hitherto envisaged in the form. It is neither marked nor unmarked. It is an imaginary value, flipping between marked and unmarked, thanks to the employment of *time*. The form of the **re-entry**, as described here, has been the source of many commentaries....

Such conceptualization diverts sharply from an intuitive understanding of a medium. As seen here, a medium is far from a Euclidean container. Rather is it introverted space, it is identical to the *topology of the form*, it is the form's 'deep structure'.

There is at least the possibility that shifting out of planar articulation of any "peace process" in the Middle East, for example, might clarify more coherent options (*And When the Bombing Stops? Territorial conflict as a challenge to mathematicians*, 2000). What indeed might superstring theory and M-theory suggest?

Schiltz concludes:

If the medium of **meaning** is indeed the ultimate medium of psychic and social systems, i.e. if meaning is 'the medium of itself', then what is its 'form', the distinction through which it can be expressed? I perceive only one answer: the medium of meaning must be identical to the difference between form and medium, and the re-entry of that distinction into itself. Its consequent indecidability is the symbol of our dealing with the world. It expresses the fact that all our attempts to get a hold of the world are doomed to frustration.... Meaning as our *phenomenology* of this world can only be partial, as the difference between form/medium can only be actualized as a form. In mathematical terms: meaning is a **lambda-domain** occupied by communications that, by acting on themselves (= being a function of themselves), produce new communications in the same domain which can in turn act on themselves and further expand the domain. [cf Louis H. Kauffman, *The Mathematics of Charles Sanders Peirce, Cybernetics and Human Knowing*, 8, 1-2, 2001]

Such considerations raise the question as to the nature of the future of comprehension -- and especially of comprehension of

'appropriateness' with respect to issues of governance and/or "elegance" (*The Future of Comprehension: conceptual birdcages and functional basket-weaving*, 1980; *Comprehension of Appropriateness*, 1986; *Enacting Transformative Integral Thinking through Playful Elegance*, 2010).

Embodying realization through waveforms

Waveforms: How best to imagine an "explanation" as a **waveform** -- as music perhaps, implying new ways of thinking about sustainable integration (*A Singable Earth Charter, EU Constitution or Global Ethic?* 2006). The existing use of **sonification** techniques for pattern recognition in fundamental physics and astrophysics offers an early pointer.

An experiential account of how complex waveforms can be directly comprehended, otherwise than through their mathematical description, is provided by **John Elder Robison** (*Be Different: adventures of a free-range aspergian*, 2011). He is renowned for his contribution to the design of musical instruments. His account of his gift may be understood as one description of "seeing":

I didn't relate to math symbols, but I had taught myself to "read" a circuit diagram the way most mathematicians solve equations... The thing was, the calculus concept of integration was a meaningless abstract. Reality for me was the way I added harmonics to a simple wave to turn it from a curve to a sawtooth shape. And I knew how that changed the sound, making it smooth and fat. Ultimately, sound was what mattered. The equations on the page were just dry representations of the sounds I created by applying my vision and imagination....That's the same thing other inventors have realized since the beginning of time....Math is merely a set of tools to represent complex things that have always happened in the real world. If you can see into the patterns of nature, like the movements of the planets or the interplay of musical notes to make a melody... you are seeing the foundation that modern representational math was built upon. (pp. 213-214).

Psychic identity? Research relating to **brain waves**, notably associated with **biofeedback** experience, meditation and the cognitive organization of music, suggests further possibilities for relating any personal sense of identity to waveforms (*Liberation of Integration -- through pattern, oscillation, harmony and embodiment*, 1980; *Emergence of Cyclical Psycho-social Identity: sustainability as "psychically" defined*, 2007). The credibility of such experience is suggested by widespread qualitative reference to "vibration" as "**vibes**".

Given the continuing research into the relationship between brainwaves and cognitive processes -- and thereby into the sense of identity - - the role of music and dance in enabling and sustaining identity is of increasing relevance. Especially intriguing in this respect is the work of Dmitri Tymoczko (*The Geometry of Musical Chords, Science*, 2006) suggesting that through music a sense of circulation is powerfully internalized through a toroidal form or an **orbifold**.

Extraterrestrial perception: Through the argument that "ex-planations" imply cognitive disassociation from the plane of grounded reality, it has been suggested that humans have been effectively transformed into "extra-terrestrials" endeavouring to engage with a flat-earth, two-dimensional world. The associated cognitive dilemmas have long been the delight of mathematicians -- from *Flatland* (1884) to *Sphereland* (1965), their **animated versions** (2007), or even to the hyperdimensionality of a **hypersphere**.

If there is a marked preference of humans to identify with a planar (flat earth) perspective, escape from it through "ex-planation" is potentially to be associated with an "extra-terrestrial" perspective. Like it or not, being thereby "ungrounded", humans are effectively extra-terrestrials -- cognitively -- or, more provocatively, to be understood as passive vehicles of extra-terrestrial perception.

The above argument also raises the possibility that "extraterrestrials" might first be recognized as waveforms (*Communicating with Aliens: the psychological dimension of dialogue*, 2000). Beyond the **mirror test** (mentioned above), might their criteria of self-awareness be extended to encompass the capacity to alternate elegantly between "rock logic" and "water logic", or additional such logics (*Self-reflective Embodiment of Transdisciplinary Integration (SETI): the universal criteria of species maturity?* 2008) ?

Possibilities might extend to the process of formation of waves, standing waves, and the patterns highlighted by **catastrophe theory**. Such speculation might highlight the sense in which conventional reification, as defining answers, is best contrasted with questions from which they emerge (*Conformality of 7 WH-questions to 7 Elementary Catastrophes: an exploration of potential psychosocial implications*, 2006; *Cognitive Feel for Cognitive Catastrophes: Question Conformality*, 2006).

Relationships:The above argument highlights the cognitive challenge implied by use of the logical AND in conjunctions -- typically through use of the ampersand (&) -- and its role in reinforcing the restrictive thinking of binary logic. Setting apparently distinct categories within a Möbius strip clarifies the potentially illusory nature of the distinction from a more fundamental perspective. Hence the comparative advantage of using the lemniscate (**8**) in any conjunction to denote the geometry of the Möbius strip. The latter is also a reminder of the cognitive dynamics of enantiodromia, fundamental to mature learning. Reflecting more closely the cognitively dramatic twist and counter-intuitive nature of enantiodromia, the infinity symbol is also fundamental to more complex forms of mathematics. It also figures prominently on representations of the **magician** in the tarot pack -- a reminder of the magician's skillful interplay of reality and illusion, so evident in modern day "spin".

With respect to the theme of "defining the objective" vs "refining the subjective", the implication of use of the lemniscate might be fruitfully illustrated by contrasting its use in one of the relationships most symbolic for the influential Abrahamic religions:

- Adam and Eve
- Adam & Eve
- Adam ∞ Eve
- Adam 8 Eve

It is only the lemniscate, as indicative of the cognitive paradox of the Möbius strip, which embodies the experiential reciprocity

characteristic of a sustainable learning relationship between "othernesses". Ironically it is the lemniscate which is perhaps best implied in the symbolism of "tying the knot" in some marriage rituals. It is also suggestive of the experience (or re-membering) of others as waveforms -- with their degrees of otherness defined in terms of interference patterns between waveforms.

With respect to Bateson's characterization of the "meta-pattern" as that which defines "the vast generalization that, indeed, it is patterns which connect" (*Mind and Nature: a necessary unity*, 1979), the lemniscate/Möbius strip offers an appropriately dynamic symbol.

Intercourse: Such possibilities emphasize that it is less a question of "grasping" reality, "possessing" it, or "appropriating" it. Rather it might be more fruitfully compared with "dancing with otherness" or with uncertainty.

This could be understood as the artful engagement encompassed by the best of the various senses of intercourse (*Human Intercourse: intercourse with nature and intercourse with the other*, 2007; *Beyond Harassment of Reality and Grasping Future Possibilities: learnings from sexual harassment as a metaphor*, 1996). In that sense, "discovery" might itself be more questionable -- as with the framing offered by Richard Panek (*The 4% Universe: dark matter, dark energy, and the race to discover the rest of reality*, 2011). Will future generations deplore the current obsession with "uncovering" every last secret of nature, depriving them of any possibility of enjoying any sense of the mystery of the unknown?

Meta-challenges of pattern questing

Various approaches merit consideration in clarifying the nature of any "meta-challenges" -- in the spirit of exploring the *Self-reflexive Challenges of Integrative Futures* (2008). They include the nature of "radical coherence" (*In Quest of Radical Coherence: a group design initiative*, 1994), the possibility of self-reflexive initiatives (*Engendering the Future through Self-reflexive Group Initiatives*, 2008; *Consciously Self-reflexive Global Initiatives: Renaissance zones, complex adaptive systems, and third order organizations*, 2007), and whatever may be understood as "union" (*In Further Quest of "Meta-Union"?* 2007). Especially intriguing is the "inconvenient" nature of any new insight (*An Inconvenient Truth about any Inconvenient Truth*, 2008).

Compromise: The argument highlights the need for an artful compromise between:

- taking the risk of reinventing (the wheel) for oneself, potentially ignoring what others have said
- investing in finding out what some have said, where such insights are accessible
- investing in finding out what all have said, irrespective of the constraints
- spending time in questing for possible new insights vs reinventing the old, or relying on it
- seeking reassurance of approval and support of authoritative others vs embodying new possibilities in the face of deprecation
- accepting the possibility of unknowns, ignorance and potential surprises

These are effectively choices in the design of a cognitive vehicle or interface. The challenges of any "universal" or "global" perspective therefore merit consideration in terms of the variety of "individual" or "local" perspectives which are feasible and/or preferred. For the majority, as with ensuring a shelter and protection from the elements, the options appear highly constrained.

Impulse to communicate: Abraham Lincoln makes the point, valid for any new insight or truth (and especially applicable to oneself), that: *You can fool some of the people all of the time, and all of the people some of the time, but you can not fool all of the people all of the time.* Despite this, and other evident constraints on "universal" propagation of a worldview (as noted above), it is a characteristic of those promoting the inherent "rightness" of any worldview (including this one) to adopt one or more strategies:

- acting in terms of the worldview on the assumption that others may resonate with the example
- articulating and affirming the worldview for a limited range of others
- elaborating proof of its relative merits, possibly irrespective of any audience
- endeavouring (thereafter) to instruct, persuade, and convince others of its merits
- enjoining belief, possibly by some form of imposition or force

Other than in the case of a personal or collective philosophy, the process has its problematic consequences in the case of:

- politics: as discussed by Noam Chomsky and Edward S. Herman (*Manufacturing Consent: The Political Economy of the Mass Media*, 1988) -- buy into an ideology, "something to vote for"
- commercial marketing: Vance Packard (*Hidden Persuaders*, 1957) -- "*Buy a Buick, Something to Believe In*"
- religion: the fundamental injunction of the Great Commission in the Christian tradition to spread the teachings of Christianity around the world through missionary work -- to be compared with the Aleinu as the fundamental expression of duty in Judaism and with the commitment of Islam to extending sharia through jihad.
- academic disciplines and assumptions made by some regarding their order of precedence, otherwise framed as a "pecking order" - in contrast with the arguments made by Paul Feyerabend (*Against Method: outline of an anarchistic theory of knowledge*, 1975)

As forms of "memetic reproduction" these instances are all mutually entangled in the (sub-conscious) commitment to human reproduction (and leaving a legacy), irrespective of its consequence for unconstrained global population growth. Does the impulse to communicate derive from a profound need to convince "others" -- a subtle variant of procreation?

Implied question: The quest for the coherence of a worldview -- or any "universal" perspective understood as an "answer" (if only for oneself) -- then fruitfully implies a questioning process to which that answer is the response (*Sustaining the Quest for Sustainable Answers*, 2003; *Critical Thinking vs Specious Arguments*, 2001). How does the experience of questioning relate to the quality of the experience of crises? (*Cognitive Feel for Cognitive Catastrophes: Question Conformality*, 2006). How to sense the nature of the unasked question? (*Abuse of Faith in Governance: Mystery of the Unasked Question*, 2009).

Notably in the spirit of meditation on a Zen koan, this offers the challenge of reflecting on:

- why question? why bother?
- what is the most appropriate question?
- how best to question?
- which question merits priority attention?
- when to question, given that timing may determine the quality of the answer?
- where to question -- anywhere, or somewhere special?
- who is the questioner -- as the ultimate challenge to anyone on a quest?

However, rather than the feverish quest for answers, however premature, the advice of the poet [Rainer Maria Rilke](#) (*Letters to a Young Poet*, 1903) merits consideration:

- *Try to love the questions themselves as if they were locked rooms written in a very foreign language. Don't search for the answers, which could not be given to you now, because you would not be able to live them. And the point is, to live everything. Live the questions now.*
- *Perhaps then, someday far in the future, you will gradually, without even noticing it, live your way into the answer.*

From a Zen perspective, what is the sound of one questioner questioning?

Meta-challenge: Perhaps most intriguing, in the quest for appropriate forms of coherence, are the **implications of the argument for its own formulation** and the justification for doing so, if only to oneself (*Self-reflexive Learnings from Writing*, 2004; *Embodiment of Change: Comprehension, Traction and Impact? Discovering enabling questions for the future*, 2011):

- how best to deal with the plethora of insights variously deemed by some to be highly relevant -- or irrelevant (cf *Musings on Information of Higher Quality*, 1996) ?
- how best to reframe arrays of external insights succinctly through metaphor, as with the possibility of "playing" them, as on the [keyboards of a pipe organ](#) -- in this case of cognitive "organ-ization" ?
- how best to use creative patterning capacity in order to imagine new "organization" ?
- how best to avoid abusive reification -- and other forms of "cognitive violence" ?
- how best to embody externalities and ex-planations out of the plane of the real (*Existential Embodiment of Externalities*, 2009) ?
- how best to "compose a life" and to celebrate the "ending of its song" ([Mary Catherine Bateson](#), *Composing a Life*, 1990; [Harold Bloom](#), *Till I End My Song: a gathering of last poems*, 2010) -- a challenge to academics framed by the "final talk" lecture series ?
- how to integrate previous insights -- now perceived to be outmoded, in the light of subsequent learning ?

Whose reality is it? For whom is the magic of the meta-pattern that connects? How is the quality of that magic destroyed?

It is therefore less a question of explanation (beyond the sense of relevance to others) and more a question of continually improvising forms of presentation offering coherence, nourishment and fulfilment (implying a fruitful relationship with otherness). Thus it is more a question of meta-framing -- how one cognitively "bends" the infinite plane of explanations to create a sense of coherence -- if only for oneself.

Imbuing with significance: With respect to any cognitive vehicle elaborated in this way, possibilities then include ways of framing how to improve its quality and scope in the light of metaphors such as:

- "upgrades" and "adaptations", notably as is typical of computer technology (*Computer Use as Philosophy in Operation: metaphors of the inner game*, 2003)
- musically, as with transposition of key and the potential indicated by the [Goldberg Variations](#) (*Paradigm-shifting through Transposition of Key*, 1999)
- moving up a "periodic table", reappropriating what has been reified by the collective construction of reality and conventional thinking (*Periodic Pattern of Human Knowing*, 2009)
- embodying more complex patterns of geometrical symmetry (*Dynamic Exploration of Value Configurations: polyhedral animation of conventional value frameworks*, 2008)
- imbuing nature with significance, employing its features as carriers of distinct significance (*Existential Embodiment of Externalities*, 2009)

Understood as a "vehicle", whether framed as a "container" or a "carpet", how best to embed the cognitive "wiring" relating the elements essential to its design and integrity, and enabling its effective navigation (*Metaphors as Transdisciplinary Vehicles of the Future*, 1991; *Entering Alternative Realities -- Astronautics vs Noonautics*. 2002; *Navigating Alternative Conceptual Realities*, 2002) ? The constraint of complexity, if only in communicating one's own disparate insights to oneself, is only too evident -- as demonstrated by the plethora of relational links in this document. A vehicle encumbered by "feature bloat"?



This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](#).

For further updates on this site, [subscribe here](#)