



laetus in praesens

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Global Brane Comprehension Enabling a Higher Dimensional Big Tent?

Strategic implication in encompassing nothing and coming to naught

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Introduction

The focus here calls into question personal experiential relationship to a vast "external" framework of knowledge -- elaborated and promoted as a "universal" framework. This framework, to the extent possible, is anchored in a fabricated complex language of formal logic within which certain concepts and insights are held to be demonstrably true. This language effectively marginalizes the experience of those who understand it only partially or not at all. It is imposed upon them as a requirement for effective engagement with reality, with the implication that people should "get with it" or be socially irrelevant. This denies the integrative value for the individual of radical experiential coherence in the moment -- frequently highlighted by personal hardship, tragedy and nostalgia over time.

The argument recognizes the extent to which ignorance and lack of understanding undermine the comprehension of the variety of integrative frameworks -- and the challenges posed by their evident lack of integration, as notably indicated by [Nicholas Rescher](#) (*The Strife of Systems: an essay on the grounds and implications of philosophical diversity*, 1985). Specifically it is framed in terms of the extent to which people:

- are bewildered by claims and counterclaims of the imminent (*Musings on Information of Higher Quality*, 1996)
- do not have the time or inclination to understand, or to invest in lengthy conventional learning processes to that end
- are unclear as to what is to be assumed to be (ir)relevant and why

Under these conditions people find themselves obliged to work with very limited knowledge, irrespective of the wealth of knowledge variously claimed to be available. Distant knowledge is then experienced as irrelevant, if not threatening in some way -- as with acclaimed centres of excellence. The question is then how to factor in such experience experientially when confronted by the sense of passing time and evident mortality. The equivalent collective strategic implications of the "unknowns" have been caricatured in a notorious "poem" by [Donald Rumsfeld](#), as separately discussed (*Unknown Undoing: challenge of incomprehensibility of systemic neglect*, 2008).

Within this context, it is no longer a question of whether some proposition can be upheld as unquestionably "true" within some frame of reference. Rather, as argued here, it is now a question for many of whether it is useful in the moment, carrying a fruitful degree of meaning. This is evident in the manner in which products and services are increasingly marketed to potential "consumers" in whatever domain -- including the political. Success in the short-term in this respect may depend primarily on a "good story", and appealing metaphors, "carrying" the significance for an adequate degree of individual comprehension.

The challenge of thriving in this cognitive environment is then less a question of locating relevant literature, learning the knowledge it contains, or citing it to justify positions to others. Nor is it a question of who has been there before, or any criticism from some other perspective of "rediscovering the wheel". The question might even be the validity of the external frame from which that question could be asked. By whom is one to be persuaded, about what and why -- and why should one seek to persuade? To what extent is any essential incommunicability a matter of [Ludwig Wittgenstein](#)'s concluding phrase: *Whereof one cannot speak, thereof one must be silent* (*Tractatus Logico-Philosophicus*, 1921).

As discussed previously (*Evolutionary influence of the absent*, 2011), with respect to the argument of [Terrence W. Deacon](#) (*Incomplete Nature: how mind emerged from matter*, 2011), a key factor with respect to the emergence of knowledge may be intimately associated with what is missing -- a point succinctly made in the contrast between the print and online summaries of his argument (*The importance*

of what is missing, *New Scientist*, 26 November 2011; *Consciousness is a matter of constraint*, *New Scientist*, 30 November 2011). For Deacon:

... have we been looking in the wrong places for clues? ... brain researchers and philosophers of mind have focused on brain processes, neural computations and their correspondences with the material world. But what if we should be focusing on what is not there instead? ... I believe that in order to overcome this stalemate we need to pay more attention to what is intrinsically not present in everything -- from life's functions and meanings to mind's experiences and values. [emphasis added]

The argument here also draws on that made by Mark Johnson (*The Meaning of the Body: aesthetics of human understanding*, 2007) and separately discussed (*Aesthetics of human understanding through embodiment*, 2011). This emphasizes understanding "through" the body and its dynamics -- recognizing the manner in which such understanding is indeed "embodied" in the capacity for a complex range of muscle-enabled movements. It is through their geometry that an individual embodies fundamental cognitive dynamics.

The argument follows from the epistemological considerations evoked in the previous discussion of "remaindering", most notably with respect to the significance of one and zero in a context in which many are faced with expectations of nothing in a variety of forms (*Reintegration of a Remaindered World: cognitive recycling of objects of systemic neglect*, 2011).

Implicit possibilities of synthesis: Omar Khayyam

Being nothing: The approach is partly inspired by the possibility of an underlying synthesis to the seemingly disparate insights offered by the polymath Omar Khayyám. Various acclamations as the "poet of uncertainty" (in a BBC Documentary series, 2009), the "poet of doubt", and the *Shakespeare of Iran* -- he is recognized as unique in being remembered as both a great poet and a great mathematician [See extensive entry in *Stanford Encyclopedia of Philosophy*]. He is known for his pioneering classification of algebraic equations and especially the development of geometrical solutions to cubic equations through intersection of a hyperbola with a circle. He believed cubic equations could only be solved geometrically by using conic sections. However, as the famed author of the *Rubáiyát of Omar Khayyám*, quatrains such as the following are attributed to him:

*The Worldly Hope men set their Hearts upon
Turns Ashes -- or it prospers; and anon,
Like Snow upon the Desert's dusty Face
Lighting a little Hour or two -- is gone.*

*And if the Wine you drink, the Lip you press,
End in the Nothing all Things end in -- Yes --
Then fancy while Thou art, Thou art but what
Thou shalt be -- Nothing -- Thou shalt not be less.*

Cognitive implications of the geometry of tent-making: There is the provocative possibility that his own insights were influenced by a form of "cognitive intersection" between his original work on the geometry of the so-called *Khayyám-Saccheri quadrilateral*, the form of the poetic quatrain, and his understanding of the circle within the complex of geometric patterns of the Islamic arabesque as abstract art -- with its fundamental philosophical significance in his culture. In the case of Wittgenstein, the nature of such an unconscious influence is fruitfully explored by Susan G. Sterrett (*Wittgenstein Flies a Kite: a story of models of wings and models of the world*, 2005). That Omar Khayyám was born into a family of tent makers, and played with that metaphor in his writings, reinforces the point -- especially when consideration is given to the geometry essential to the viability of tent design. A related argument, with respect to Albert Einstein, has been developed separately (*Einstein's Implicit Theory of Relativity -- of Cognitive Property? Unexamined influence of patent office procedures*, 2007).

To what degree did understanding of the geometry of tents -- in relation to sun, shadow and wind -- influence Omar Khayyám?

*Khayyám, who stitched the tents of science,
Has fallen in grief's furnace and been suddenly burned,
The shears of Fate have cut the tent ropes of his life,
And the broker of Hope has sold him for nothing!*

As with the mystique of the *Da Vinci Code* (2003), there is a case for exploring the possibility of a *Tentmaker's Code* (John Feeney, *Tentmakers of Cairo*, 1986). It has been recognized that thinking about continuous change, as evident in tent design and tensile architecture, can be a unifying theme in the study of geometry (Albert A. Cuomo and E. Paul Goldenburg, *Dynamic geometry as a bridge from Euclidean geometry to analysis*, 1997).

With respect to the following argument, regarding one, zero and nothing, a question is whether the cognitive implications of the geometric understanding of Omar Khayyám are implicitly expressed in the quatrains -- and whether the quatrains might even be "read" as cognitive geometry of some higher order. How might he have understood the relationship between those quatrains and his classification of the tetrachords which were the focus of his famous contribution to the science of music. This treatise provides highly technical commentary on music theory that discusses the mathematical relationship among notes, minor, major and tetrachords.

Irrelevant dispute: Appropriate to this argument is current learned dispute as to whether Omar Khayyám in fact existed, was one or two people, and whether the translations of the quatrains or their attribution are accurate (*Asghar Seyed-Gohrab, Momentary Glimpse -- Final Report of the conference: The Legacy of Omar Khayyam*, 2009). On such matters the following quatrains are ironically relevant.

*Oh, come with old Khayyam, and leave the Wise To talk;
one thing is certain, that Life flies;
One thing is certain, and the Rest is Lies;
The Flower that once has blown for ever dies.*

*Myself when young did eagerly frequent
Doctor and Saint, and heard great Argument
About it and about: but evermore
Came out by the same Door as in I went.*

As with similar dispute with respect to Shakespeare, a more fundamental question with respect to this argument is whether the significance of those quatrains "rings true" -- whatever their origin -- as well as the nature of that "ringing" experience for the individual.

Wine and wisdom: The frequent reference to the fundamental insight derived from "wine" in those quatrains might well be indicative of a more fluid form of logic which various authors now acclaim (Edward de Bono, *Water Logic*, 1993; Douglas Hofstadter, *Fluid Concepts and Creative Analogies: computer models of the fundamental mechanisms of thought*, 1995), and separately discussed (*Enabling Governance through the Dynamics of Nature: exemplified by cognitive implication of vortices and helicoidal flow*, 2010). The nature of "flows in higher dimensions" is a theme explored by Robert Gilmore and Marc Lefranc (*The Topology of Chaos: Alice in Stretch and Squeezeland*, 2002).

*You know, my Friends, how long since in my House
For a new Marriage I did make Carouse:
Divorced old barren Reason from my Bed,
And took the Daughter of the Vine to Spouse.*

*For "is" and "is-not" though with Rule and Line,
And, "up-and-down" without, I could define,
I yet in all I only cared to know,
Was never deep in anything but -- Wine.*

This forbidden preoccupation with "wine" may be readily understood, and hailed, as specifically undermining the anti-alcohol tenets of Islam (Norman Berdichevsky, *Omar Khayyam's Rubaiyat: an antidote for Islamic Fundamentalism*, *New English Review*, November 2007). However it may be more fruitfully understood in terms of preoccupation with a seemingly hidden cognitive modality which could not be adequately formulated within that framework -- nor within other logical frameworks of today.

The "wine" to which he refers may be understood as a form of wisdom (*The Wine of Wisdom: the life, poetry and philosophy of Omar Khayyam*, 2005). As expressed by Ivan M. Granger (*And much as Wine has play'd the Infidel*, *Poetry Chaikhana: Sacred Poetry from Around the World*):

Here Omar Khayyam is speaking of the Infidel wine with an ironic double meaning. On the one hand it is the forbidden earthly drink in the Islamic world, the drink tasted only by "Infidels."... On the other hand, wine is the promised drink of paradise. In the very foundations of Islam, wine has had a dual nature, from the profane to the most sacred -- and Sufi poetry loves to play with this paradox.

For Khayyam, it is the heavenly wine, the drink of bliss that has played the Infidel by robbing him of his "Robe and Honor." This is a reference to how the nondualistic perspective that overwhelms you in deep bliss makes all distinctions and social roles, even religious roles and positions of honor, empty. You recognize yourself as essentially whole, even though you stand naked, stripped of the robes of social position. The Infidel Wine has made you an infidel to the outer forms of religion and social honor.

We are all of us "Vintners," makers of the wine of divine union. But, Khayyam asks, what can we buy in the world -- money, power, position, fame, companionship -- that is even half as valuable as the heavenly wine we waste in order to gain those things? It is best to spend our lives in quiet fermentation, cultivating within ourselves heavenly wine, and drinking deeply until we become drunk in indescribable joy!

Towards higher dimensional "tent-making"?

"Tent" as metaphor shared by Abrahamic religions: In a period in which the global challenges of faith-based governance are becoming ever more evident, it is curious that a fundamental metaphor shared by the Abrahamic religions in conflict is that of the tent. One example is the tradition of "big tent" assemblies of the World Council of Churches (Jerry Van Marter, *Together on Holy Ground: Inspiration Inside the Big Tent*). Another example is that of the **Tabernacle** of fundamental significance to the Hebrew tradition, as noted by Bonnie Roche (*The Mishkan as Metaphor -- Form and Anti-form: on the Transformation of Urban Space*, *Cross Currents*, Fall 2002, 52, 3):

What we once knew in the ancient world, more than ever, has relevance today; that the ancient Mishkan, the tent assembled and disassembled for forty years throughout the journey of the People of Israel, was critical to creating and holding a newly formed community from a nomadic people in a land that was ownerless and free. The Mishkan became a vehicle for spiritual rootedness within nomadism, within mobility

Metaphor of the "Big Tent": The role of this metaphor is now actively considered within those religions, and to some degree as a

means of framing their assembly into a more fruitful relationship. Examples of commentary to that effect notably use the metaphor "big tent" -- including an early reference in *The Economist* (*Religious Tolerance: a big tent*, 14 October 2004). It has been the focus of a recent conference (Phoenix, February 2011), as summarized by Ray Cook (*Big Tent for Israel: a day to remember*, 29 November 2011). Other references include:

- Thomas Keene (*Heaven is a Tent: the tabernacle as an eschatological metaphor in the Epistle to the Hebrews*, Westminster Theological Seminary, 2010)
- Philip Clayton (*Seeking Common Ground in 'Big Tent' Christianity*, *The Huffington Post*, 2009 1/10)
- Rachel Heller (*The Big Tent: Jews, Muslims, Christians celebrate spirituality in a shared sacred space*, *JewishJournal.com*, 21 December 2011)
- Adam Walker Cleaveland (*Big Tent Christianity - Phoenix: A Review*, *POMOMusings*, 23 February 2011)
- Jim Burklo (*Abraham's Big Tent*, *ProgressiveChristianity.org*, 2006)
- Cynthia B. Astle (*Big Tent Christianity: Progressives, Emergents Find Common Ground at National Event*, *The Progressive Christian*, 13 February 2011)
- Yahya Birt (*Big Tent Islam in America*, *Emel Magazine*, October 2007, 37)

The "big tent" metaphor was originally proposed by Colin Elman (*Horses for Courses: Why Not Neorealist Theories of Foreign Policy? Security Studies*, 1996) as a means of framing the current state of political realism. In politics, a **big tent party** or catch-all party is one seeking to attract people with diverse viewpoints. The use of the metaphor is discussed by Jonas Daub (*The Tent of Political Realism, International Relations*, 4 November 2010):

Realism, or to be more precise and to avoid any confusion with the identically named philosophical term, *political realism*, is one of the most prominent theories in the study of International Relations and has had great influence on both academic thinkers and politicians over many generations. In fact it is still a very important approach for analysing the international system and has many implications for international politics today. It is a very broad and diverse realm, offering a place for various ideas and concepts. As a consequence some writers do not describe it as a theory, but as a "general orientation" or "philosophical disposition with a recognizable attitude of mind" The aim of this essay is to examine this "tent of realism" in order to find the essential features of political realism and whether the diversity inside this tent is justified.

The metaphor has also been used as indicative of a process, as in relation to the **Occupy Wall Street** protests (*'Occupy' goes big-tent*, *New York Post*, 8 November 2011).

Higher-dimensional "tent-making": There is therefore a case for considering that **some psychosocial analogue to "tent-making" may be of significance to the preoccupations shared by the Abrahamic religions in their various efforts to consider the design of a "big tent"**. Missing from commentary on those initiatives is the possibility that designs of requisite complexity may need to be envisaged in dimensions greater than three -- as implied by the mathematical work on **q-analysis** and social connectivity of Ron Atkin (*Multidimensional Man; can man live in 3-dimensional space?*, 1981; *Combinatorial Connectivities in Social Systems; an application of simplicial complex structures to the study of large organizations*, 1977) and separately summarized (*Social organization determined by incommunicability of insights*, 1995).

The **string theory** of theoretical physics (and the related **M-theory** and **brane cosmology**) envisages the existence of a **brane**, (or membrane) as a spatially extended mathematical concept. The membrane exists in from 0 to 11 dimensions. Mathematically "membranes" and "tents" are both characterized as **tensile structures** whose higher dimensional analogues can be explored -- as in the case of so-called **tent maps** (Pierre Quinon Gauthier, *Higher dimensional analogues of the tent maps*, 1987). Tensile structures feature have been explored as the key to molecular self-organization in biological cells, most notably through the work of **Donald E. Ingber** (*The Architecture of Life, Scientific American*, January 1998; *Cells as Tensegrity Structures*, 1985). He argues that a universal set of building rules seems to guide the design of organic structures -- from simple carbon compounds to complex cells and tissues. Identified as principles of **tensegrity**, namely tensional integrity, their role with respect to cellular membranes could be seen as "tent-making" (and "sail-making") on a micro-scale -- of potential relevance to psychosocial organization (*From Networking to Tensegrity Organization*, 1984).

In the light of the cognitive modality within which Omar Khayyám may have functioned mathematically as an extraordinary "tent-maker", it is appropriate to consider that his references to "wine" may even have constituted allusions to a degree of understanding of cognitive analogues to the "branes" of string theorists. In his case however, as an acknowledged polymath (possibly even "afflicted" by **synaesthesia**), this understanding may have been associated with a form of cognitive engagement "beyond" the formal preoccupations of the physicists of today (*Degrees of Cognitive Engagement with Interrelated Global Categories*. 2009).

Simplistic use of tent metaphor: By contrast, at a time of widespread rumours and threats regarding an impending destructive intervention by the USA into the homeland of Omar Khayyám, it is appropriate to record the simplistic use of the "tent" metaphor to articulate US foreign policy, as noted by **William Safire** (*A Hot Metaphor Emerges*, *The New York Times*, 2008/01/06) in commenting on the US **National Intelligence Estimate** (NIE):

"The most difficult aspect of developing a weapons program," said President George W. Bush, trying to counter the CIA's NIE-jerk relaxation response to Iran's nuclear ambitions, "or as some would say, the **long pole in the tent**, is enriching uranium". Who are the "some" who would so say? One of the **long pole-vaulters** is the national security adviser, Stephen Hadley, who said the day before, "Weapons-grade uranium is the **long pole in the tent** for a nuclear weapon."

Use of a tent in relation to governance became a focus of considerable media attention and diplomatic embarrassment through use, as a

residence, of a large traditional Bedouin tent by [Muammar Gaddafi](#) as president of Libya -- most notably in the course of his official visits around the world. It was a replica of the original one set next to the ruins of Bab al-Azizia, Gaddafi's headquarters bombed by the U.S. in 1986. Its fate became uncertain following the alleged bombing of Libya by NATO forces "back to the Stone Age" in 2011 ([Gaddafi's tent gets a blow by high wind of change](#), *Al Arabiya*, 23 February 2011; [New Libya replaces Gaddafi's tent at UN](#), *Ahramonline*, 20 September 2011).

Such strategic oversimplification, and its implication in enabling the destruction of civilizations, is curious for a global civilization -- purportedly "knowledge-based" and exploring the possibilities of "collective intelligence" and even the emergence of a "global brain" ([Simulating a Global Brain: using networks of international organizations, world problems, strategies, and values](#), 2001; [From ECHELON to NOLEHCE: enabling a strategic conversion to a faith-based global brain](#), 2007).

Global brane?: In the spirit of [technomimicry](#), given the focus on "branes", there would appear to be a case for exploring the requisite strategic complexity in the light of a "global brane" -- following its consideration in theoretical physics (Yongli Ping, Lixin Xu, Chengwu Zhang, Hongya Liu. [Dark Energy in Global Brane Universe](#), *Int.J.Mod.Phys*, 2007). The concern in what follows is how any individual brain could engage with the integrative globality of such insights. **Might it be the case that the ordering of the multidimensional insight of a polymath such as Omar Khayyám is indicative of the nature of a "global brane" which his worldview exemplified?**

As discussed separately ([Higher dimensionality as the prime characteristic of human consciousness?](#) 2003), physicists make much of how inaccessibly small (10^{-33} cm, the Planck length) is the "curled up" fifth-dimensional space from which humanity is divorced -- and of how much energy would be required to demonstrate its existence. With only four dimensions of the 10-dimensional universe in which people live being accessible to the everyday senses, string theory attests that the missing six [extra dimensions](#) are to be understood as "wrapped" up on themselves, or "curled up" in bizarre structures known as [Calabi-Yau manifolds](#) or on [orbifolds](#). Their "existence" has been proved by [Shing-Tung Yau](#). By a process of "symmetry breaking", the remaining parts of the higher dimensional pattern are then considered to be "hidden" as a result of [compactification](#), as explained by Shing-Tung Yau and Steve Nadis ([The Shape of Inner Space: string theory and the geometry of the universe's hidden dimensions](#), 2010) and separately discussed ([Engaging with the symmetry of "bloodless categories"](#), 2011).

There is an ultimate irony to the possibility that it is precisely this infinitely small high-dimensional space that is in some way the locus of what scientists have been unable to "locate" inside the body -- namely whatever constitutes "life" or, in its higher dimensions, "soul" or "spirit". Humans may have a much more intimate relation to such higher dimensions -- in fact this "intimacy" may be precisely what characterizes consciousness, the sense of selfhood, insight, and wisdom.

Information vs. Outformation

Psychology of geometry: There is some consideration of the philosophy, epistemology and psychology of geometry, notably following from the work of [Ernst Mach](#) ([On the Psychology and Natural Development of Geometry](#), 2011). [K. R. Coventry](#) and colleagues have provided a focus for a "psychologically-plausible model for spatial language". Indications of the literature on the "geometry of meaning" are provided by Reinhard Blutner and Peter beim Graben ([Linear Algebra and the Geometry of Meaning](#)). They note that geometric models of meaning have become increasingly popular in natural language semantics and cognitive science.

"Geometry" is mathematically implicit in the representation and description of knowledge as offered by:

- [vector space model](#): Vector space model (or term vector model) is an algebraic model for representing text documents (and any objects, in general) as vectors of identifiers, such as, for example, index terms. It is used in information filtering, information retrieval, indexing and relevancy rankings. Its first use was in the SMART Information Retrieval System.
- statistical text analysis techniques such as [Latent Semantic Analysis](#) (LSA), [Hyperspace Analogue to Language](#) (HAL), and Latent Dirichlet Allocation (LDA) have demonstrated that highly useful and reliable information can be extracted from word [co-occurrence](#) information in text. LSA is a technique in natural language processing, in particular in vectorial semantics, of analyzing relationships between a set of documents and the terms they contain by producing a set of concepts related to the documents and terms (Thomas K. Landauer, [Latent Semantic Analysis: a theory of the psychology of language and mind](#). *Discourse Processes*, 27, 1999, 3, pp. 303-310)

Embodied cognition: The question evoked here is the extent to which learning "through" the body, as argued by Mark Johnson ([The Meaning of the Body: aesthetics of human understanding](#), 2007), has been ignored in favour of "formal technomimicry". The latter process is then to be understood as learning through the cognitive "technology" of external formalization, notably as articulated in geometry. This is then to be contrasted with a form of "[biomimicry](#)", namely a learning through the geometry as articulated by the body and its dynamics. The cognitive implications of their relationship have been discussed separately ([Technomimicry as analogous to biomimicry](#), 2011).

It might then be said that there is an unrecognized degree of "cognitive entrapment" in convention as a form of technomimicry. Acculturation can then be understood in this light. There is a questionable degree of displacement from actual subjective experience into objectivity (Max Deutscher, [Subjecting and Objecting: an essay in objectivity](#), 1984).

The issue of "what the body knows" has notably been explored in relation to dance and movement (Maxine Sheets-Johnstone, [The Primacy of Movement](#), 1999; [Kinesthetic experience: understanding movement inside and out](#), *Body, Movement and Dance in Psychotherapy*, 2010). A 12-part Standard Scale is a feature of the movement analysis of the [Laban dance notation](#) (Rudolf Laban, [Choreutics](#), 1966).

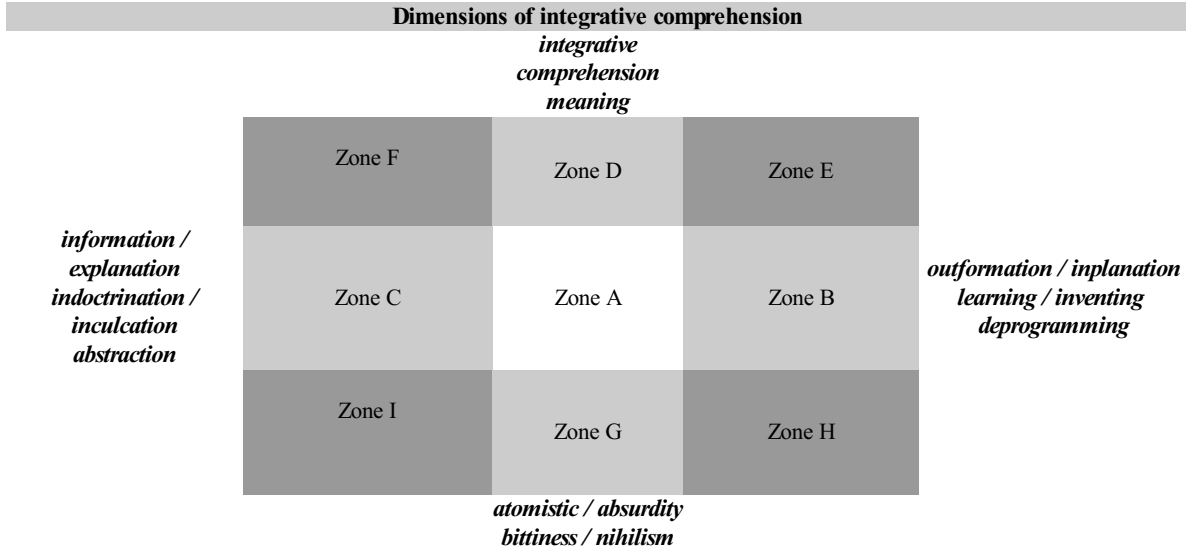
"Outformation" and "inplanation"? It might then be asked what is the range of things the body "knows", notably through its dynamics, as previously explored ([Defining the objective ∞ Refining the subjective ?! Explaining reality ∞ Embodying realization](#),

2011).

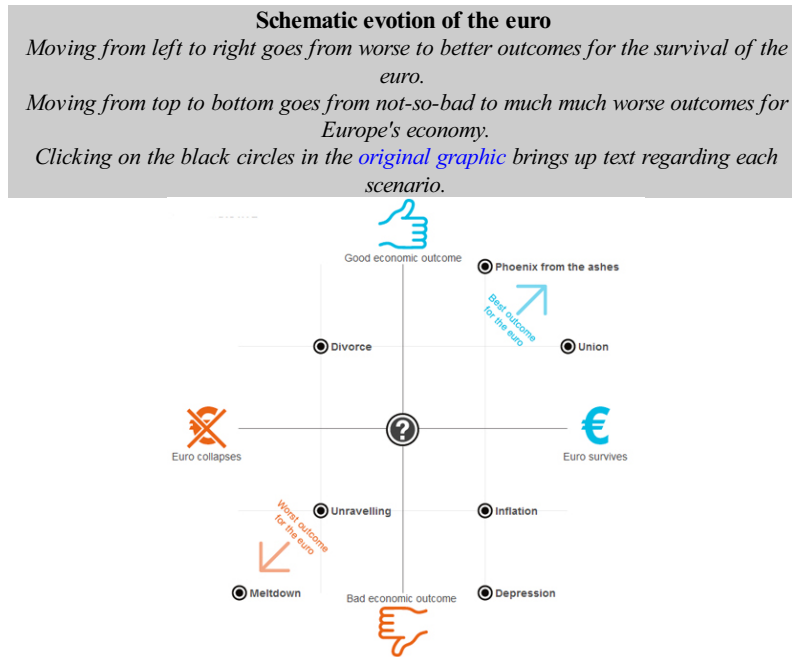
The following schematic offers a way of considering the interrelationship between the issues under discussion. A distinction can be made between:

- "information" -- as imposed by a form of external grooming -- marketing, propaganda, indoctrination, "training"
- "outformation" -- placing the emphasis on creative engagement, notably through embodiment

The absence of embodiment, and the reliance on "externalities", may then be understood in terms of meaning *less* (*Existential Embodiment of Externalities*, 2009). The art is then presumably to avoid shifting the cognitive centre of gravity too far in any direction.



This pattern can be fruitfully compared with a recent interactive indication of the [possible outcomes of the eurozone crisis](#) (*BBC News*, 9 December 2011) as follows -- with analogous implications for global governance:



The first variant of the pattern suggests the possibility of exploration of cognitive "transactions with reality" (*Cardioid Attractor Fundamental to Sustainability: 8 transactional games forming the heart of sustainable relationship*, 2005). Of particular interest is the manner in which "information" (assumed to be objectively "external") can indeed result in cognitive "in-formation" (possibly pejoratively described as "programming"). Similarly the countervailing process of "outformation" as suggested here (assumed to be subjectively "internal") is indeed to be associated with enacting and constructing the experience of external reality. The geometry of this inner-outer relationship can be fruitfully explored through the *Möbius strip* and the *Klein bottle*, as discussed separately (*Embodying the paradoxical dynamics of polarization*, 2011), most notably in relation to the work of *Steven M. Rosen* (*Topologies of the Flesh: a multidimensional exploration of the lifeworld*, 2006; *Bridging the "Two Cultures": Merleau-Ponty and the Crisis in Modern Physics*, 2008).

Metaphorical truth: To the extent that conventional collective issues of governance can be explored as misplaced technomimicry, this opens the way to considering how, as metaphors, they "disguise" more fundamental insight into the vehicles appropriate to the carriage of meaning (*Metaphors as Transdisciplinary Vehicles of the Future*, 1991). What then are the cognitive issues in the moment for the individual of : transportation, energy, shelter, employment, nourishment, security, learning? A summary of more extensive discussions of

this question has been presented separately (*Degrees of Cognitive Engagement with Interrelated Global Categories*, 2009).

Writing on the relationship between tropes and truth in terms of the paradox of "tropical truth", Herbert L Colston (*Irony, Analogy and Truth*, 2010):

On one level, tropes have the characteristic of enhanced truthfulness, in terms of both depth and breadth, in that their comprehension can tap into deeply embedded meaning motivation mechanisms and their applicability can spread across multiple layers of fact about the world and thus can seem deeply and broadly true. But at the same time, tropes achieve this enhanced truthfulness with a greater disconnection with their referent topics on the seemingly central function of semantic meaning. Put simply, *tropes are more true, by not being true.* (p. 344)

With respect to this paradox Colston continues:

My contention is that such a paradox is only apparent on the surface. A deeper look at the notions of language, truth and meaning clarifies the picture. Tropes make use of a wide variety of embodied sensory, perceptual, cognitive, linguistic, semiotic, social, cultural and other mechanisms in their conveyance of meaning. In doing so they are powerful tools for affecting feeling, belief, comprehension, knowledge, attitude, intimacy, ingratiation and a host of other facets of a shared conscious life. They are this quite adept at ringing true for people. (p. 344)

With respect to the following argument however, the insight of Kenneth Boulding is relevant:

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)

Engaging with information: The situation Boulding describes might itself be described through the metaphor of walking through a forest -- a forest of knowledge trees between which birds fly. Through that frame, understood in terms of biomimicry, there is an obligation to engage to varying degrees with the distracting "bird calls" and "birds" as vectors of "persuasive" information -- through which a global sense of comprehension may possibly be derived. The forest is therefore a challenge to comprehension for survival and thrival.

Within that context, "governing" exposure to information is necessarily an issue, most notably in relation to any disempowerment from information overload. As with exposure to light, this has been described in terms of "opening" and "closing" by Orrin E Klapp (*Opening and Closing; strategies and information adaptation in society*, 1978; *Overload and Boredom: essays on the quality of life in the information society*, 1986). The challenging dynamic is readily understood in a large library or through the facilities offered by a web search engine (*Musings on Information of Higher Quality*, 1996). It is dramatized by limitations on attention span and the ease through which any focus may be lost in the quest for fruitful connectivity. Cognitively the subtleties may even be described in terms of an "elven" mythical quest (*Walking Elven Pathways: enactivating the pattern that connects*, 2006; *Climbing Elven Stairways*, 2007).

Aesthetic relevance: The use of the poetic medium by Omar Khayyám, as a complement to the mathematical, might then be understood in the light of the argument of Gregory Bateson as a semiotician and social scientist:

One reason why poetry is important for finding out about the world is because in poetry a set of relationships get mapped onto a level of diversity in us that we don't ordinarily have access to. We bring it out in poetry. We can give to each other in poetry the access to a set of relationships in the other person and in the world that we're not usually conscious of in ourselves. So we need poetry as knowledge about the world and about ourselves, because of this mapping from complexity to complexity.

*Of knowledge naught remained I did not know,
Of secrets, scarcely any, high or low;
All day and night for three score and twelve years,
I pondered, just to learn that naught I know.*

What follows is an exploration of the nature of the cognitive experience of "naught" to which Omar Khayyám may have been alluding as a 12th century Middle Eastern polymath -- prior to the first recognition of "zero" in the West in the 13th century.

Nothing, naught, nought and zero

"Nought" and "naught" are occasionally recognized as distinct, with "nought" being primarily used in a literal arithmetic sense (as the number 0). "Naught" is used in poetical and rhetorical senses, where "nothing" could equally well be substituted (as when an initiative "came to naught"). An older sense of "naught" as meaning "bad" is still preserved in the word "naughty", with "naughty child" as originally meaning a "good for nothing child". Such problematic connotations remain evident in pejorative characterization of a person as a "zero" or a "nobody" -- and the early banning of the use of "0" after it was first introduced to the West.

There is a degree of current relevance to the elusive nature of "nothing" through its various connotations. This is partly indicated by the crises of globalization -- a strategy which could well be criticized by some as having "come to naught" in its present form. At the time of writing the Occupy movement is focusing the concerns of many who perceive the conventional strategies of governance as offering

them "nothing" -- after having irresponsibly facilitated processes through which people were deprived of "everything". Faced with the prospect of "nothing", many experience a sense of emptiness in their lives (*Implication of Personal Despair in Planetary Despair*, 2010). This problematic situation is compounded by forms of official denial which are reminiscent of the banning of psychosocial consideration of "zero" by the West when it was first introduced.

The relevance of "nothing" is also brought into focus through current international threats of "annihilation" of one country or another -- framed by the earlier strategy of *Mutually Assured Destruction* (MAD). Ironically, presumably indicative of a condition preceding actual annihilation, would seem to be the discussion of threats of "bombing back to the Stone Age" (Nick Cullather, *Bomb them Back to the Stone Age: an etymology*, *History News Network*, 5 October 2006; *NATO has bombed Libya back to Stone Age*, 19 October 2011).

The significance and signification of zero and nothing continue to evoke commentary (Brian Rotman, *Signifying Nothing: the semiotics of zero*, 1993; Charles Seife, *Zero: the biography of a dangerous idea*, 2000). At the time of writing, a particular focus on "nothing" is provided by a special issue of the *New Scientist* (*Nothing: the intangible idea that rules the cosmos*, 19-23 November 2011), introduced by theoretical physicist *Brian Greene* (*Nothingness: Why nothing matters*). For Greene:

Shakespeare had it right, even in ways he couldn't have imagined. For centuries, scientists have indeed been making much ado about nothing -- and with good reason. **Nothing, or rather what we've long taken to be nothing, may be the key to understanding everything** from why particles have mass to the expansion of the universe... nothing is a rich and subtle subject whose biography is far from finished.... Since the time of Newton, we have thus gradually realised that nature has masked the identity of nothing with a Shakespearian deftness. With the relentless rise of science, we have slowly peeled back the obscuring layers, revealing vital intangibles at the very heart of reality, a grand triumph for nothing. *[emphasis added]*

Appropriate to this argument, Greene is author of *The Hidden Reality: parallel universes and the deep laws of the cosmos* (2011).

Physics offers a new sense to "annihilation" in recognizing it as the process that occurs when a subatomic particle collides with its respective antiparticle. Given the requirement that energy and momentum be conserved, the particles are not actually made into "nothing", but rather into new particles.

The themes evoked in that special issue are discussed separately (*Fundamental integrative role of nothing -- the ultimate remainder?* 2011). For Robert Kaplan (*The Nothing That Is: a natural history of zero*, 2000):

If you look at zero you see nothing: but look through it and you will see the world. For zero brings into focus the great, organic sprawl of mathematics, and mathematics in turn the complex nature of things. (p. 1)

Why should zero, that O without a figure, as Shakespeare called it, play so crucial a role in shaping the gigantic fabric of expressions which is mathematics? Why do most mathematicians give it pride of place in any list of the most important numbers? (p. 2)

Why had it taken so long to signify nothing? Why was the use of zero after that still so hesitant? And why, having surfaced, did it submerge again? The reasons reach down to the ways we turn thoughts and words into each other, and the bemusement this can cause, then as now. (p. 14)

Nature abhors a vacuum and so do we. Zero, we've seen, is intricately woven into the workings of our thought, but the temptation time and again has been to look for its original outside of the mind, in physical space: a silent desert amid the clamor of oases. We may be disappointed. (p. 175)

Zero is neither negative nor positive, but the narrowest of no-man's lands between those two kingdoms. (p. 190)

We have come to know zero intimately in its mathematical, physical and psychological embodiments. It remains elusive. (p. 203)

Kaplan concludes by citing Wittgenstein:

For Wittgenstein...language built on logic, could only say what *isn't*: but that by sighting along it -- looking where it pointed -- we could see what is; and *Whereof one cannot speak, thereof one must be silent*. This was the famous conclusion of his *Tractatus Logico-Philosophicus*... (p. 215)

Conclusion

Coming to naught: There is a widely remarked sense in which global strategic initiatives have "come to naught" -- especially in the light of the manner in which many sense that they have been left with "nothing" or can expect "nothing" from the future. What has been promoted as what "ought" to be has resulted in the most problematic forms of "nought". Such perceptions are of course vigorously denied by those who are replete with the "something" they have achieved, or to which they look forward. Much is invested by them in distracting those left with "nothing" in order to cultivate an illusion of the accessibility of "something" for everyone.

Global civilization is marked by the condition well described with respect to the Roman Empire: *Panem et Circenses*. That sense of "circus" is curiously echoed by the domains to which circus is now applied as a metaphor, such as the "media circus" and the "political circus" and by extension to the "financial circus" and "casino capitalism" which has proven so disastrous in engendering "nothing" for so many. The sense of a circus tent is highlighted by references in Ireland to the "Galway Tent" (George Taylor, *Risk and Financial Armageddon in Ireland: the politics of the Galway Tent*, *The Political Quarterly*, October-December 2011). As a temporary structure

co-incident with the annual [Galway Races](#) -- reputedly the location of choice for conspiracy and covert policy making -- the Galway Tent has negative connotations due to the manner in which such practices exacerbated the recent economic crisis in Ireland. Subsequent denial has given rise to the phrase *I was never a Galway Tent type* -- permitting deniers to have physically been there, excused by a mental reservation (Terry Prone, *Updated Devil's Dictionary sorely needed to redefine modern Ireland*, *The Irish Examiner*, 4 January 2010).

Big Tent: The dramatic crises engendered by the faith-based governance inspired by religions in conflict have resulted in recent recourse to the metaphor of the "Big Tent" to encompass and reconcile differences. Necessarily, however unfortunately, none has the ability to use its particular insights to design a tent that is more than exclusive. It is in this sense that insights from Omar Khayyám are of relevance -- as an inspired "tent-maker" and acknowledged polymath. Especially relevant is the contrast he explicitly offers between the "naught", which was the outcome of his life-long initiatives, and the transcendent nature of the "wine" which so inspired him.

If tent-making is to be understood as a way of encompassing "space" -- of encompassing nothingness -- the question is whether the geometry of "tent-making" can be extended into higher dimensions of cognitive and existential significance. The archetypal [Round Table](#) may well imply a "12-dimensional" understanding of such a possibility (*Eliciting a 12-fold Pattern of Generic Operational Insights*, 2011). In that sense geometry may well offer a form of "ladder to the stars" -- a [Jacob's Ladder](#), shared as a metaphor by the Abrahamic religions, like the tent.

Discourse of higher order: Does this suggest that there is a mode of discourse of "higher order" to be discovered, as separately suggested (*Enabling a 12-fold Pattern of Systemic Dialogue for Governance*, 2011)? Given the increasingly evident strategic inadequacies of discourse in global meetings -- potentially to be understood as "Big Tents" -- is there then a case for relating the subtlety of the required insight to that of the challenge of so-called [M-theory](#) in reconciling the 11 dimensions of string theory? An elusive meeting theory -- mnemonically an "M-theory" for gathering globally? Is the "bigness" of a "Big Tent" then to be understood in terms of its dimensionality -- with the inspiration offered by the [E8 symmetry groups](#), namely any of several closely related [exceptional simple Lie groups](#) whose visual renderings are so reminiscent of the meditation aids of some spiritual traditions (as in the images below) ?

"Con-tentment"? Use of "tent" in several words offers scope for fruitful reflection. How is the "content" of discourse in a Big Tent to be reframed and understood? Especially relevant is the sense, suggested by the "Galway Tent", that a degree of confidence trickery may be enabled -- hence "con-tent". This suggests a need for a special kind of questioning on the part of those who might otherwise be duped by that context (*Engaging with Questions of Higher Order: cognitive vigilance required for higher degrees of twistedness*, 2004).

Also of relevance is the sense in which a Big Tent is associated with a more profound degree of confidence and the potentially problematic implications of ensuring global "con-tentment" (*Primary Global Reserve Currency: the Con? Cognitive implications of a prefix for sustainable confidence*, 2011). Understood in relation to any encompassing belief, this is indicative of the need for a mathematics of the "envelopment" provided by a tent of higher dimensionality (*Mathematical Theology: future science of confidence in belief*, 2011). Furthermore, given the variety of "in-tent" which the geometry of a Big Tent would need to hold, the challenge implied by any perceptions of "out-tent" could only be met by the paradoxical topology of structures such as the Möbius strip and the Klein bottle, as explored by Hofstadter and Rosen (as noted above).

Getting a sense of the meeting: Whether an archetypal Round Table of 12 "dimensions" or the above-mentioned question of Terrence W. Deacon (2011) -- *have we been looking in the wrong places for clues?* -- the question is how to obtain a sense of the requisite dynamics of a Big Tent appropriate to global governance. What kinds of experimental discourse might offer indicators -- inspired by the absence of Omar Khayyám? Those between the physicist [David Bohm](#) and the spiritual philosopher [Jiddu Krishnamurti](#) offer an indication (*Limits of Thought: Discussions*, 1999; *The Ending of Time*, 1985), as with those separately instigated by both or in other configurations (Jiddu Krishnamurti, et al. *The Nature of the Mind*, 2005). The latter suggests a "4-dimensional pattern".

The reflections of Bohm are especially relevant to his argument (*Wholeness and the Implicate Order*, 1980; *Meaning And Information*, 1989). Deacon's question is however a key to the limitations of those experiments and their dynamics -- if the discussants are to be understood as seeking agreement, rather than according recognition to the nature of what is absent (*The Consensus Delusion: Mysterious attractor undermining global civilization as currently imagined*, 2011).

This suggests the possibility of a form of Round Table in which the "dimensions" represented by the discussants were as great as can be imagined and the "discipline" was itself of a higher order -- as yet to be discovered, but for which multi-part singing and poetic jousting offer as yet unexplored indications (*Clues to patterns of dialogue from song*, 2011; *Strategic Jousting through Poetic Wrestling*, 2009). In that mode, and in a spirit of self-reflexivity, what might be learned from a critical evaluation of the process of the [The Edge Foundation](#) whose objective is: *To arrive at the edge of the world's knowledge, seek out the most complex and sophisticated minds, put them in a room together and have them ask each other the questions they are asking themselves?*

Oversimplistic tents: It might be understood as most curious in an era of global civilization that those with "nothing", especially refugees, remain highly dependent for physical shelter on some form of tent -- with the consequent emergence of semi-permanent "[tent cities](#)". Little consideration is however given to the nature of their needs for subtler forms of cognitive and existential shelter. Possibly to be considered as of great symbolic significance at this time is the widely viewed "[Tent Monster](#)" incident (December 2011) involving the [Melbourne group of the Occupy movement](#) -- with the subsequent hilarious attempt by the Melbourne police to "[undress](#)" a women dressed in a tent.

This makes dramatically apparent how humour elicits a higher order of logic and integrity than that employed in the conventional strategies of governance (*Enacting Transformative Integral Thinking through Playful Elegance*, 2010). The "undressing" process is ironically reminiscent of official efforts to reduce women dressed in a *burkha* -- often described as a form of tent -- to Western conventions of leaving nothing unexposed (except the eyes) in contrast to Islamic conventions of leaving nothing exposed (except the eyes), as separately discussed (*Burkha as Metaphorical Mirror for Imperious Culture?* 2009).

Given the current use of the tent metaphor in relation to the potential "annihilation" of countries in the Middle East, there is a case for intelligent exploration of tents of a higher order of complexity.

Weaving threads: Collective tent-making may be explored as a metaphor both in terms of "membranes" (collective "memory branes") and the higher orders of "weaving" of the "threads" of discussion to engender such membranes (*Interweaving Thematic Threads and Learning Pathways*, 2010; *Interweaving Contrasting Styles of Remaindering*, 2011; *Warp and Weft of Future Governance: ninefold interweaving of incommensurable threads of discourse*, 2010).

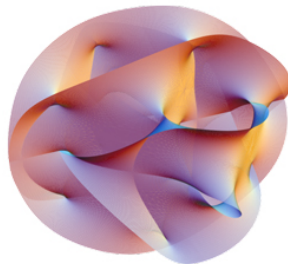
Appropriate to this argument, a "visual rendering" of the E8 symmetry group (presented below) was constructed by interweaving threads. The pattern so created is reminiscent of the [sand mandalas](#) characteristic of practices of Vajrayana Buddhism, which are also a key part of anuttarayoga tantra meditation practices.

Potentially highly suggestive of the dynamic interweaving of "global brane discourse", characteristic of Big Tent emergence and self-organization, are the marvels of the weaving and twisting in [bird flocking patterns](#) -- and their equivalent in some swarms of fish. These can be seen as temporarily weaving recognizable "membranes" -- of which the representation below of the Calabi-Yau manifold is reminiscent. Separately these have been compared with *Memetic flocking dynamics through Twitter* (2010) -- as presaging a possible re-emergence of the ["language of the birds"](#). With the quantity of [tweeting data](#) now available, such patterns of discourse might well be detected through initiatives such as the [Sentient World Simulation](#) or the [Living Earth Simulator](#) -- although it is currently questionable whether they could self-reflexively embody biases arising from their own very particular institutional contexts.

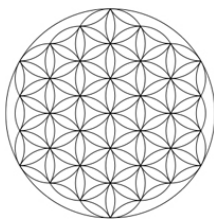
Pattern comprehension: The possibilities of "tent-making" in higher dimensions -- inspired by the global brane of physicists -- become increasingly credible with recent innovations in the capacity for pattern detection independent of specific queries (*Connecting the Dots: finding patterns in large piles of numbers*, *The Atlantic*, 16 December 2011; David N. Reshef, et al., *Detecting Novel Associations in Large Data Sets*, *Science*, 16 December 2011). The question is however the cognitive challenge of comprehending the higher-order patterns so detected -- of comprehending the integrative nature of the requisite "pattern that connects". This is illustrated by the [Monster Group](#) and its associated "moonshine connectivity", as separately discussed (*Dynamics of Symmetry Group Theorizing: comprehension of psycho-social implication*, 2008; *Hyperspace Clues to the Psychology of the Pattern that Connects*, 2003).

Potentially more fundamental are the cognitive challenges in recognizing patterns of a higher order in the light of the various forms of collective denial and taboo (*Map of Systemic Interdependencies None Dares Name: 12-fold challenge of global life and death*, 2011; *Mapping Paralysis and Tokenism in the Face of Potential Global Disaster*, 2011).

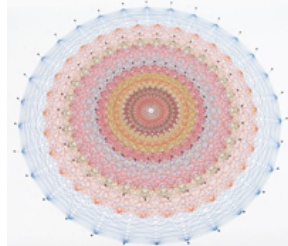
Visual clues to the nature of a "Big Tent Global Brane" ?



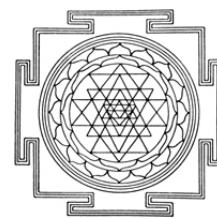
Calabi-Yau manifold
(larger version in [Wikipedia](#),
from *Scientific American*, Nov. 2007)



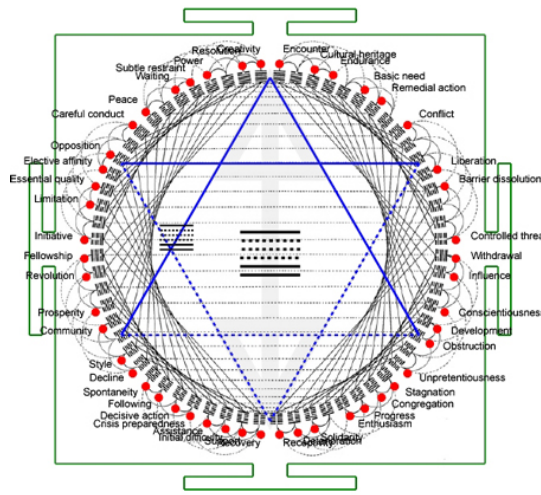
Flower of Life
(larger version in [Wikipedia](#))



E8 symmetry group in thread
(larger version in [Wikipedia](#))



Sri Yantra
(larger version in [Wikipedia](#))



Screen shot from one phase in an experimental [animation](#) indicative of "Big Tent" dynamics? [faster [swf alternative](#)]
 (reproduced from *Dynamic Exploration of Value Configurations: Interrelating traditional cultural symbols through animation*, 2008)

Paper completed while travelling through the lands of the [Kamilaroi](#).

These are a large group of indigenous Australian peoples -- the first to be encountered by "white fellas" at [Botany Bay](#) in 1770.

They are now nearly extinct and the language is no longer spoken -- following historically controversial massacres, .

The name literally means "having not". For those subject to "repossession", it powerfully embodies a sense of "depossession".

As in Manhattan, the Occupy movement in Australia offers other connotations.

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