



laetus in praesens

Alternative view of segmented documents via Kairos

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Warp and Weft of Future Governance ninefold interweaving of incommensurable threads of discourse

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Introduction

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Introduction

The challenge of interrelating seemingly incompatible threads of discourse in more fruitful ways was explored in an earlier paper (*Interweaving Thematic Threads and Learning Pathways*, 2010). As noted there, the thread metaphor had previously been developed by Jennifer Gidley (*A Macrohistorical Planetary Tapestry: the fascinating integral narratives of Steiner, Gebser and Wilber*, 2007) as part of her exploration of *The Evolution of Consciousness as a Planetary Imperative* (2007). The question is how any such weaving relates to the challenges of global governance, notably as tentatively explored previously (*Planetary Challenge of 12-fold Strategic Marriage*, 2003; *Warp and Weft: Governance through Alternation: world governance as a Gandhian challenge for the individual*, 2002).

The purpose here is merely to point to the possibility of combining the threefold weaving explored by Gidley with the quite different weaving explored by Douglas Hofstadter (*Gödel, Escher, Bach: an Eternal Golden Braid*, 1979). The implication is that this ninefold weaving responds to dimensions of the challenge of governance neglected by the two threefold weavings considered individually.

Ninefold interweaving of discourse

The argument is made most succinctly, if simplistically, by the following presentation -- and the reflection it invites. The suggestion is that the pattern is necessarily not definitive but is rather indicative of the kinds of qualities and complexity that may be necessary for fruitful integration -- the requisite complexity for which knowledge cybernetics may call (*Comprehension of Requisite Variety for Sustainable Psychosocial Dynamics*, 2006). It of course makes use of the insights of contemporary authors although this does not preclude the possibility of an equivalent pattern based on the earlier authors to which each may also refer.

Fig. 1: Pattern of ninefold interweaving

		3-fold Interweaving (Gidley, 2007)				
		Rudolf Steiner	Jean Gebser	Ken Wilber	medium	epistemological challenge to singular worldviews
3-fold Interweaving (Hofstadter, 1979)	Kurt Gödel	Gödel-Steiner	Gödel-Gebser	Gödel-Wilber	logic	inherent incompleteness of fundamental articulation
	M. C. Escher	Escher-Steiner	Escher-Gebser	Escher-Wilber	depiction	paradoxical self-reflexivity requiring a cognitive twist
	J. S. Bach	Bach-Steiner	Bach-Gebser	Bach-Wilber	music	comprehensive exploration of

					harmony in variation
distinctive qualities (as cited by Gidley)	imagination -- developing a thought training/discipline, leading to new levels of cognitive and psycho- spiritual development	integrality -- emergence of integral- aperspectival consciousness; self- reflectively participatory, enacting of integrality in his very writing	vision-logic -- a cognitive/conceptual emphasis on the development of consciousness; orienting largely- agreed-upon generalizations from the various branches of knowledge		
	participatory enactment of integrality and of the artistic/aesthetic domain				

There is necessarily a challenge to articulating the cognitive characteristics of each set of authors. It might be said that:

- the **Steiner-Gebser-Wilber** trinity emphasizes the ordering of a form of categorization of an inherently hierarchical nature -- the development of consciousness being so conceived. "Up" and "Ascent" are significant metaphors, whether or not they are achieved through spiral movement via complementary mindsets. Each emphasized explanation leaves open how meaning may be experientially associated with categories definitively and uncompromisingly presented as singular worldviews -- even to be characterized as silo thinking (however refined as "meta-silo thinking"). Doubt and uncertainty are then characteristic of the (as yet) unenlightened. Whatever the degree of explanation, the experiential necessarily remains implicit. This modality can however readily be understood as suggestive of implications for planetary development and governance -- even of three "styles" of governance. Unfortunately this has been the fate of singular worldviews down the centuries, as is only too evident in the problematic relationships between the religions.
- the **Gödel-Escher-Bach** trinity indicates various challenges to singular worldviews offering different means through which they may be articulated and comprehended -- and possibilities of engaging with such understanding. Bach offers understanding to those of musical sensibility. Escher offers provocative depictions of the cognitive challenge. Gödel undermines the capacity to make coherent fundamental statements as the basis for articulation of worldviews. His incompleteness theorems might be seen as corresponding to the concerns of apophatic theology -- the necessity of "unsaying". In a curious way the three systems are content-free. They are reflections on patterns guiding exploration of how they may be experienced. Again however, each separate thread is readily to be understood as corresponding to a form of silo thinking.

In the case of the Steiner-Gebser-Wilber modalities, they are suggestively understood as "cognitive telescopes" -- each based on different "design principles" -- through which intuitions of more integrative understanding are brought into focus -- as with the use by astronomers of various kinds of telescope (reflecting mirror, infra-red, radio, etc). The need to "see" larger wholes has notably been explored by [Joël de Rosnay](#) (*The Macroscope: a new world view*, 1979). This need also applies notably with respect to time, whether the past or the future (*Engaging Macrohistory through the Present Moment*, 2004; *Presenting the Future*, 2001). To the extent that development of consciousness is understood through metaphors of "up" (rather than "down"), and "ascent", or even "escape" (as with respect to gravity), many religions offer pointers in such terms as discussed in *Clues to 'Ascent' and 'Escape'* (2002) in an exploration of *Navigating Alternative Conceptual Realities: clues to the dynamics of enacting new paradigms through movement* (2002).

Incommensurability and antipathy: The systems associated with the constituent authors of each "trinity" are averse to one another to a curious (if necessary) degree. In detailed argument of this point, Gidley (2007, p. 13) notes with respect to the Steiner-Gebser-Wilber modality:

All three of these authors have large global communities who draw on their work with apparently little conversation between them, either academically or professionally. I do not believe that isolationist approaches any longer serve the planetary community, given that all these approaches have much to contribute to the challenges our planetary community faces.

Gidley also notes the extent to which each of the three accords little attention to the others.

These factors play out in the competitive relationship between their interpreters and followers as may be provocatively illustrated (*Epistemological Challenge of Cognitive Body Odour: exploring the underside of dialogue*, 2006; *Dynamically Gated Conceptual Communities: emergent patterns of isolation within knowledge society*, 2004). As Gidley notes however, with respect to her own approach:

From a formal perspective the narratives of Steiner, Gebser and Wilber on the evolution of consciousness could be seen as rival integral schemes. I have attempted to show how the honoring of all three in their uniqueness can actually strengthen rather than weaken the entire integral project. (p. 133)

The systems are not constituted such as to be able to internalise any interplay between them -- a theme explored by [Nicholas Rescher](#) (*The Strife of Systems: an essay on the grounds and implications of philosophical diversity*, 1985; *Pluralism: against the demand for consensus*, 1993) concluding that:

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.

A provocative celebration of anarchism in the knowledge environment is however offered by [Paul Feyerabend](#) (*Against Method: outline of an anarchistic theory of knowledge*, 1975; *Conquest of Abundance: a tale of abstraction versus the richness of being*, 1999). Irrespective of any cognitive confusion, this offers a fruitful contrast to the singular "taste" metaphorically offered by Ken Wilber (*One Taste: daily reflections on integral spirituality*, 2000).

It is most curious that the challenge of engaging with any "other" through dialogue is framed in English by use of the term "intercourse" - with all the associations this offers in English to consummation of marriage and the unchecked reproduction of the human species ("*Human Intercourse*": "*Intercourse with Nature*" and "*Intercourse with the Other*", 2007). This is perhaps even more curious in a period widely challenged by marital breakdown and dramatic issues regarding the role of women in religion -- let alone the challenges of interfaith dialogue by many who eschew such consummation.

Bach offers an indication of how variations can be comprehensively and harmoniously explored through musical relationships -- although excluding other musical forms and patterns. However, in the terms of religious systems, Gidley's creative exercise in interweaving the silos -- which she describes with the poetic Deleusian term of creating conceptual *lines of flight* between the three narratives -- would readily be labelled by the followers of the Steiner-Gebser-Wilber pathways as inappropriate syncretism. Gidley, partly inspired by Wilber, explicitly endeavours 'to weave the pluralistic voices' of Steiner, Gebser, Wilber and others into a 'beautiful tapestry of integral intent'. Hofstadter's initiative, interweaving media, is readily to be understood as anathema to conventional academic thinking.

It is intriguing that the "thread" and "silo" metaphors suggest the value of thinking of **threads as silos -- tunnels through which reality is claimed to be explored**. The interweaving of threads offers a means of thinking beyond such linear constraints. Silos necessarily do not weave.

Self-reference: emptiness and fulfillment: Whereas the Steiner-Gebser-Wilber modality is constrained in its capacity to address with adequate self-reflexivity the identity of the author of any such singular worldview, Hofstadter subsequently addressed that cognitive challenge in his own case (*I Am a Strange Loop*, 2007) in the light of his own earlier argument (*Gödel, Escher, Bach: an Eternal Golden Braid*, 1979). It will be interesting to see whether Gidley follows suit in reinterpreting the relevance of the Steiner-Gebser-Wilber modality to the collective challenges of governance -- given her explicit appreciation of the "planetary imperative".

Hofstadter extensively explores the paradoxical nature of self-reference and has been a major contributor to a collection of papers on the matter (Uriah Kriegel and Kenneth Williford, *Self-Representational Approaches to Consciousness*, 2006).

There is a curious irony to the relationship between the two modalities with regard to self-reference:

- **Steiner-Gebser-Wilber** naturally make much of the traditional challenge of "knowing thyself" and the transcendence of the relationship between knower and known -- notably expressed in terms of self-fulfillment, even an oceanic experience of integrative fullness which many mystics have sought vainly to describe. However, as collective initiatives they are each much challenged (as noted) by the relationship to any other approach with similar intentions and claims. Curiously various spiritual disciplines explicitly refer to achieving a degree of emptiness -- a stripping away of cognitive attachments -- and recognition of the "emptiness of form".
- **Gödel-Escher-Bach**, as articulated by Hofstadter, focuses on paradox as a means of highlighting the questionable cognitive attachment to conventional categories -- in a manner strangely reminiscent of Buddhist argument's regarding emptiness ([Sunyata](#)), for example. However, as an exercise of the mind -- of "thinkodynamics" in Hofstadter's terms -- his articulation has a quality of aridity rather than emptiness, lacking the sense of fulfillment that inspires attraction to the other modality. As he concludes:

In the end, we self-perceiving, self-inventing, locked-in mirages are little miracles of of self-reference.... Our very nature is such as to prevent us from fully understanding its very nature. Poised midway between the unvisualizable cosmic vastness of curved spacetime and the dubious, shadowy flickerings of charged quanta, we human beings, more like raindrops or boulders, are unpredictable self-writing poems -- vague, metaphorical, ambiguous, and sometimes exceedingly beautiful. To see ourselves this way is probably not as comforting as believing in ineffable other-worldly wisps endowed with eternal existence, but it has its compensations.... the strange-loop characterization of our essences gives us a deeper and subtler vision of what it is to be human. And to my mind, the loss is worth the gain. (*I Am a Strange Loop*, p. 363)

Incompleteness and undecidability: The disturbing implications of [Gödel's incompleteness theorems](#) may be fruitfully used to challenge the possibility (or nature) of fundamental articulations -- made in terms of sets of a limited number of concepts or categories, as with those made in the systems of Steiner-Gebser-Wilber, specifically Gödel's arithmetical proofs that:

- if an arithmetical encoding of the statement "this statement is unprovable" were to be proven then the statement itself would be untrue, thereby demonstrating the inconsistency of the underlying framework, whereas, if it could not be proven then the statement is then undeniably true, then implying that the framework is incomplete
- no consistent framework for arithmetic can ever be proved consistent under its own rules

Such forms of incompleteness and undecidability have now been reinforced by the work of [Harvey Friedman](#) (*Boolean Relation Theory and Incompleteness*, 2010) through identification of entirely new forms of incompleteness. In his summary of such challenges, Richard Elwes (*It doesn't add up*, *New Scientist*, 14 August 2010) asks whether "a gaping hole has opened up in the foundations of mathematics".

However, perhaps even more challenging, is what this may imply for a "gaping hole" in the foundations of philosophical reflection on the development of consciousness and the governability of the planet (*Ungovernability of Sustainable Global Democracy? Towards engaging appropriately with time*, 2010).

Just as the incompleteness theorems demonstrate the possibility that no "true" or "false" answer exists within fundamental arithmetical frameworks, this may be as true of philosophical statements. As stated by Elwes:

The most severe implications are philosophical. The result means that the rules we use to manipulate large numbers cannot be assumed to represent the pure and perfect truth. Rather, they are something more akin to a scientific theory such as a "standard model" that particle physicists use to predict the workings of particles and forces: our best approximation to reality... but at the same time manifestly incomplete and subject to continuous and possibly radical reappraisal...

The approaches to governance (of "large numbers" of people) founded on such philosophical assumptions may then be equally problematic. Such possibilities are consistent with:

- reflections on the necessity of negative theology, namely a mode of [apophatic discourse](#) -- "unsaying" in contrast with definitive statements (Michael A. Sells, *Mystical Languages of Unsaying*, 1994). These are possibly of greater relevance in a world of faith-based governance, notably with regard to the consequent implications for some forms of identity (*Being What You Want: problematic kataphatic identity vs. potential of apophatic identity?* 2008)
- strategic reflections on undecidability, as highlighted by the notorious poem of Donald Rumsfeld as US Secretary of Defense (*Unknown Undoing: challenge of incomprehensibility of systemic neglect*, 2008)
- the development of strategies ignoring a central key problem -- caricatured by failure to recognize the elephant in the living room as in the case of climate change (*Lipoproblems: developing a strategy omitting a key problem*, 2009)

Curiously, with respect to governability, such possibilities may also be consistent with the adage of Abraham Lincoln: *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* (*Responsibility for Global Governance: Who? Where? When? How? Why? Which? What?* 2008). Such challenges relate to any conclusions to be drawn with respect to governance from the several efforts at detailed computer simulation of the whole population of the world (*Sentient World Simulation; Joint Simulation System*).

"Large" intangibles beyond human ken: Curiously, as noted by Elwes:

With Friedman's work, it seems Gödel's delayed triumph has arrived: the final proof that if there is a universal grammar of numbers in which all facets of their behaviour can be expressed, it lies beyond our ken.... The only way that Friedman's undecidable statements can be tamed, and the integrity of arithmetic restored, is to expand [Peano's rule book](#) to include "[large cardinals](#)" -- monstrous infinite quantities whose existence can only ever be assumed rather than logically deduced.... We can deny the existence of infinity, a quantity that pervades modern mathematics, or we must resign ourselves to the idea that there are certain things about numbers we are destined never to know

Such large cardinals, notably understood to be "inaccessible", have yet to be fully admitted into the axioms of mainstream mathematics. Of interest with respect to governance is the place then to be accorded to the unknowable -- in contrast to the definitive nature of the assertions typically made. This consideration might be strangely consistent with the place accorded by Steiner to [angelic hierarchies](#), including "Powers", "Mights", "Dominions", and "Thrones" (presented in a [Table of Evolution](#) similar to Mendeleev's *Periodic Table of the Elements*). Through what metaphors are intangibles "beyond human ken" to be described? Does the mathematical understanding of "large cardinals" correspond to Steiner's understanding of "powers"?

It is also potentially consistent with the much-cited verse by Lao Tzu (*Tao Te Ching*, ch 11):

*Thirty spokes share the wheel's hub; It is the centre hole that makes it useful.
Shape clay into a vessel; It is the space within that makes it useful.
Cut doors and windows for a room; It is the holes which make it useful.
Therefore profit comes from what is there;
Usefulness from what is not there.*

There is also a potentially fruitful association of "cardinals" to the more complex [symmetry groups](#) discovered by mathematicians, held to be fundamental to the organization of the universe as it is known (*Potential Psychosocial Significance of Monstrous Moonshine: an exceptional form of symmetry as a Rosetta stone for cognitive frameworks*, 2007). The challenge to comprehension of such complexity, and to cognitive engagement with it, is also of interest in its own right (*Dynamics of Symmetry Group Theorizing: comprehension of psycho-social implication*, 2008). The metaphorical devices by which a degree of understanding of such groups may be obtained through "correspondences" is also of relevance (*Theories of Correspondences -- and potential equivalences between them in correlative thinking*, 2007).

Metaphorical geometry: Stranger still is that it is the **circle** that is the most common symbol of the potential integrative fulfillment indicated by the Steiner-Gebser-Wilber modality -- perhaps best recognized in the symbol of the **Ouroboros**, whereas it is the **loop** that is so closely associated with Hofstadter's self-reference. Neither attaches great significance to the dynamics implied by such closely associated patterns nor to the identity sustained by that dynamic, whether or not it might be fruitfully understood as a standing wave (*Emergence of Cyclical Psycho-social Identity: sustainability as "psychically" defined*, 2007). Although in Hofstadter's recognition of it as a cognitive [feedback loop](#) it relates to the emerging challenges of knowledge cybernetics (Maurice Yolles, *Knowledge Cybernetics: a*

new metaphor for social collectives 2005). Given the capacity of physicists to explore beyond the "standard model", a case might be made for an analogous initiative in relation to the evolution of consciousness (*Beyond the Standard Model of Universal Awareness*, 2010). The integrality variously explored through the Steiner-Gebser-Wilber modality may involve a dynamic dimension -- to an extent as yet unexpected (*Dynamic Reframing of "Union": implications for the coherence of knowledge, social organization and personal identity*, 2003).

It might also be asked whether such inherently simple geometry is an adequate support for richer intuitions adequate to the challenges of the future (*Metaphorical Geometry in Quest of Globality-- in response to global governance challenges*, 2009). In this respect the arguments of Steven Rosen and Melanie Purcell regarding the *Klein bottle* highlight further possibilities (*Intercourse with Globality through Enacting a Klein bottle: cognitive implication in a polysensorial "lens"*, 2009). Some possibilities are also developed in the delightfully titled argument of Sam C. Ziegler (*A Cloud that's Dragonish: a description of the possible evidence of use of the Mobius Strip in pre-modern times*, 2009).

With respect to governance, neither modality has much to say about the implications of such insight for collective initiatives and collective identity. **Is humanity to be understood in some way as a strange loop**, for example? Or perhaps we are a set of strangely interlocking loops?

And yet curiously, in the value attached to "self-fulfillment" by the Steiner-Gebser-Wilber modality might be seen the roots of a society obsessed with forms of consumption and growth which could well be fruitfully transcended. Both modalities point to the merits of what might be understood as a form of cognitive **voluntary simplicity** -- traditionally celebrated in many intentional communities as noted by **Duane Elgin** (*Voluntary Simplicity: toward a way of life that is outwardly simple, inwardly rich*, 1981).

"Copyright": Given Hofstadter's explicit interest in the cognitive significance of thinking and its products, there is a delightful irony to the lack of self-referential consideration by the authors of either modality to the significance of the intellectual copyright they (or their followers) so firmly associate with their insights. This lack may be further explored in the light of the argument of **Gregory Bateson** (*Mind and Nature: a necessary unity*, 1979), inspired like Hofstadter by the formalism of cybernetics, who subsequently (1987) presented his central theme in the following terms:

The significance of all this formalization was made more evident... by a reading of Carl Jung's *Seven Sermons to the Dead...* [1] began to think about the relation between "map" and "territory." Jung's book insisted upon the contrast between *Pleroma*, the crudely physical domain governed only by forces and impacts, and *Creatura*, the domain governed by distinctions and differences. It became abundantly clear that the two sets of concepts match and that there could be no maps in *Pleroma*, but only in *Creatura*. That which gets from territory to map is news of *difference*, and at that point I recognized that news of difference was a synonym for information.

When this recognition of difference was put together with the clear understanding that *Creatura* was organized into circular trains of causation, like those that had been described by cybernetics, and that it was organized in multiple levels of logical typing, I had a series of ideas all working together to enable me to think systematically about mental process as differentiated from simple physical or mechanistic sequences, without thinking in terms of two separate "substances". My book *Mind and Nature: a necessary unity* combined these ideas with the recognition that mental process and biological evolution are necessarily alike in these *Creatural* characteristics.

The cognitive challenge of Bateson's argument was subsequently presented by Peter Harries-Jones (*A Recursive Vision: ecological understanding and Gregory Bateson*, 1995):

Aesthetics provides a medium through which humanity can begin to understand the unity of the biosphere. Yet, when approaching unity and holism in the biosphere, our pragmatic, mechanistic civilization becomes overwhelmed by epistemological panic and does not know how to proceed. How then to overcome panic and pursue that "path where even angels fear to tread"? (p. 216)

The implication of intellectual copyright in relation to any form of cognitive self-transcendence has been discussed separately (*Transcending Duality: epistemological panic of nonduality?* 2010). The issue of property and territory is of course one of the most fundamental in global governance. There it is argued that this seemingly abstract and sterile consideration has extremely concrete implications -- well-recognized by the indigenous peoples of the world with their unique relationships to the land, as documented by **Darrell A. Posey** (*Cultural and Spiritual Values of Biodiversity*, 1999). As is most evident in the case of the Aborigines of Australia, whose "unconventional" relationship to the land is not in terms of "property" but through the **Dreaming** -- a sleep-related metaphor. This gave rise to the controversial, "conventional", legal assumption of *Terra Nullius* -- territory which has never been subject to the sovereignty of any state, or over which any prior sovereign has expressly or implicitly relinquished sovereignty.

Is it the case that the much sought comprehensive model -- the ultimate **"Theory of Everything"** -- will necessarily be subject to a form of copyright, somehow avoiding a requisite reframing of possessive engagement with reality? How will copyrighted metaphors constrain future global governance (*Future Coping Strategies: beyond the constraints of proprietary metaphors*, 1992)? The question is effectively raised by the copyrighted work of Ken Wilber (*A Theory of Everything: an integral vision for business, politics, science and spirituality*, 2001). In a creative era of **open source** initiatives, how is "a" copyrighted theory of everything to be reconciled with multiple copyrighted theories of everything (John D. Barrow, *New Theories of Everything*, 2008)? Might there be a hidden insight to be derived from Einstein's quest (*Einstein's Implicit Theory of Relativity -- of Cognitive Property? Unexamined influence of patenting procedures*, 2007)? Does the effort to copyright knowledge of "everything" imply a fundamental misunderstanding of its nature and of how it is to be

apprehended?

Revolution vs. Convolution: The Steiner-Gebser-Wilber modality, as with any singular world view, implies in each case a form of "revolution" of consciousness, possibly only cognitive but necessarily with psychosocial implications. Humanity has exhibited little capacity to manage such revolutions with any skill. The singular world view, unable as it is to engage meaningfully with any alternative perspective, is obliged to marginalise and demonise it -- and seek its elimination (*Designing Global Self-governance for the Future: patterns of dynamic integration of the netherworld*, 2010). This pattern currently plays out on the world stage in the relationships between Christianity and Islam, between democratic and other modes of organization, and between science and religion, as previously discussed (*Guidelines for Critical Dialogue between Worldviews -- as exemplified by the need for non-antisemitic dialogue with Israelis?* 2006).

It is interesting therefore to consider that the missing dimension might be found in the Gödel-Escher-Bach modality. Although the "complexity sciences" have as yet to offer insight into global governance, it would appear that at least Escher and Bach -- as prototypes of the "complexity arts" -- may offer insights into the riches of cognitive "convolution" in contrast with "revolution". The contribution of the "complexity sciences" to such exploration is evident in the beauties of the visual renderings of the **Mandelbrot fractal** or of symmetry groups such as the **Monster group** or the **Lie group** (*Psycho-social Significance of the Mandelbrot Set: a sustainable boundary between chaos and order*, 2005; *Potential Psychosocial Significance of Monstrous Moonshine: an exceptional form of symmetry as a Rosetta stone for cognitive frameworks*, 2007).

Such convolution corresponds to the radical recursion of Steven M. Rosen (*What is Radical Recursion?* 2004) and to 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) -- as discussed separately (*Beyond the plane: form and medium in terms of the calculus of indications*, 2006). Aspects of the cognitive challenges of otherness may even be understood through a common experience (*Snoring of The Other: a politically relevant psycho-spiritual metaphor?* 2006).

Resilience in an adaptive cycle: The new organizational modality is then to be associated with a new cognitive modality built on fruitful complexity rather than the disastrous oversimplification so readily promoted in political and religious social change programmes (*Consciously Self-reflexive Global Initiatives: Renaissance zones, complex adaptive systems, and third order organizations*, 2007). In the case of the fundamental use made by Ken Wilber of the conveyor metaphor, the failure to recognize its necessarily "convoluted" circular dynamic has been discussed elsewhere (*Potential Misuse of the Conveyor Metaphor: recognition of the circular dynamic essential to its appropriate operation*, 2007). Resilience would seem to call for a mode to compensate for the value of the **KISS Principle** by which enthusiasts for silo thinking are naturally tempted. Hence the corrective value of the "cognitive enhancements" offered (successively?) by Bach-Escher-Gödel -- each potentially more radically challenging than the last and therefore readily to be understood as "barriers".

Ironically turbulent global conditions call for the adaptive skills associated with the kinetic intelligence of surfing and skateboarding and extreme sports rather than those geared to a sedentary perspective on the world. These may offer a key to navigation of the adaptive cycle for which humanity may be obliged to equip itself (*Adaptive Hypercycle of Sustainable Psychosocial Self-organization*, 2010).

Potential alternative applications of the ninefold pattern

Others have made use of a triadic pattern as a basis for elaboration of richer patterns. For example:

- the triadic paradigm for general system building developed by Paris Arnopoulos (*Sociophysics: a general theory of natural and cultural systems*, 1992; *Sociophysics: cosmos and chaos in nature and culture*, 2005)
- the social process triangles developed through a **collective process** within the context of the Institute of Cultural Affairs (Jon and Maureen Jenkins, *Social Process Triangles*, 2001).
- the classical Chinese **BaGua system of trigrams**

Nine muses? The ninefold pattern of Fig. 1 recalls the classical set of **nine muses** -- the subject of the poet **Virgil's** assertion: *Muses love alternatives* (*Eclagues*, Bk III) and seemingly in contrast to the pattern of a singular worldview. For a creative person, especially in the arts, the psychological significance of an inner "muse" may well be perceived as essential -- as associated with the **daimon's** of classical mythology. A muse might be understood as a catalyst enabling the connectivity of the "pattern that connects" -- however challenging this may be (*Daimon, Djinn, Muse and Duende: variations on a timeless experience*, 2007). There is a case therefore for looking at the variety of muses -- presumably eliciting different kinds or qualities of connectivity. In classical Greece and Rome, 9 such goddesses were identified as sources of inspiration in the arts and sciences (see Angeles Arrien. *The Nine Muses: a mythological path to creativity*. 2000).

Muse name	Muse domain
Calliope	Epic Poetry
Clio	History
Erato	Love Poetry
Euterpe	Music
Melpomene	Tragedy
Polyhymnia	Sacred Poetry
Terpsichore	Dancing
Thalia	Comedy
Urania	Astronomy

Whilst the nine muses are identified here in terms of aesthetic **form**, a classical Indian analogue, the *nava rasa* (or nine sentiments), emphasizes the aesthetic **quality** in the performing arts (music, dance, drama or poetry) that colour the mind with a particular feeling,

sentiment, passion or emotion.

Religions: The pattern of Fig. 1 merits reflection when applied to the three Abrahamic religions (for example) in problematic relationship down the centuries -- and constituting a continuing challenge in relation to the influence of faith-based governance..

Fig. 2: Pattern of ninefold interweaving applied to religion						
		3-fold Interweaving of the Abrahamic religions				
		Judaism	Christianity	Islam	medium	epistemological challenge to singular worldviews
3-fold Interweaving (Hofstadter, 1979)	Kurt Gödel	Gödel-Judaism	Gödel-Christianity	Gödel-Islam	logic	inherent incompleteness of fundamental articulation
	M. C. Escher	Escher-Judaism	Escher-Christianity	Escher-Islam	depiction	paradoxical self-reflexivity requiring a cognitive twist
	J. S. Bach	Bach-Judaism	Bach-Christianity	Bach-Islam	music	comprehensive exploration of harmony in variation

Of interest in this case is a detectable degree of affinity between:

- Judaism and the logical preoccupations of Gödel, if only with respect to the "unnamability" of God, although not with that "naming" by other religions
- Christianity and Bach (and with a degree of acknowledgement of the relevance of **apophatic discourse**), although avoiding any appreciation of alternatives
- Islam and the pattern explorations of Escher (**Keith Critchlow**, *Islamic Patterns*, 1976), although Islamic architecture avoids the paradoxes offered by Escher

Of potentially greater interest are the distinct "flavours" with which each religion might be associated -- in contrast to Wilber's "one taste" -- and hence the manner in which they respectively function as strange attractors for those variously preferring those flavours (*Human Values as Strange Attractors: coevolution of classes of governance principles*, 1993).

Governance: The pattern of Fig. 1 might also be used to elicit insight of relevance to governance in the case of the the interaction between religion, science and politics.

Fig. 3: Pattern of ninefold interweaving applied to preoccupations of governance						
		3-fold Interweaving of the preoccupations of governance				
		Religion	Politics	Science	medium	epistemological challenge to singular worldviews
3-fold Interweaving (Hofstadter, 1979)	Kurt Gödel	Gödel-Religion	Gödel-Politics	Gödel-Science	logic	inherent incompleteness of fundamental articulation
	M. C. Escher	Escher-Religion	Escher-Politics	Escher-Science	depiction	paradoxical self-reflexivity requiring a cognitive twist
	J. S. Bach	Bach-Religion	Bach-Politics	Bach-Science	music	comprehensive exploration of harmony in variation

Just as the "Steiner modality" (in Fig. 1) seeks to reinforce comprehension through venturing into the "Bach-Escher domains" in its exploration of the performance art of **eurythmy**, it is appropriate to note (with respect to Fig. 3) the various explorations by religion, politics and science of music and visualization as a means of facilitating and enhancing comprehension.

In considering issues of meta-governance, Hofstadter's consideration of strange loops has been noted by J. Kooiman (*Governing as Governance*, 2003):

In a democratically governed society the governed are governed by their governors, who are likewise governed by those they govern. A central meta governance question must be: how are the strange loops between governors and governed organised, and what is the quality of these arrangements This is a strange loop process, being both input and outcome at the same time. Because meta is itself a two-way interacting governing order, it is not necessarily paradoxical or contradictory to define meta governance both in terms of process and the outcome of that process (pp. 171-172)

Of relevance are the considerations of **William Irwin Thompson** (*Nine Theses For A Gaia Politique. In Context*, 1997).

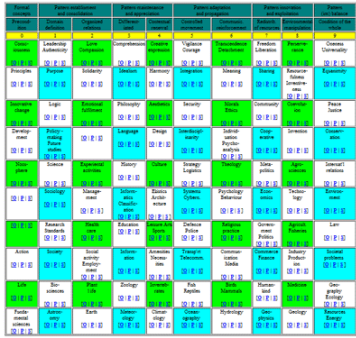
Spreadsheet perspective as the cognitive burka of globalization?

Understanding of the world, as apprehended through the formal structure of a **spreadsheet**, may be seen by the future as being as inadequate as that regretted in relation to wearing of the **burka** by women. As an appropriate illustration, the image on the right is a

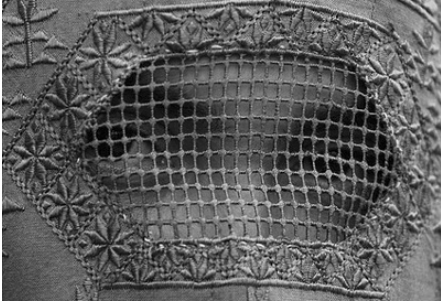
screenshot of an [Integrative Matrix of Human Preoccupations](#), described separately (*Functional Classification in an Integrative Matrix of Human Preoccupations*, 1982) as used to enable access to the contents of the *Encyclopedia of World Problems and Human Potential*. That on the left is the access to the world through a burka by the women who wear that garment.

Correspondingly constrained views of the world?

Engaging with the world from within a spreadsheet



Engaging with the world from within a burka



Wearing of the burka is widely challenged by those claiming to uphold the universal values of global civilization. The question is whether the cognitive constraints imposed by the widespread use of the spreadsheet in its various forms -- as the key aid to global governance in institutions of every kind -- are fruitfully seen as being as problematic as wearing the burka. Are leaders of the world constrained in their cognitive engagement with the world -- as many arguing the merits of post-formal discourse would argue (Paul Feyerabend, *Conquest of Abundance: a tale of abstraction versus the richness of being*, 1999; David Abram, *The Spell of the Sensuous: perception and language in a more-than-human world*, 1997; Sallie McFague, *Life Abundant: rethinking theology and economy for a planet in peril*, 2000).

To the extent that there is validity to the comparison, concerns relating to the burka may be seen as offering insights into the problematic consequences of dependence on the spreadsheet (*Burka as Metaphorical Mirror for Imperious Culture?* 2009). Curiously the most widespread spreadsheet software application is deliberated associated with the capacity of people and institutions to "excel" -- echoing to a degree the global aspirations for human development. Equally curiously wearing the burka is associated with *namus* -- a form of excellence in virtue, honour and integrity.

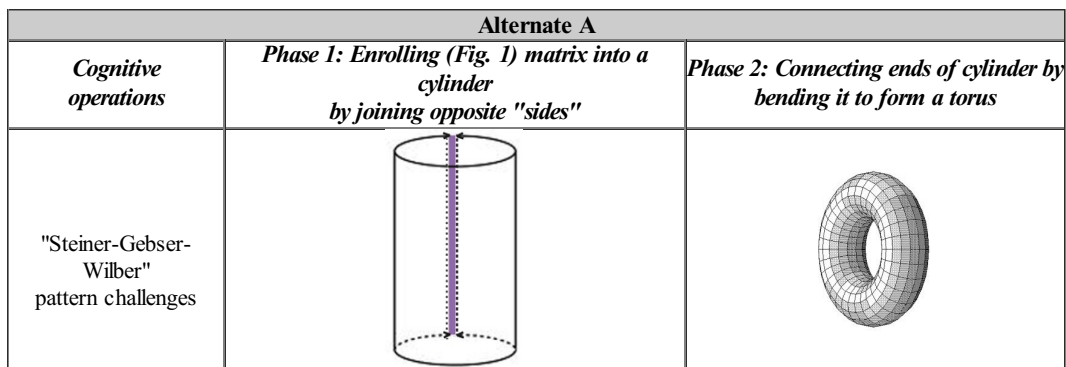
"Enrolling" the matrix

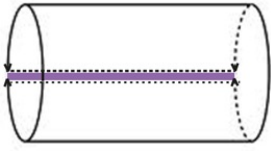
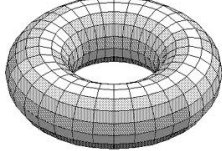
The matrix pattern (Fig. 1) used to suggest the appropriateness of interweaving Steiner-Gebser-Wilber with Gödel-Escher-Bach is of course a characteristically simple pattern only too evident in every variety of governance and planning -- an unfortunate exemplification of the [KISS Principle](#). In the earlier exploration of *Interweaving Thematic Threads and Learning Pathways* (2010) the possibilities of fruitfully complexifying such a weaving were detailed. In the discussion of Jennifer Gidley (*A Macrohistorical Planetary Tapestry: the fascinating integral narratives of Steiner, Gebser and Wilber*, 2007) the value of a fourth dimension was introduced. Understood as time, such a dimension merits extensive "re-cognition" with respect to governance and planetary development (*Strategic Embodiment of Time: configuring questions fundamental to change*, 2010; *The Isdom of the Wisdom Society Embodying time as the heartland of humanity*, 2003).

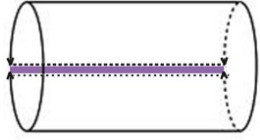
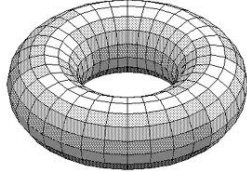
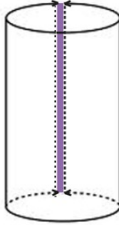
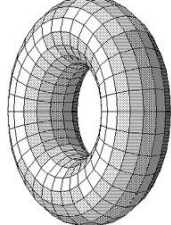
A potentially fruitful exercise is to explore the possibility of "enrolling" each matrix (Fig. 1, Fig. 2 or Fig. 3) by cognitively "bonding" together the opposite ends of the matrix, such that the last column is juxtaposed with the first to form a cylinder, and the top row is juxtaposed with the bottom row to bend the cylinder into a torus. The argument for doing so has been made separately (*Comprehension of Requisite Variety for Sustainable Psychosocial Dynamics: transforming a matrix classification onto intertwined tori*, 2006). The possibility was envisaged in relation to conventional tabular categorizations of human needs (*Needs Communication: viable need patterns and their identification*, 1980).

The possibility and relevance of such transformation of categories has been variously explored in relation to the sphere (*Spherical Accounting: using geometry to embody developmental integrity*, 2004; *Spherical configuration of interlocking roundtables: Internet enhancement of global self-organization through patterns of dialogue*, 1998; *Spherical Configuration of Categories to Reflect Systemic Patterns of Environmental Checks and Balances*, 1994).

The process of enrolling the matrix into a torus -- geometrically of the same family as the sphere -- may be undertaken in two alternative ways suggestive of further insight.



	-- engaging with "the other" -- embodying the circle as a symbol of the whole	-- "the first shall be last and the last first" -- getting ends to meet (Ouroboros)
Gödel-Escher-Bach pattern challenges		
	-- self-referential "re-cognition"	-- embodiment as a strange loop

Alternate B		
Cognitive operations	Phase 1: Enrolling (Fig. 1) matrix into a cylinder by joining "top" and "bottom"	Phase 2: Connecting ends of cylinder by bending it to form a torus
"Steiner-Gebser-Wilber" pattern challenges		
	-- "first shall be last and the last first" -- getting ends to meet (Ouroboros)	-- engaging with "the other" -- embodying the circle as a symbol of the whole
Gödel-Escher-Bach pattern challenges		
	-- embodiment as a strange loop	-- self-referential "re-cognition"

It is potentially of interest in that in the case of both alternatives, a torus can also be formed by stretching the circumference at each end of the cylinder and curling each such that they meet.

From a cultural perspective the looping is extensively explored in the work of religious historian [Mircea Eliade](#), and his successors, on [eternal return](#) (*The Myth of the Eternal Return: cosmos and history*, 1971). The cognitive implications are poignantly articulated by the poet [T. S. Eliot](#) (*Little Gidding*, 1942) to the effect that:

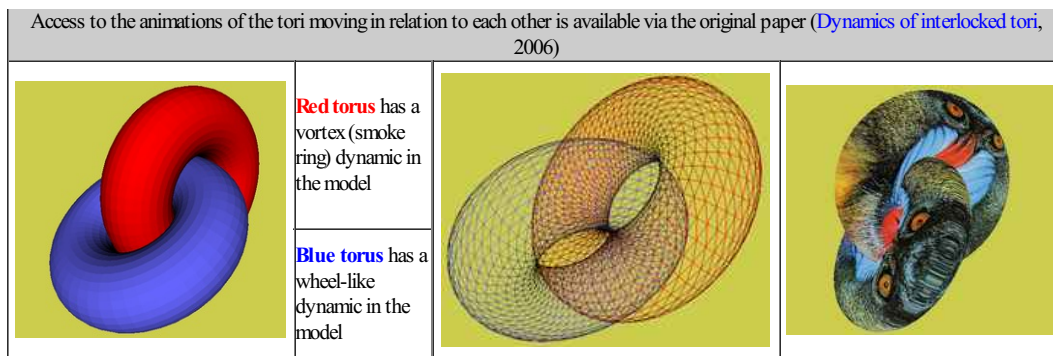
*We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know it for the first time.*

The torus form may be fruitfully related to that of the traditional *bi disk* of Chinese culture and the fundamental symbolism associated with it -- heaven and earth-like imagery. Also of potential relevance in framing the dynamics of a torus-like periphery, in relation to a centre losing the function primitively accorded to it, is the insight of [W. B. Yeats](#) (*The Second Coming*, 1920):

*Turning and turning in the widening gyre
The falcon cannot hear the falconer;
Things fall apart; the centre cannot hold;
Mere anarchy is loosed upon the world,
The blood-dimmed tide is loosed, and everywhere
The ceremony of innocence is drowned;
The best lack all conviction, while the worst
Are full of passionate intensity.*

However these lines call for reinterpretation where they imply forms of control from the centre and by the centre whereas the *bi disk* symbolizes the insight of the *Tao Te Ching* (as quoted above) regarding the pre-eminent value that may be accorded to the emptiness of the centre.

A search of the images regarding "torus", accessible on the web through Google, offers many visual variations of relevance to the above argument -- notably those in which the columns (or rows) of the above matrix are variously coloured and twisted. As previously discussed and illustrated (*Comprehension of Requisite Variety for Sustainable Psychosocial Dynamics: transforming a matrix classification onto intertwined tori*, 2006), intertwining the two differently oriented tori offers geometrical support for the cognitive implications of the alternates (*Interlocking tori: combining the two alternative representations*, 2006).



Such intertwining readily recalls the interweaving of DNA strands and its fundamental importance to biology and reproduction (*DNA Supercoiling as a Pattern for Understanding Psycho-social Twistedness*, 2004; *Climbing Elven Stairways: DNA as a macroscopic metaphor of polarized psychodynamics*, 2007). If "supercoiling" is so essentially vital as a pattern, is it possible that such "convolution" is vital to an integrative future (*Self-reflexive Challenges of Integrative Futures*, 2008). Ironically DNA may also offer new insight into the psychosocial challenges of intellectual "copyright".

Beyond the ninefold pattern?

The ninefold pattern used in Fig. 1, and the threefold patterns from which it was derived, are not to be considered as "set in stone". Both Gidley and Hofstadter readily cite other authors of relevance. With respect to the evolution of consciousness, Gidley acknowledges other pioneers whom she variously cites: Pierre Teilhard de Chardin, Henri Bergson, Erich Neumann, [Sri Aurobindo](#), Ervin László, Edgar Morin, Ashok Gangadean, Robert MacDermott, Richard Tarnas, Basarab Nicolescu, Alfonso Montuori, Peter Russell, and Brian Swimme.

In each case Hofstadter and Gidley have effectively made a "design choice" for purposes of comprehensible communication. Had they considered a much larger number, many issues of comprehension would have arisen. The implications of such selection of sets have been explored more generally (*Representation, Comprehension and Communication of Sets: the role of number*, 1979). Many examples have also been considered (*Examples of Integrated, Multi-set Concept Schemes*, 1984) in relation to *Patterns of N-foldness; comparison of integrated multi-set concept schemes as forms of presentation* (1984).

Of interest with respect to the ninefold matrix is how it might be "extended" in either case and what might be the case for doing so -- or not doing so. Thus, for example:

- the Steiner-Gebser-Wilber trilogy might be fruitfully challenged by the work of mathematician [John G. Bennett](#), who helped coordinate and articulate the insights of [G.I. Gurdjieff](#) in his multi-volume study of *systematics* (*The Dramatic Universe*, 1970), further articulated through the work of [Anthony Blake](#) (J.G. Bennett and Anthony Blake, *Systematics: A New Technique In Thinking*, 1966). However, as noted below, Gidley cites many other potentially relevant authors of such schemes. Omitted, but also of relevance, is the work of mathematician Vasily V. Nalimov (*Realms of the Unconscious: the enchanted frontier*, 1982) and that of [Edward Haskell](#) (*Generalization of the structure of Mendeleev's periodic table*, 1972)
- the Gödel-Escher-Bach trilogy might be extended by the work on mindscapes of [Magoroh Maruyama](#), and its relevance to management, notably through a theory of increase of heterogeneity by causal loops, the transculturality of epistemological types, and associated aesthetic preferences (M. Caley and D. Sawada, *Mindscapes: the epistemologies of Magoroh Maruyama*, 1994). Other authors attentive to such variety might also be considered (*Systems of Categories Distinguishing Cultural Biases*, 1993).

With respect to mathematical formalization of issues of comprehension, it might be extended to include the work of Ron Atkin (*Multidimensional Man; can man live in 3-dimensional space?* 1981) as previously summarized (*Social organization determined by incommunicability of insights*, 1995). Comprehension might also be treated separately in terms of education in the manner stressed by Gidley. Further to Gidley's explorations of the aesthetic dimension, the function of myth might be fruitfully distinguished, especially in the light of the work of [Joseph Campbell](#) (*The Inner Reaches of Outer Space: metaphor as myth and as religion*, 1986; *The Power of Myth*, 1988) and the later work of [Karen Armstrong](#) (*A Short History of Myth*, 2005), both having been intriguingly preceded by that of [Marsilio Ficino](#) as described by [Thomas Moore](#) (*Planets Within: the astrological psychology of Marsilio Ficino*, 1990) and previously discussed (*Composing the Present Moment: celebrating the insights of Marsilio Ficino interpreted by Thomas Moore*, 2001).

The "patterns" of such extensions -- as designs -- may be explored through the metaphor of cognitive "magic carpets" (*Magic Carpets as Psychoactive System Diagrams*, 2010; *Harmony-Comprehension and Wholeness-Engendering eliciting psychosocial transformational principles from design*, 2010).

With respect to the approaches to governance thereby enabled a case can be made for considering any chosen (square) matrix as indicative of an interactive game between integrative perspectives variously challenged thereby (*Designing Global Self-governance for the Future*, 2010). These "games" could then themselves be integrated within a comprehensible scheme for which the *Fibonacci spiral* was used as an example (*Tao of Engagement -- Weaponised Interactions and Beyond: Fibonacci's magic carpet of games to be played for sustainable global governance*, 2010). An argument can also be made for exploring geometric variations in a playful mode -- inspired by the possibilities of music, as notably explored by Bach (*Enacting Transformative Integral Thinking through Playful Elegance*, 2010).

As previously noted, there is a case for "liberating" approaches to integration (*Liberation of Integration, Universality and Concord -- through pattern, oscillation, harmony and embodiment*, 1980). A "musical addendum" to that paper, in relation to Hofstadter's argument regarding insights from the fugues of Bach, concluded with the question:

Could it be that one dimension of the challenge of socio-political integration is illustrated by the problem of interrelating seemingly hostile or incompatible "voices". And that counterproposals and counterarguments need to be set in a larger context to which we are as yet insensitive? And does the **time dimension** over which arguments and counterarguments are developed need to be better understood in terms of an integrated socio-political **process**? (*Fugitive Integration*, 1982)

In the quest for "harmony", a musical metaphor may be used in relation to a more extensive "matrix" of human beliefs as argued separately in the light of the insights offered by the periodic table of elements (*Tuning a Periodic Table of Religions, Epistemologies and Spirituality -- including the sciences and other belief systems*, 2007; *Periodic Pattern of Human Knowing implication of the Periodic Table as metaphor of elementary order*, 2009). The harmony sought for global governance may indeed benefit to an unsuspected degree from intuitive appreciation of music (*A Singable Earth Charter, EU Constitution or Global Ethic?* 2006).

Both the musical and periodic table metaphors point to possibilities of reclustering the elements of a set. In music this is a question of different tuning systems. In the case of the periodic table this is a question of clustering "elements" into different groups. In either case different patterns of distinction are made -- possibly in playful experimentation (*Engaging with Globality through Playful Re-categorizing*, 2009). "Integration" of cognitive relevance might even emerge from "chords" (*Polarities as Pluckable Tensed Strings: Hypercomprehension through harmonics of value-based choice-making*, 2006). Arguably extension of the Gödel-Escher-Bach modalities might then be understood in terms of different "ways of knowing" or "intelligences" (as with the **multiple intelligences** explored by Howard Gardner). This suggests an alternative way of thinking of the "faculties" of a university and their subject matter.

Requisite cognitive variety for sustainable governance

Although a case can be made for exploring the "extension" of the number of columns and rows of Fig. 1, the merit of doing so could usefully be seen in terms of requisite variety -- especially in its implications for governance as understood in cybernetic terms. Specifically how different do the functions of such rows or columns need to be and how is such meaningful difference to be determined -- possibly through the emerging disciplines of knowledge cybernetics and the cybernetics of human knowing? Much is made of the viability of a gene pool but little is considered with respect to the vital requirements for the viability of a cultural "meme pool" -- especially to avoid civilizational collapse (Jared Diamond, *Collapse: How Societies Choose to Fail or Succeed*, 2005).

Missing from the rows and columns as they stand is any sense of that variety, especially if each is understood as problematically "other" to the others. In Maruyama's terms, in arguing for "polyocular vision", the question is how many complementary "eyes" are necessary for sustainable governance (*Polyocular Vision or Subunderstanding, Organization Studies*, 2004). His exclusive use of the vision metaphor -- so common in governance -- is further challenged by the possible requirement for polysensorial variety (*Strategic Challenge of Polysensorial Knowledge: bringing the "elephant" into "focus"*, 2008; *Cyclopean Vision vs Poly-sensual Engagement*, 2006)

As integral schemes, it could be argued that such variety is (at least to a degree) implicitly embodied **within** the schemes of Wilber, Gebser and Steiner. Wilber distinguishes types and phases by colours, for example. However the "colour" of "his" integral scheme as a whole, from the perspective of any other scheme, is not evident within that pattern -- reinforcing the argument regarding what may be the necessary lack of self-reference of such singular schemes. In their claims to encompass the sweep of the evolution of human consciousness, the insights of macrohistory merit consideration as noted by Gidley. In that respect, the case for multiple perspectives is partially addressed by Johan Galtung and Sohail Inayatullah (*Macrohistory and Macrohistorians: perspectives on individual, social and civilizational change*, 1997).

Inspired by the mathematical literature on "moonshine" connectivity -- in the spirit of the Gidley-Deleusian *lines of flight* -- there is an intriguing possibility of a form of "moonshine correspondence" (of relevance to global governance) to be discovered between:

- the widespread intuitive appeal of the 12-fold in myth and legend, reinforced by astrological categorization of types and conditions. This has traditionally been most evident in the pantheons of Imperial Rome as appropriated from the **Dodekathion** of classical Greece. Their comprehensibility to populations has been of fundamental significance to governance over centuries. This pattern is also evident in the founding myth of the 12 tribes of Israel.
- the significance of polyhedral patterns, notably the dodecahedron's reinforcement of the Dodekathion, or the value of the icosahedron to dialogue -- as argued by management cybernetician **Stafford Beer** (*Beyond Dispute: The Invention of Team Syntegrity*, 1994), following his earlier consideration of a *Platform for Change* (1975) and *Diagnosing the System for Organisations* (1985). This could be an element in a more general consideration of polyhedral organization to governance as previously discussed (*Towards Polyhedral Global Governance: complexifying oversimplistic strategic metaphors*, 2008; *Coherent Value Frameworks: Pillar-ization, Polarization and Polyhedral frames of reference*, 2008)
- the curious recent discovery by Friedman in testing numerous relationships between inputs and outputs in expansive linear growth (ELG) functions in the light of Peano's rules. In 12 cases, rather than the definitive positive or negative answer expected, the relationship could neither be proven nor disproven using Peano's axioms nor by any reasonable extension of conventional arithmetic. Hence his argument for consideration of "large cardinals" which Elwes notes are "blessed with a hierarchy all their own" in the "ladder of infinities". Again this is reminiscent of any comprehension of Steiner's angelic hierarchies.

The fundamental pattern of packing of the variety of regular polyhedra [[applet](#)], notably its implication for comprehension may be

distinctly associated with qualities in human cognition, as represented by the Dodekathion (for example). Their aesthetic distinctions may effectively encode an unsuspected role as fundamental (strange) attractors. For a civilization labelled "unconscious" by John Ralston Saul (*The Unconscious Civilization*, 1995), failure to explore the possible hidden cognitive influences of such patterns may serve significantly to perpetuate their more problematic dynamics (*Generic Reframing of the 12 Tribes of "Israel"*, 2009; *Web resources on "breaking the cycle"*, 2002).

The case was made above for "enrolling the matrix" to hold significance more adequately. A further intriguing possibility emerges from recognition of the extent to which the "rows" and "columns" are in a sense artificially distinguished in that elements (or "colours") of those two dimensions feature in the other -- and possibly increasingly so with any "extension" to achieve requisite variety. Is there a sense in which such reciprocal embodiment should be interpreted as a form of fractal organization? Rather than the set of rows and the set of columns being understood as distinct "sides", is requisite variety associated with recognition that their distinction is paradoxically better held as the single "side" of a Mobius strip variously perceived?

The charming reference, mentioned above, to the significance of that strip by Sam C. Ziegler (*A Cloud thats Dragonish: a description of the possible evidence of use of the Mobius Strip in pre-modern times*, 2009) may even be interpreted as implying that a viable future for global governance is best understood as "dragonish". Furthermore, his "cloud" metaphor his possibly entirely appropriate given the extent to which the knowledge of the global knowledge society is now held "on the cloud". Ironically Hofstadter, in introducing his discussion of strange loops, makes use of a classic Peanuts cartoon regarding what can be perceived in clouds.

Enlivening psychoactive engagement

In her magnificent review of the Steiner-Gebser-Wilber trilogy, Jennifer Gidley (*The Evolution of Consciousness as a Planetary Imperative: an integration of integral views. Integral Review: A Transdisciplinary and Transcultural Journal for New Thought, Research and Praxis*, 2007) gives focus to her intention in the following terms:

... the intent of my own integrality is not so much in detailing and mapping integral concepts -- which Wilber has done so extensively -- rather to enliven them. I hope to nurture and transpire the living imaginations of the *Zeitgeist* shining through the concepts of integral awakening in our time.

Again this points to the need for additional rows in Fig. 1, relating not only to the issue of comprehension but to the manner in which the columns are enlivening and enactivating -- or not, as they are experienced by many. Gidley has a specific concern with enactivating integrality, notably by reference to Sri Aurobindo's [integral project](#):

I have chosen to focus primarily on the theoretic narratives contributed to the evolution of consciousness discourse by Steiner, Gebser and Wilber. In this way, I am enacting a conscious bias, by privileging narratives that have formerly been marginalized in the evolution discourse.... Furthermore, I am confident that my methodology, particularly the hermeneutic contextualization, provides a means of buffering the bias I am deliberately enacting, by making it explicit.... In the main narrative I will be enacting a narrative writing style that deliberately weaves conceptual reasoning with imagination, though from a post-rational mythopoetic rather than a pre-rational mythic stance.

With respect to the challenges of cognitive engagement, as it might relate to global governance, Gidley intimates (notably citing Gebser) that the domain of art -- or aesthetic sensibility -- may be a more fruitful starting point for the creation of a new panhuman narrative for an authentically integral-planetary consciousness. (p. 200).

In the light of explorations of [enactivism](#) as a process in the psychosocial construction of reality, this may fruitfully be related to the "pattern that connects" as highlighted by Gregory Bateson, and previously discussed (*Walking Elven Pathways: enactivating the pattern that connects*, 2006; *Hyperspace Clues to the Psychology of the Pattern that Connects*, 2003; *Designing Cultural Rosaries and Meaning Malas to Sustain Associations within the Pattern that Connects*, 2000). As stated by Bateson (*Mind and Nature: a necessary unity*, 1979)

The pattern which connects 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.

And it is from this perspective that he warns in a much-cited phrase: *Break the pattern which connects the items of learning and you necessarily destroy all quality*. The "threading" of beads in circlets of spiritual significance -- or their cultural importance as "worry beads" -- then implies a "meta-thread", perhaps as having been celebrated by Hofstadter's *Metamagical Themas* (1985).

The challenge for governance is how to embody that meta-pattern. One possibility is that the meta-pattern can be usefully mapped onto symmetrical polyhedra as a key to comprehension and mnemonic reinforcement (*Topology of Valuing: psychodynamics of collective engagement with polyhedral value configurations*, 2008).

Empowering governance as a cognitive vehicle

There is a weakness to the tapestry metaphor to the extent that it reinforces the current bias in governance towards use of the vision metaphor in articulating future strategy. Tapestries, whatever the beauty of their weaving, are designed to be "looked at" -- however successfully they enable remembrance. As noted above, this is evident in the failure to take account of the forms of intelligence associated with other sensual metaphors (*Strategic Challenge of Polysensorial Knowledge: bringing the "elephant" into "focus"*, 2008;

Cyclopean Vision vs Poly-sensual Engagement, 2006). Also as noted, there is the further challenge that they are not designed to facilitate forms of cognitive embodiment potentially essential to governance in the future. Such weavings are not designed to be "donned" through being formed into cognitive clothing adapted for engagement with the elements.

The importance to governance of cultivating strategic "narratives" has effectively been widely recognized -- especially by politically parties, even as the essence of spin. Intimately associated with such narratives are the metaphors which give coherence to them (*Metaphoric Revolution: in quest of a manifesto for governance through metaphor*, 1988). In this sense sustainable governance may be understood as the challenge of how to ride the sustaining metaphor through which its coherence is recognized and with which people can engage. Metaphors thereby become the vehicle of requisite transdisciplinarity (*Metaphors as Transdisciplinary Vehicles of the Future*, 1991). Threats to sustainable governance may even be framed in such terms (*The "Dark Riders" of Social Change: a challenge for any Fellowship of the Ring*, 2002).

With respect to the integral argument, as an economist and key instigator in the emergence of general systems research, **Kenneth Boulding** (*Ecodynamics; a new theory of societal evolution*, 1978) offers the following insight into the relevance of such metaphor:

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.

In any tapestry as envisaged by Gidley, the concern is the strategic identification with a given thread, even that of a recognizable colour. To what degree does a strategy "become the metaphor" -- as with calls to "be the change"? There is a sense in which strongly advocated paths of governance -- as guiding threads of meaning -- are embodied in ways yet to be fruitfully understood. It implies a degree of self-reference. Indeed, whether fruitful or problematic, styles of governance may be understood as their own metaphor -- following the argument of **Gregory Bateson** that "we are our own metaphor" (as cited by Mary Catherine Bateson, *Our Own Metaphor: a personal account of a conference on the effects of conscious purpose on human adaptation*, 1972). The context of this citation reinforces the link to Gidley's exploration of the evolution of consciousness.

Given the emphasis placed above on cognitive exploitation of increasingly complex geometry, strategic "paths" are readily to be understood as linear -- however they are supported by threads of argument. Aside from the possibility of interweaving lines into a tapestry, also intriguing is the cognitive possibility of bending such pathways into "rings" potentially isomorphic with the challenges of navigation and governance of any adaptive cycle. This has been variously argued (*Designing Cultural Rosaries and Meaning Malas to Sustain Associations within the Pattern that Connects*, 2000; *Engaging with Globality through Cognitive Circlets*, 2009; *Adaptive Hypercycle of Sustainable Psychosocial Self-organization*, 2010). Such possibilities may be related to the review of "ring composition" by **Anthony Blake** (*Decoding the Past: ring composition and sacred number*) and notably the study by **Mary Douglas** (*Thinking in Circles: an essay in ring composition*, 2007).

Emergence of self-reflexive governance

Geometrical complexification: Curiously the threaded "beads" of rosaries and mala circlets even offer a reminder of the significance of the torus with which meaning has been associated in the above argument. The cognitive significance of interlocking (or interweaving) rings can be explored as a further stage in fruitful geometrical complexification (*Engaging with Globality through Cognitive Crowns*, 2010) -- a stage prior to that of the Klein bottle and its paradoxes (*Engaging with Globality through Knowing Thyself*, 2010). In such a metaphor, it is the thread -- understood as threading the circlet of beads together -- that holds a larger significance.

Psychosocial energy: Such arguments point to the possibility that greater recognition could usefully be given to the manner in which sustainable governance is necessarily a channel for the "psychic energy" of populations -- understood as *Zeitgeist*, motivation or otherwise (*Reframing Sustainable Sources of Energy for the Future: the vital role of psychosocial variants*, 2006). This energy might in future even be associated with the problematic dynamics of polarization (*Psychosocial Energy from Polarization: within a cyclic pattern of enantiodromia*, 2007).

Embodiment of form: Much seemingly remains to be discovered about how collectivities embody insight in relation to their governance, as implied by the arguments of various authors, although more especially in relation to the individual (George Lakoff and Mark Johnson, *Philosophy In The Flesh: the embodied mind and its challenge to western thought*, 1999; Francisco Varela, Evan Thompson and Eleanor Roach. *The Embodied Mind: cognitive science and human expression*, 1991). The argument for embodiment beyond "vision" can be developed in relation to strategic scenarios (*Stepping into, or through, the Mirror: embodying alternative scenario patterns*, 2008).

A radical expression of any such strategic embodiment is the Buddhist phrase adopted by Francisco Varela (*Laying down a path in walking*. In: W. Thompson (Ed.), *Gaia: a way of knowing*, 1987). This is hopefully to be radically contrasted with the common accusation that governments "make up policies as they go along". The argument has been variously explored and developed in the following:

- *Degrees of Cognitive Engagement with Interrelated Global Categories*, 2009
- *En-minding the Extended Body: enactive engagement in conceptual shapeshifting and deep ecology*, 2003
- *Existential Embodiment of Externalities*, 2009
- *Enveloping Development through Cognitive Enactivism: engaging with climate change by changing apprehension of climate*, 2009

Together such factors make a case for consciously self-reflexive governance (*Consciously Self-reflexive Global Initiatives: Renaissance zones, complex adaptive systems, and third order organizations*, 2007).

Psychosocial evolution – through "evolution"?

As noted, Gidley's focus on Steiner-Gebser-Wilber forms part of her wider focus on *The Evolution of Consciousness as a Planetary Imperative* (2007). To that end, the argument above suggests the intriguing possibility of interrelating the following themes:

- "ring composition":
 - in the [anthropological and literary sense](#) (especially [chiastic structure](#)) of Mary Douglas (*Thinking in Circles: an essay in ring composition*, 2007), that associated with cycles of variations in music as associated with Bach, or in the construction of mnemonic rings as in the case of mala beads and rosaries
 - as a fundamental preoccupation in the synthesis of organic molecules, notably those essential to life and most notably the [benzene molecule](#)
- insights into "composing a life", namely seeing it as an aesthetic design, as explored by Mary Catherine Bateson (*Composing a Life*, 1989) -- with implications for "composing a community" or a larger cultural entity
- psychosocial identification with a cycle or a ring, possibly to be understood as "conscious loops" or "loop consciousness", even related to engagement with a "work cycle" (*Emergence of Cyclical Psycho-social Identity: sustainability as "psychically" defined*, 2007; *Psychosocial Work Cycle: beyond the plane of Mobius*, 2007)
- the stability of a torus as a dynamic system, achieved through the dynamics of a [vortex ring](#) ([smoke ring](#), for example). Many investigators have recognized that vortex rings are one of the most fundamental and fascinating phenomena in fluid dynamics (Feliks Kaplanski, *Dynamics of Vortex Rings*, *SciTopics*, 12 July 2010). More relevant to the collectively intuited sense of "emptying", as mentioned below, are the contexts in which governance is faced with problematic vortices -- dynamically undermining conventional processes.
- psychosocial processes of "emptying" variously suggested by:
 - the insight of W. B. Yeats: *Things fall apart; the centre cannot hold* as cited above (from *The Second Coming*), and his related sense of disrespect for authority (and normative "shoulds" and "oughts") expressed in the line: *The falcon cannot hear the falconer*. The latter is of course reinforced by abuse of any central authority (*Abuse of Faith in Governance*, 2009)
 - various spiritual disciplines concerned with "emptying the mind" (F. Streng, *Emptiness: a study of religious meaning*, 1967; Jeffrey Hopkins, *Meditation on Emptiness*, 1996; Geshe Tashi Tsering and Lama Zopa Rinpoche, *Emptiness*, 2009).
 - the increasingly recognized challenges to fulfillment, self-esteem and its loss -- associated with "depression" and a sense of despair (*Implication of Personal Despair in Planetary Despair*, 2010)
 - insights into the process of cultural collapse (Jared Diamond, *Collapse: How Societies Choose to Fail or Succeed*, 2005; Thomas Homer-Dixon, *The Upside of Down: Catastrophe, Creativity, and the Renewal of Civilization*, 2006)
 - the degree to which meaning is being progressively drained from collective communication with the possibility that this process may reach a critical point (*Emerging Memetic Singularity in the Global Knowledge Society*, 2009). Noteworthy is the widespread focus on [end-times scenarios](#), whether in speculation regarding "2012" or otherwise (*Spontaneous Initiation of Armageddon -- a heartfelt response to systemic negligence*, 2004).
 - the manner in which awkward and potentially transformative questions are avoided, both in the context of interpersonal relationship and with respect to governance (*Lipoproblems: developing a strategy omitting a key problem*, 2009; *Abuse of Faith in Governance: mystery of the unasked question*, 2009; *Global Strategic Implications of the Unsaid*, 2003)
 - the extent to which statutory bodies and meetings, notably of non-profit initiatives (whether of global or local scope), are losing their strategic significance and relevance for the governance and efficacy of the initiative -- effectively "hollowed out" or "white-anted" through the displacement of their traditional role (in career promotion, letterhead placement, travel facilitation and networking) into a more open web environment
 - the extent to which supposedly "factual" reporting is now intimately related with "spin" -- effectively reinforcing a vortex of meaning
- a biological analogue to "emptying" evident in the developmental transformation of embryos at their earliest stage (Harald Jockusch and Andreas Dress, *From Sphere to Torus: a topological view of the metazoan body plan*, *Bulletin of Mathematical Biology*, 2003), the latter document forming part of the more general argument by Stuart Pivar (*On the Origin of Form: evolution by self-organization*, 2009). Especially interesting are their points to the effect that:
 - From the viewpoint of mathematical topology, membrane systems in intact living cells can be described as closed and orientable surfaces, i.e., as surfaces with two sides and no boundary lines so that an 'inside' and an 'outside' can be distinguished.
 - Toroidal membranes are occasionally observed, e.g., in specialized structures of plant cells like the prolamellar body.
 - We suggest to study the emergence of morphological complexity during metazoan development using concepts from mathematical topology, and propose experimental analyses of those topological transitions that appear to be relevant in development and evolution.
 - During metazoan development, epithelia determine the increasing complexity of the body by actively changing their local curvature, e.g. during the formation of the primitive gut by invagination, leading to the gastrula stage.
 - Mechanisms for torus formation have probably evolved several times independently in both coelenterata and bilateria. Repeated addition of "handles" or creation of "holes" has led to double, triple, and even higher- order toroids.

With respect to closure, the paper itself mentions the Mobius strip and the Klein bottle (whose significance was mentioned above).

Referring to the topology of cylinders, the paper also notes that although cylinders and discs and "cutting" and "gluing" of "handles" do not actually occur in living organisms, these mathematical metaphors are helpful concepts to clarify topological transitions of membrane and epithelial systems.

To the extent that these may be usefully recognized as isomorphic features of the "evolution" or complexification of systems in general, it can then be fruitfully asked whether such "emptying" is a possible prelude to a more complex psychosocial form. Of notable relevance is the manner in which forms of organization, tending to escape the control of governance as currently framed, are often named in terms of "rings" -- crime rings, drug rings, spy rings, carousel fraud, etc -- implying the emergence of a more complex topology to which governance is currently not adapted.

Invagination of society? As a topological process, invagination in the embryonic transition in biological development is especially suggestive if only as a metaphor. It is described the morphogenetic processes by which an embryo takes form, and is the initial step of [gastrulation](#), the massive reorganization of the embryo from a simple spherical ball of cells, the [blastula](#), into a multi-layered organism, with differentiated germ layers: endoderm, mesoderm, and ectoderm. Is the current understanding of "global civilization" to be compared to the blastula from which a "multi-layered organism" has yet to emerge -- following "massive reorganization"?

Does this offer a way of reflecting on psychosocial maturation and the evolution of civilizations in the sense explored by Gidley?

The term invagination may well offer two sets of helpful associations:

- consonant with the psychosocial concerns of feminists, invagination could be understood as corresponding to the sense that women (in a supposedly egalitarian global society) continue to be subject to a form of pressure (psychological or otherwise) -- effectively distorting the "spherical" ideal such as to compensate through a more complex topology. Of relevance to tracing such structural violence is the work of [Elise Boulding](#) (*The Underside of History: a view of women through time*, 1976) or the current situation in meetings (*Women and the Underside of Meetings: symptoms of denial in considering strategic options*, 2009).
- in biological development, the process of invagination also applies simultaneously to what becomes the upper end of the digestive tract. In a global society variously recognized as dependent on encouraging consumption, invagination in that respect could be recognized as an effort to adapt topologically to such pressures.

Taken together -- as with the formation of the digestive tract in the biological case -- the two directions of development meet forming a tube. This is effectively a "hole" through the original spherical cluster of cells -- effectively engendering a torus. Does this indeed correspond to the insight of W. B. Yeats -- *the centre cannot hold* -- as it might apply to governance of a global population? The pressures of "growth" and "consumption", and the dependence on them within the current global model -- as so frequently articulated and critiqued -- might then be said to be in process of engendering topological consequences implicit within the efforts to adapt to those trends. The analysis of energy needs and sourcing within the Roman Empire by Thomas Homer-Dixon is suggestive of an approach to clarifying such "topological pressures" (*The Upside of Down: Catastrophe, Creativity, and the Renewal of Civilization*, 2006).

Topology of volition? The argument here is that this process is occurring at the psychosocial level in the topology of collective organization -- so commonly symbolized by the spherical ideal of global completion. In a sense it may be understood as an adaptive development in the expression of "volition" -- of the political will so often desperately sought with respect to governance.

Exploiting the etymological potential of Gidley's use of the poetic Deleusian phrase of conceptual *lines of flight* between the three narratives she considers, a case could be made for recognizing the root concept in the following terms, namely "**vol**". Rather than "**Revolution vs. Convolution**", as suggested above, or the case made by Gidley for "**Evolution**", is it more significantly a case of "**Revolution vs. Convolution**" and "**Evolution**" -- whatever such neologisms might then fruitfully signify?

Especially intriguing is the manner in which "revolution" is then reminiscent of the "resolution" which is the primary focus of governance in most international institutions in endeavouring to elicit and focus political will. Does "revolution" imply a mode of cognition missing from the "resolutions" -- which might rightly be judged as having proven themselves not fit for purpose, offering neither "solution" nor "resolve"? The possibility of "convolution" as a collective process may well depend on the kind of cognitive "convolution" highlighted by Hofstadter.

Whilst the prefix "e" may appear questionable, it is appropriate to note its widespread use as an expression of qualitative appreciation in "emeritus" -- even then to be construed as a recognition of a degree of wisdom. "Evolution" might then be suggestive of a richer form of volition, possibly consistent with the self-referential arguments of Hofstadter and his sense of the evolution of consciousness. Gidley's concern with education in enabling such evolution might even be challenged in terms of its etymological origins as "*e-ducare*" with its implicit reference to leadership -- from the centre?

The original sense of the evolution of human consciousness in terms of the [noosphere](#) by [Pierre Teilhard de Chardin](#) and [Vladimir Vernadsky](#) has previously been reframed in terms of the internet and planetary consciousness (*From Information Highways to Songlines of the Noosphere: global configuration of hypertext pathways as a prerequisite for meaningful collective transformation*, 1996). However, from the above, it would appear there is a case for reframing such use of a "sphere" in toroidal terms. Might it be more meaningful to represent "global" mappings of both internet traffic and content organization on toroidal surfaces?

Is there then a case for exploring a "nootorus" as an emergent phase in the "evolution" of human consciousness? How might this correspond to the arguments made for the emergence of a "cognitively distinct" species with whose members intercourse would be "unfruitful" (*Authentic Grokking: Emergence of Homo conjugens*, 2003)? Is such a strange loop then to be understood by the future as a "[missing link](#)" in the process of evolution? What then of the "songlines of the nootorus"?

From global governance to toroidal governance

The future may consider it strange that civilization should in this period of crisis be focused on its globality and its globalization when these are intimately associated with the essentially **static** geometry of the planet as a sphere. The fact that the sphere engages in diurnal "revolutions" is not evident in conventional use of the global metaphor -- revolution being itself a challenging process to governance. It is also strange that a widely lauded book by [Thomas L. Friedman](#) (*The World Is Flat*, 2005) should endeavour to reframe such globality in a seemingly retrogressive fashion, as criticized elsewhere (*Irresponsible Dependence on a Flat Earth Mentality -- in response to global governance challenges*, 2008).

The argument above may however be extended in that it is indeed a fact that the planet traces out a torus in its annual rotation around the Sun -- a cycle to which many environmental and institutional reporting cycles are geared. There is therefore at least a case for considering that a more appropriate geometrical framework for humanity's "global civilization" is as a "toroidal civilization" -- honouring the **dynamic** in which the static is embedded. The process of "globalization" and concerns with "sustainability" might then be more fruitfully considered in terms of "toroidalization" -- as dynamic processes over time (*Strategic Embodiment of Time: configuring questions fundamental to change*, 2010).

Of relevance is the programme of research proposed by Christopher Alexander (*Harmony-Seeking Computations: a science of non-classical dynamics based on the progressive evolution of the larger whole*, *International Journal for Unconventional Computing*, 2009) following his major study of order as it can be recognized in nature (*The Nature of Order: an essay on the art of building and the nature of the universe*, 2003-4). Alexander strongly emphasizes beauty, in terms of "ring-like structures", as a driver to 'wholeness-extending' -- qualifying conventional understandings of the 'attractor' of complexity theory as follows

Rather, I suspect that there are, deep in geometry of space, reasons why ring-like structures with this kind of ratio are likely to occur. In current jargon, rings of this particular ratio might be viewed as attractors in some phase space. However, the discovery of geometric attractors in the solutions to systems of dynamic equations is, in my view, only one particular manifestation of the far more general harmony-seeking computations that occur naturally in three-dimensional space.

The implications of Alexander's work have been discussed separately (*Harmony-Comprehension and Wholeness-Extending: eliciting psychosocial transformational principles from design*, 2010). Although [Gidley](#) presents a variety of illustrations of aesthetic principles, and refers to sacred geometry, she does not appear to take account of the projective geometry inspired by [Steiner](#) (*Olive Whicher, Projective Geometry: creative polarities in space and time*, 1971) or make much of the spiral dynamics associated with the work of [Wilber](#) ([D. E. Beck and C. C. Cowan, Spiral Dynamics: mastering values, leadership and change](#), 1996). It is unclear that [Steiner](#), [Gebser](#) or [Wilber](#) engage with geometry through the topological paradoxes central to [Hofstadter's](#) exploration of strange loops. [Wilber's](#) questionable use of the geometry and dynamics of the conveyor metaphor has been separately discussed (*Potential Misuse of the Conveyor Metaphor: Recognition of the circular dynamic essential to its appropriate operation*, 2007).

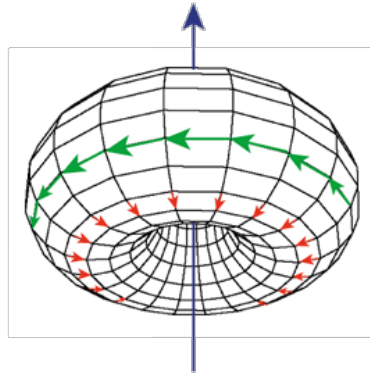
More significant to the cognitive implications for governance of the transition from sphere to torus is the mathematical work of [Ron Atkin](#) (*Multidimensional Man; can man live in 3-dimensional space?* 1981; *Combinatorial Connectivities in Social Systems; an application of simplicial complex structures to the study of large organizations*, 1977). This has been separately summarized (*Social organization determined by incommunicability of insights*, 1995). As indicated in that summary, of great interest is the manner in which communication within a group is constrained to move "around" an unmentioned "object" or "hole" in the geometry -- a process which [Atkin](#) analyzes in the communication processes amongst academics in a university. This circular dynamic is reminiscent of the dynamics essential to the stability of a smoke-ring and seemingly characteristic of strategic development (*Lipoproblems: developing a strategy omitting a key problem*. 2009).

Of interest is then the contrasting implication of use of the geometrical metaphor of the circle:

- **global governance:** there is a comfortable familiarity associated with a "circle" as a form of organization -- whether in local communities or as circles of the wise. Local circles can be compared in the geometry of the sphere to what are known as "**small circles**" -- notably associated with the surface of the sphere. These can be contrasted with "**great circles**" which encircle the sphere -- perhaps corresponding to the aspiration and inspiration of circles of the wise. It is the minimum threefold interlocking that has been clarified as necessary to an emergent system by [R. Buckminster Fuller](#) (*Synergetics: explorations in the geometry of thinking*, 1975). The significance of this great circle interlocking has been discussed separately (*Spherical Configuration of Interlocking Roundtables: Internet enhancement of global self-organization through patterns of dialogue*, 1998; *Spherical Accounting: using geometry to embody developmental integrity*, 2004; *Spherical Configuration of Categories to Reflect Systemic Patterns of Environmental Checks and Balances*, 1994). Providing a global context for local organization was explored in relation to the 1992 Earth Summit (*Configuring Globally and Contending Locally: shaping the global network of local bargains*, 1992).
- **toroidal governance:** in this case the many "small circles" can be fruitfully considered as those associated with the "smoke-ring" dynamic defining the torus (in red in the images below). The fundamental "great circle" is then that which "threads" through their centres, as with the mala or rosary beads, mentioned above (shown on the surface in green in the images below). "Local" and "global" are then distinguished in a different manner with greater significance attached to the "local" as essential to the sustainability of the torus. It is interesting that internet protocols could readily be adapted to facilitate exploration of this distinction in practice -- given the many emergent "circles", notably via social networking sites. The question is how would the integrative thread then emerge and be distinguished from the conventional misrepresentation of "global" in conversation (*Future Generation through Global Conversation: in quest of collective well-being through conversation in the present moment*, 1997). The "local" circles are then effectively "enabling rings" reminiscent of the design considerations governing the operation of toroidal nuclear fusion reactors (*Enactivating a Cognitive Fusion Reactor: Imaginal Transformation of Energy Resourcing (ITER-8)*, 2006) -- or of particle accelerators as speculatively explored (*Dynamic Interrelationship of Symbols of Coherent Experiential Representation*

of *Nonduality (DISCERN)*. 2008). Of more fundamental interest is the evolution thereby engendered (indicated by the arrows in blue in the images below).

Potential application of Faraday's Law of Induction to governance?



Curiously, but perhaps predictably, the only application of a toroidal approach to governance was that noted by Nicholas Ind and Rune Bjerke (*Branding Governance: a participatory approach to the brand building process*, 2007) namely the Double Vortex Model of L. de Cernatony and Riley F. Dall'Olmo (*Defining a "brand": beyond the literature with experts' interpretations*, *Journal of Marketing Management*, 14, 1998, pp. 417-443). Various examples of governance have however been caricatured pejoratively as constituting a vortex (Anthony Watts, *Video from the Copenhagen Climate Vortex*, 12 December 2009; Karuna Sarup-Munshi, *Values Swirl in the Vortex of Virtues*, *Sai World News*, July 2008; Abdullahi Dool, *The Vortex Leadership Issue of Somalia*, *Hiiraan Online*, 21 March 2008). Especially relevant to the above argument is the study by James H. Mittelman (*Whither Globalization?: the vortex of knowledge and ideology*, 2004). Few make fruitful use of the metaphor (*The Community Intelligence Innovation Architecture: how to jump-start and sustain a vortex of innovation*). One such is **Vortex-WINDS** (A Virtual Organization to **R**educe the **T**oll of **E**xtrême Winds on Society).

Figures such as those above point to the possibility of distinguishing and configuring:

- the stories and sub-plots which are the daily focus of the media (red cycles in the figures)
- the larger thematic threads and stories (in green), implied by the sub-plots, and "threading" them together
- the emergent or engendered mega-themes (in blue), essentially only to be recognized as longer term preoccupations (evolution of consciousness? population overshoot? 2012?)

Note: The aesthetic aspects of this argument are developed in a separate document, effectively an annex (*Sustaining a Community of Strange Loops: comprehension and engagement through aesthetic ring transformation*, 2010). A different approach to the argument has been developed in a subsequent paper (*Enabling Governance through the Dynamics of Nature: exemplified by cognitive implication of vortices and helicoidal flow*, 2010).

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