



laetus in praesens

Alternative view of segmented documents via Kairos

1 April 2019 | Draft

Exploring Representation of the Tao in 3D

Virtual reality clues to reconciling radical differences, global and otherwise?

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Introduction

Symbolizing what cannot be named: "Tao" versus "Yin-Yang"?

Stages in imagining a 3D Tao symbol in virtual reality

Clues to the Tao symbol from animation of the Lauburu in 2D

Challenge of "evil" as embodied in the Tao, the Lauburu and the Swastika

Understanding the Tao through animation of the Lauburu and the Swastika in 3D

Reconciliation of incommensurable differences implied by the mysterious "valley spirit"

Tao comprehension in terms of achieving orbit -- and orbital decay

Experimental animation of the Tao symbol in 3D

Tao of snoring?

References

Introduction

The **Tao symbol** is widely known as an indication of viable harmony between opposites -- understood as a possibility for a mature human civilization of the future. There is extensive commentary on the subtlety of the insight it represents, dating most notably from that of [Laozi](#) in the *Tao Te Ching*. This explains that the Tao is not a 'name' for a 'thing' but the underlying natural order of the Universe whose ultimate essence is difficult to circumscribe due to it being non conceptual yet evident in one's being of aliveness.

Various adaptations of the insight continue to be offered, notably those of [Ralph Siu](#) (*The Tao of Science: an essay on Western Knowledge and Eastern Wisdom*, 1957), [Fritjof Capra](#) (*The Tao of Physics*, 1975), [Thomas Clearly](#) (*Tao of Politics*, 1990), and [George T. Haley, et al.](#) (*The Chinese Tao of Business: the logic of successful business strategy*, 2004). *The Tao of governance: public administration reform in China* is featured as a chapter in the *The International Handbook of Public Administration and Governance* (2015). Such insights have been interpreted with respect to both military operations and to intelligence ([James Y. Wong and Ernest Y. Wong](#), *The Tao of Protracted Warfare: a yin-yang approach to conducting COIN*, *Small Wars Journal*, 2012; [Stewart K. Bertram](#), *The Tao of Open Source Intelligence*, 2015). In an era of unprecedented fake news and propaganda, also of interest are the insights relating to deception ([Ralph D. Sawyer](#), *The Tao of Deception: unorthodox warfare in historic and modern China*, 2007).

The variety of such adaptations, and the enduring value associated with the Tao -- however understood -- are especially striking in contrast to the poisonously divisive conditions currently evident **between** many nations and **within** those democracies enshrined as Permanent Members of the UN Security Council (notably USA, UK, and France). There is thus a case for noting the arguments of [Tom Atlee](#) (*The Tao of Democracy: using co-intelligence to create a world that works for all*, 2003).

Perhaps curiously, with the evolution of information technology, the Tao symbol continues to be most commonly represented in the two dimensions convenient for reproduction on a flat surface. Arguably this can be understood as totally inappropriate to the subtle multidimensionality of the insights that the symbol is held to imply, especially when facilities exist for representation in 3D and virtual reality. This argument can be developed with respect to other such symbols (*Cognitive Implications in 3D of Triadic Symbols Valued in 2D: representations of the triskelion in virtual reality and implications for quantum consciousness*, 2017).

It is however the case that the Tao symbol has indeed been variously represented "in 3D", but most commonly through embossing, shading and adding a degree of thickness to the traditional 2D version. This could be understood as excessively simplistic -- given other design opportunities. The only exception to this approach seems to have been the unusual 3D animation offered by [Lance Skelly](#) (*Sling Yang* 4 March 2013), explicitly inspired by that of [Dave Goetsch](#) *Yin-Yang Animation*, 24 January 2013). These are based on the movement of mutually orthogonal versions of the two major design features of the 2D version -- the first with 3 of them, the second with 2. Such use of animation also potentially implies a shift from the conventional static depiction to the dynamics of 4D.

The approach taken here is to explore the possibility of "constructing" experimentally the Tao symbol using features from three-dimensional geometry, notably representing areas of the 2D symbol as volumes (curved cones and spheres, framed by a torus and

embodying several tori). As projections, the simpler 2D versions of these 3D features are necessarily fundamental to the geometry of the construction of the symbol in 2D. Arguably a 3D symbol can "hold" or suggest greater subtlety to many more people than a 2D symbol in which that subtlety is implicit to a higher degree -- then meaningful to fewer.

The assumption in exploring the possibilities of this construction, and its interactive representation in virtual reality, is that the design process itself offers learnings of relevance to any reference to the Tao as indicative of a higher order of harmony than is currently evident in governance -- whether national or global. Such learnings are potentially evoked when the construction process is initiated experimentally with a degree of ignorance as to the method which might be most fruitfully employed. This contrasts with the possibilities when greater mathematical capacity can be deployed by experts in the use of design software -- using insights which are communicable and comprehensible only to the few.

In this spirit any unfruitful approaches and mistakes are themselves valuable as being indicative of the challenges in practice to any understanding and achievement of the "harmony" suggested by the aesthetics of that symbol. The results of this exercise are therefore left incomplete -- inviting further improvements, notably if further degrees of animation are to be envisaged.

As noted below, a similar approach can be explored with respect to other fundamental symbols, notably the Celtic [triskelion](#) (mentioned above), to the Basque [lauburu](#), and to the reconciliation of the symbols of the three violently quarrelsome Abrahamic religions (*Reconciling Symbols of Islam, Judaism and Christianity: catalytic methodology for effective interfaith dialogue*, 2017). More provocatively with respect to the focus of the argument below, consideration has previously been given to the *Tao of Snoring* (in the *Snoring of The Other: a politically relevant psycho-spiritual metaphor?* 2006).

A key question is whether the possible dynamics of representation in 3D are indeed more suggestive of subtler insight. A particular concern is whether the representation enables greater understanding of the nature of the paradoxical strangeness of the reconciliation between opposites -- named in the *Tao Te Ching* as the mysterious [valley spirit](#), and perhaps to be considered the epitome of a [strange attractor](#) in cognitive terms. Separately the elusive relevance of this understanding at this time was evoked with respect to the problematic cognitive relation between "local" and "global" (*Imagining a mnemonic device of requisite higher dimensionality*, 2019) -- as argued in terms of the *Local Reality of Overcrowding -- Global Unreality of Overpopulation* (2019).

Symbolizing what cannot be named: "Tao" versus "Yin-Yang"?

It is appropriate to note that there is clearly a question as to whether the conventional symbol is of the "Tao" or of its "Yin-Yang" components. There are indeed exploratory representations and animations framed in terms of the second, whereas the first may be considered as inherently beyond any appropriate representation. The classic *Tao Te Ching* is notably explicit in its introductory chapter to the effect that:

The Tao that can be told is not the eternal Tao
The name that can be named is not the eternal Name.

The challenge and the controversy are inherent in the extensive exploration of [sacred geometry](#). There is therefore a sense in which any approach to rendering it as a symbol is necessarily inappropriate.

This view is consistent with philosophical and religious deprecation of any attempt to depict the most encompassing form of unity. However the focus on Yin-Yang could itself be deprecated as a reinforcement of the divisive psychosocial dynamics in engagement with any "other" so characteristic of society today -- whether between political ideologies, strategies, male-female, or inter-ethnic relations, as discussed with respect to *Elaborating a Declaration on Combating Anti-otherness* (2018). That focus can be seen as stressing the dynamics of competition -- to an unnecessary degree in which, typically, "Yang" is expected to triumph over "Yin".

Rather than any direct focus on the elusive Tao, or on the problematic binary dynamic of Yin-Yang, recourse may be had to an eightfold encoding. In the form of the [BaGua](#) "mirror", this is widely known and depicted in two variants as a configuration of eight trigrams. This readily lends itself to a variety of animations (*Animation of Classical BaGua Arrangements: a dynamic representation of Neti Neti*, 2008). However, "avoiding the Tao" to a greater degree, an even greater articulation is evident in the pattern of 64 hexagrams of the *I Ching* which also lends itself to a variety of visual configurations and animations (*Experimental Revolutionary Animations of a Chinese Pattern of Metaphors*, 2015; *Proof of concept: use of drilled truncated cube as a mapping framework for 64 elements*, 2015).

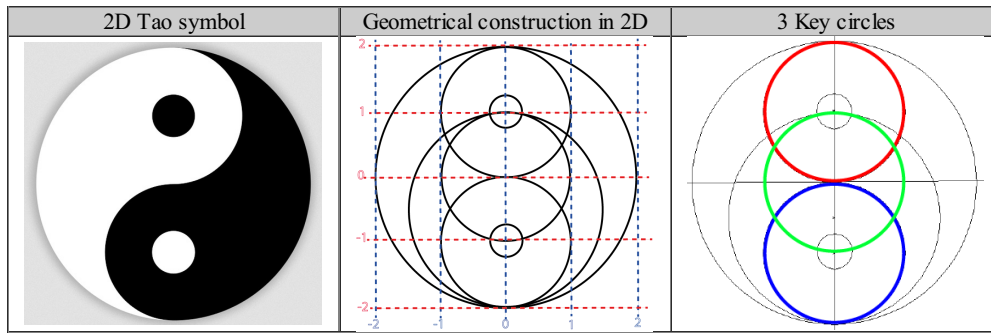
The "Yin-Yang" framing has raised the question as to a spherical rendering (*What would a 3-dimensional yin-yang look like?* *Quora*, 2016). This has engendered efforts to render this in spherical form with interactive options (Sandor Kabai, *Spherical Yin-Yang*, *Wolfram Mathematics Project*, November 2008). With respect to the 64-fold articulation, the most relevant is the mapping by József Drasny (*Cosmos in the I Ching: the Yi-globe*, 2007; *revision* of 2011). This mapping is illustrated and discussed separately (*Designing Global Self-governance for the Future: patterns of dynamic integration of the netherworld*, 2010; *In Quest of a Dynamic Pattern of Transformations: sensing the strange attractor of an emerging Rosetta Stone*, 2012).

Given the problematic global dynamics of the times, how indeed is the "shape" of the psychosocial universe to be more coherently understood? Curiously the case for exploring a unifying symbol of the Tao may be compared to the efforts of astrophysics to explore the [shape of the universe](#). Hypotheses currently focus on:

- Whether the universe is infinite or finite in extent
- Whether the geometry of the global universe is flat, positively curved, or negatively curved
- Whether the topology is simply connected like a sphere or multiply connected, like a torus

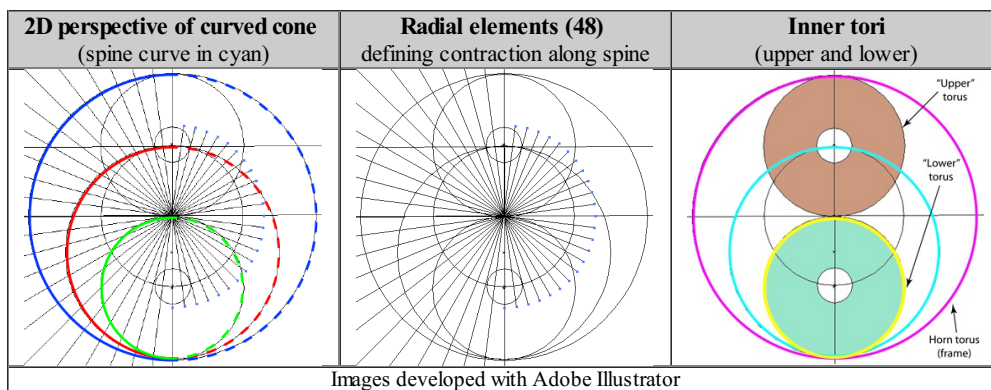
Stages in imagining a 3D Tao symbol in virtual reality

"Geometry of the Tao"? An obvious point of departure in any representation process is the 2D symbol of the Tao. This suggests identification of its possible components in 2D geometry as illustrated below -- constructed with Adobe Illustrator. The approach is consistent with calls for 3D thinking (Jonathan Frost, *3D Thinking: how to enrich your thinking*, 2 May 2014; *The relativity of knowledge and 2D vs. 3D Thinking....* 13 August 2014; Roger Burrows, *3D Thinking in Design and Architecture*, 2018). It draws upon the rapidly developing technology of *Virtual Reality-based Modeling and Simulation* (Association for Computing Machinery, 2006).



Potentially significant to the relevance of this argument is the challenge to comprehension of the three circles (above right), as remarkably articulated by Dante Alighieri with respect to the three rings (*tre giri*) of the Holy Trinity in *Paradiso* 33 of the *Divine Comedy* (Arielle Saiber and Aba Mbirika, *The Three Giri of Paradiso XXXIII*, *Dante Studies*, 131, 2013, pp. 237-272). The rings are discussed separately in terms of interlocking *Borromean rings* (*Borromean challenge to comprehension of any trinity?*, 2018; *Comprehension of Unity as a Paradoxical Dynamic: metaphors reframing problematic engagement with otherness*, 2019; *Imagining a mnemonic device of requisite higher dimensionality*, 2019).

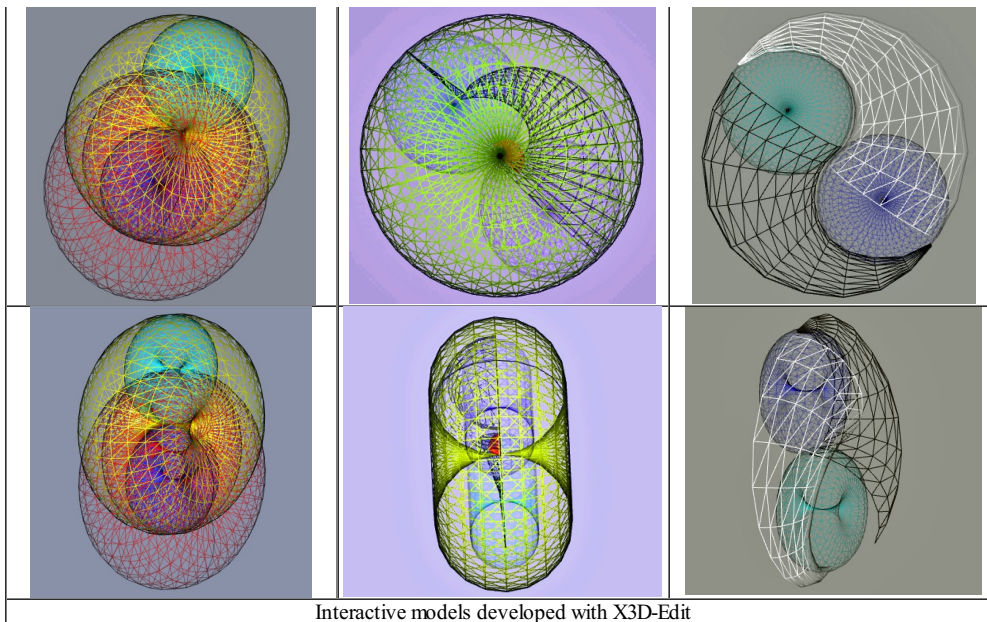
In the shift to 3D, the geometry of the construction of the two "curved cones" as primary features of any Tao symbol in 3D, requires a measure of the "orbital decay" from the contextual circle to the lower or upper inner circles. The image on the left below indicates how approximations to the contraction of the "curved cone" (central image) can be determined, namely through the changing proportions of the relation between red-blue and blue-green distances in relation to the "spine" of the curved cone in 3D. The upper and lower circles can be envisaged as each forming a torus in 3D. The Tao symbol as a whole can itself be envisaged as framed by an implicit torus, whether a more conventional torus (with the central hole corresponding to the middle circle) or a horn torus, namely with a central hole of zero diameter (Wolfgang W. Daeumler, *Horn Torus and Physics: 'Geometry of Everything'*).



Initial experiment: In imagining the potential complexification of the design of the Tao symbol in 3D, one option is to avoid the assumption that the colouring of the "other side" would be a continuation of that which is visible in the 2D representation. An alternative assumption is adopted in this exploration, namely that the "white" colouring would be complemented by a "black" colouring on the other side, and the "black" colouring by "white". The 3D variant would then have four distinctively coloured segments (as discussed further below).

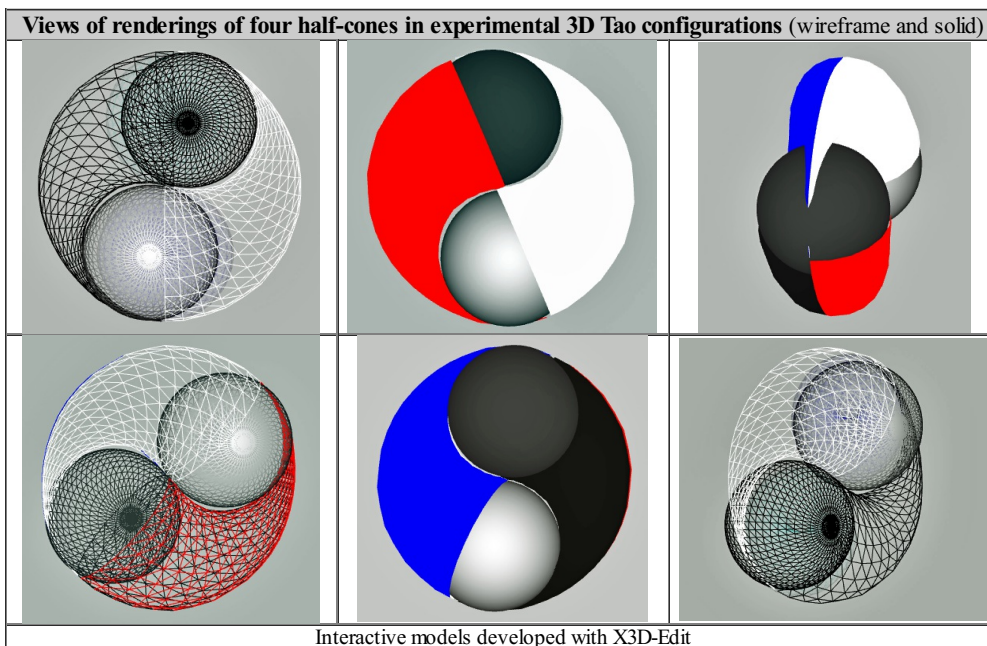
The consequence of this decision from a construction perspective is that each "curved cone" (of which half is visible in 2D) has a hidden half of the opposite colour. The challenge is then to produce two pairs of half "curved cones". Using 3D software such as *X3D-Edit*, a "curved cone" (or half-curved cone) is produced by a process of *extrusion*. This requires a set of coordinates defining the *spine* (coloured cyan in the left and right images above) along which a *cross-section* -- in this case a circle (or a half-circle) -- is extruded. In the case of a "curved cone", the cross-section is necessarily subject to a scaled contraction along the spine. The degree of scaling is indicated by the central image above.

Wireframe renderings of initial design experiments in 3D Tao configuration		
Complex of toroidal components	Single half-cone	Two half-cones (one side)



Interactive models developed with X3D-Edit

Further development: In the next stage the concern was to replicate the two half-cones such as to match the first pair, ensuring that the second halves were of a different colour -- giving 2-coloured cones (to check the design). A further concern was the introduction of 2 spheres to cap the larger end of each half-cone pair. The question which emerged was how the diameter of those spheres related to that of the 2 inner tori which served as provisional markers for the characteristic eyes or holes of the Tao symbol. The wireframe rendering helps to clarify the role of those tori -- obscured by the solid rendering of the spheres.



Interactive models developed with X3D-Edit

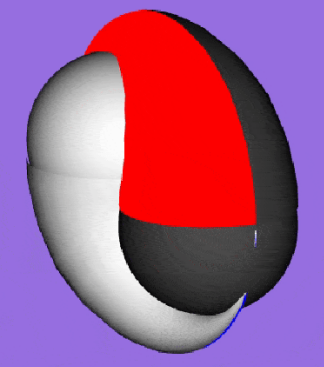
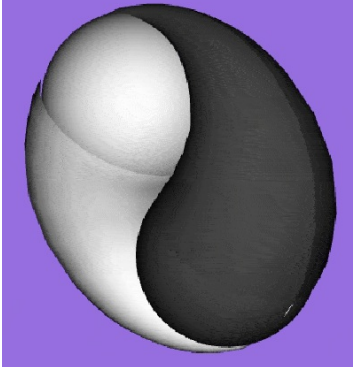
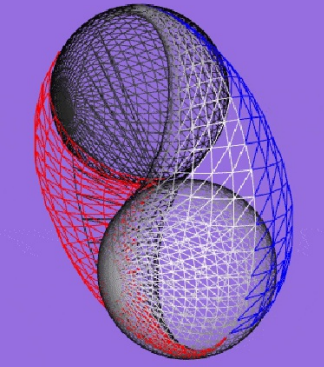
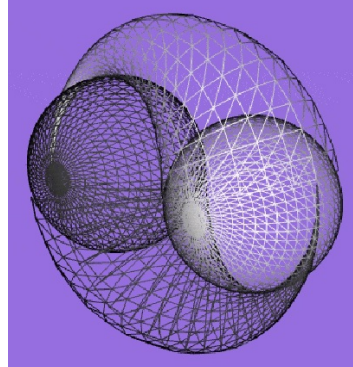
Animations of results: The following gif animations may of course be better viewed in video (mp4) formation from which they are derived. Better still is interaction with the images in virtual reality (x3d or vrml) to which access is offered. The files for the latter allow parameters to be altered with a simple text editor -- enabling change of colour, speed of rotation, and the like.

This experimental exercise has been primarily focused on "proof-of-concept" rather than on perfecting the models (which have obvious defects and are better considered as "work in progress"). A particular issue relates to the use of colour and the associated aesthetics. At this stage it is the wireframe variants which are more acceptable. Use of pure white and black requires subtle degrees of shading to render the solid variants more acceptable in aesthetic terms.

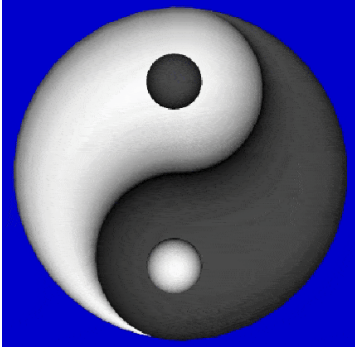
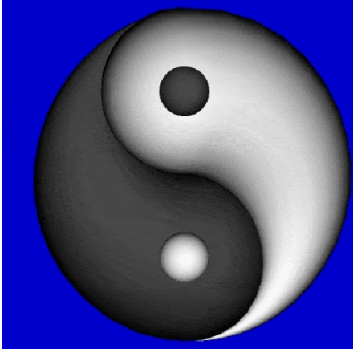
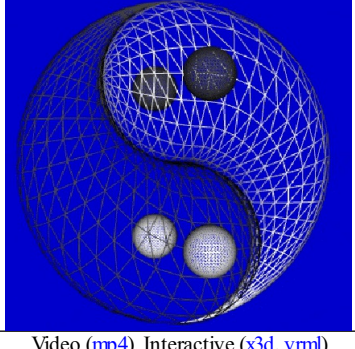
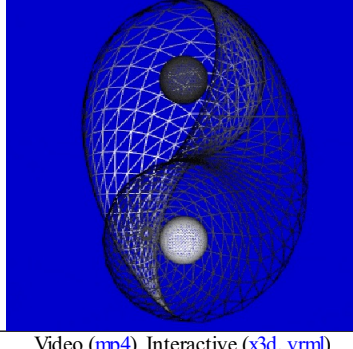
The variants included below also address the issue of what should be coloured and in what way. This calls for further exploration with respect to the half-cone distinction and the use of a sphere and/or torus for closure at the larger ends. How the advantages of a torus are to be used for the holes remains to be addressed. At this stage it is only fortuitous that the wireframe rendering of a sphere offers the suggestion of such holes.

Also to be addressed in the virtual reality variants are the navigation processes offering distinctive close-up views of the 3D topography - - potentially enabling the "valley" between the cones to be traversed through a succession of viewpoints or a special animation.

Animations of experimental 3D Tao configuration (wireframe and solid)
 (NB: The animations and videos are not a reflection of the quality of the models in 3D)

viewers)	
Half-cones distinctively coloured	Black and white only
	
	
Videos mp4 (solid, wire). Interactive (x3d, wrl)	Videos mp4 (solid, wire). Interactive (x3d, wrl)

Professional construction for comparison: An early draft of the above models encouraged the elaboration of models using far more professional techniques -- as presented below. They were prepared by Sergey Bederov, Senior Developer at [Cortona3D](#), which specializes in [VRML modelling](#) software -- to whom thanks are due for permission to include them in this document. Model 2 features some inside-out geometry. Both provide an example of extrusion: each droplet-like shape is a single extrusion object. Access to the VRML variants is provided below -- as with their conversions into [X3D](#) variants.

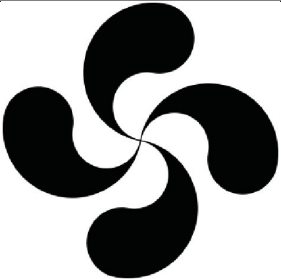
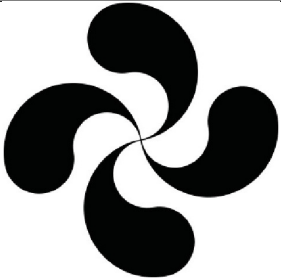
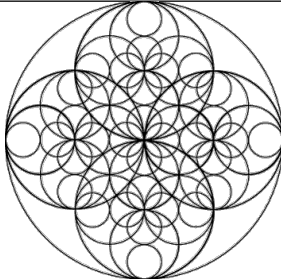
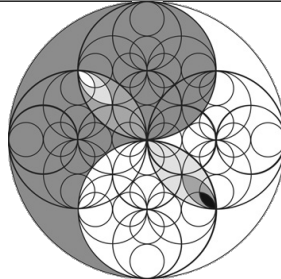
Animations of solid and wireframe renderings of professional models (NB: The animations are not a reflection of the quality of the models in 3D viewers)	
Model 1	Model 2
	
	
Video (mp4). Interactive (x3d, vml)	Video (mp4). Interactive (x3d, vml)

Ideally the design of models from a professional perspective could be said to aspire to the [parametrization](#) of the desired form. This is the process of finding [parametric equations](#) of a curve, a surface, or, more generally, a [manifold](#), as defined by an [implicit equation](#). Provocatively it could be said that forms appropriate to the reconciliation of opposites in society call for some kind of "**Parametrization of the Tao**", or perhaps the "**Parametrization of Yin-Yang**". The economy of the coding required for the above models is suggestive in that respect -- to the extent that the mathematics is comprehensible.

Clues to the Tao symbol from animation of the Lauburu in 2D

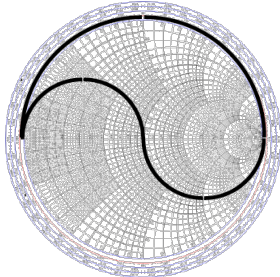
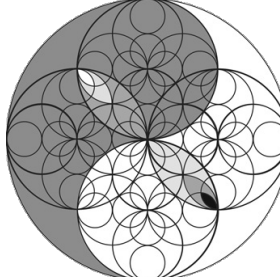
The **Lauburu** or Basque cross is a traditional Basque hooked cross with four comma-shaped head and is associated with other Celtic peoples. It exists in two versions, right-facing and left-facing, a reminder of the fact that the Tao symbol can be presented in two versions -- with the white colouring above, or the black. The Lauburu can be readily constructed with compass and square.

In a separate discussion the use of the Lauburu as a succinct mnemonic container has been explored (*Paradoxical container for the uncontainable: prescriptive constraints on creativity*, 2016) in a wider discussion of its relevance for more complex understanding of discourse (*Improvisation in Multivocal Poetic Discourse: Basque lauburu and bertsolaritza as catalysts of global significance*, 2016). That discussion extends the geometric analysis through mapping a smaller version of the larger image of the Lauburu into the branches of the larger image -- recursively engendering a fractal form. Two such recursive mappings are illustrated in the following, thereby highlighting a relationship to the traditional 2D rendering of the Tao symbol -- with its two "eyes".

Alternatives renderings of the Lauburu		Recursive mapping	Relation to Tao symbol
Right-facing Lauburu	Left-facing Lauburu	Superposition of a reduced version within each branch of the Lauburu (as with a fractal)	Highlighting one orientation of the Tao symbol and emergence of its traditional "eyes" from the geometry
			

A further elaboration suggests another means of transforming periodic tabulation characteristic of the archetypal table of chemical elements into a "periodic container" (*Eightfold Configuration of Nested Cycles of Cognitive Transformations: meta-pattern of connectivity through a hypersphere?* 2012). This approach was framed as *Towards a "new set of wheels" for psychosocial navigation* (2012).

Insights from wave theory? Through its animation in 2D, the image on the right above can be usefully seen as supportive of an electrical metaphor of communication, as explored separately (*In Quest of a Dynamic Pattern of Transformations: sensing the strange attractor of an emerging Rosetta Stone*, 2012). The argument with respect to modulating cognitive transformations is taken further there in terms of a "yin-yang" switching perspective through metaphorical use of the widely used **Smith Chart**, invented by the electrical engineer **Phillip H. Smith** (and independently by Kaneyuki Kurokawa, a Japanese engineer). This is a graphical aid for electrical and electronics engineers specializing in radio frequency engineering to assist in solving problems with transmission lines and matching circuits. (Randy Rhea (*The Yin-Yang of Matching, High Frequency Electronics*, 2006).

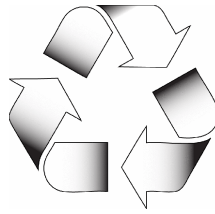
Dynamic pattern of transformations (through experimental animation of the 8 types on a Smith Chart)	Possibility of more complex transformations (animation of the right-hand image above with rotation of the nested structures of smaller scale)
	

Use of electrical metaphors is consistent with their fundamental significance for communication, especially when understood in wave terms which are intuitively more consistent with experiential reality, as discussed separately (*Encountering Otherness as a Waveform In the light of a wave theory of being*, 2013).

Dynamics in 2D implied by the Tao symbol -- as a "standing wave": The very form of the curved cone in 2D suggests a "swirl", whether emerging from each "hole" as some form of spring, or sinking into them -- or both, perhaps alternatively. In that sense the conventional static representation could be explored as a form of **standing wave**. This is understood in physics as a wave which oscillates in time but whose peak amplitude profile does not move in space.

The question is how such a dynamic across those surfaces might best be rendered. Rippling effects across the surface? Patterns of flow? Changing gradients of shading, as suggested below by a modification of the **recycling symbol**?

Anthropo-scene?



Anthropocene?

**Anthropo-
seen?**

This itself constitutes a 3-fold embodiment of the dynamics implied by the Tao. It is reproduced from a separate discussion of the essential cognitive paradox implied by any such comprehension (*Comprehension of Unity as a Paradoxical Dynamic: metaphors reframing problematic engagement with otherness*, 2019). As indicated there, any question of unity and coherence, rather than being solely recognized in societal terms, can be usefully considered in terms of individual integrity and coherence. This can be understood as constraining or determining comprehension of both the Anthropocene and the Anthro-scene. In the context of a paradoxical dynamic, meaningful insights into the nature of unity preclude premature closure. Any "answer" elicits further "questions" for continual reflection - especially including how to engage with that dynamic.

Modifying conventional static symbols in this way can be explored as a means of increasing cognitive engagement with what they imply, as discussed separately (*Augmenting the psychoactive function of a mnemotechnical device*, 2009).

Challenge of "evil" as embodied in the Tao, the Lauburu and the Swastika

The two variants of the Lauburu (to a greater degree than that of the Tao symbol) recall the very high degree of controversy associated with the two variants of the *Swastika* -- left-facing and right-facing (*The Baskian Swastika Lauburu: its symbolic meaning and history*). The continuing extent of this controversy is usefully indicative of the current challenge of the perception of any other -- for which no process or framework of reconciliation has as yet been envisaged. That one variant is readily associated with "evil" destructive processes, and the other with beneficent creative processes suggests the manner in which one is used to frame and embody the problematic differences characteristic of any other.

Although assumed to be totally irrelevant to rational discourse, this controversy usefully highlights the difficulty in contemporary discourse of engaging more fruitfully with any other, as discussed separately (*Encyclopedia of Evil Claims, Claimants, Counter-claims, and Sigils: proposed facility in support of current global strategic priorities*, 2016). This notes the importance of this framing to which, beyond rhetoric, only religions have been able to accord a degree of meaning:

- *David Cameron: World uniting to fight 'evil threat' of IS* (BBC News , 23 November 2015)
- *'Fighting common evil': Putin, Hollande agree to share intelligence on terrorist targets in Syria* (RT, 26 November 2015)
- *Putin to Hollande: Russia ready to cooperate against 'common evil'* (Times of Israel, 26 November 2015)
- *A global coalition can beat the evil of Islamic State, states Chris Roycroft-Davis* (Express, 28 November 2015)
- *Obama on Paris attacks: 'ISIS is the face of evil'* (MSNBC, 18 November 2015)
- *George W. Bush: Islamic State shows 'evil is real'* (The Washington Times, 22 February 2015)

Authoritative references include:

- **George W. Bush:** Referring to three countries engaged in terrorism, indicated that: *States like these, and their terrorist allies, constitute an axis of evil, arming to threaten the peace of the world. By seeking weapons of mass destruction, these regimes pose a grave and growing danger. (2002 State of the Union Address)*. He further stated that: *We've come to know truths that we will never question: evil is real, and it must be opposed. and We are a people dedicated to the triumph of freedom and democracy over evil and tyranny (Patriot Day, 2002)*. George Bush famously declared that he "**wanted to rid the world of evil**"
- **Barack Obama:** Presumably with the full support of his science advisors, Barack Obama specifically referred to evil in the course of his acceptance of the Nobel Peace prize: *For make no mistake: evil does exist in the world. (Remarks by the President at the Acceptance of the Nobel Peace Prize, 10 December 2009)*.
- **John Kerry** (US Secretary of State): Declared in relation to the Boston Marathon bombings: *We've been in direct confrontation with evil* (BBC News, 19 April 2013).
- **Justin Welby** (Archbishop of Canterbury): Recently declared: *I believe Islamic State is deeply evil -- even to its own supporters* (BBC, 19 April 2015)

This pattern of thinking continues to be reinforced without any challenge to its dangerous oversimplification of complex cognitive processes potentially meriting deeper reflection:

- Richard Cohen: *Trump has his own Axis of Evil* (The Washington Post, 4 March 2019)
- David A. Walsh: *How the Right Wing Convinces Itself That Liberals Are Evil* (Washington Monthly, July-August 2018)
- *Trump threatens retaliation against 'evil, treasonous' opponents over Russia investigation* (The Guardian, 26 March 2019)

More tragic for governance at this time is the degree to which "evil" is readily claimed of the opposition in any democratically elected parliament. Such perception, with the associated rhetoric, is a characteristic of discourse claiming any opposition to be foolish, irrational, or mad. Both sides perceive themselves to be unquestionably "right" and would prefer the other to be "left" behind, if not eliminated by

force (*Eradication as the Strategic Final Solution of the 21st Century?* 2014).

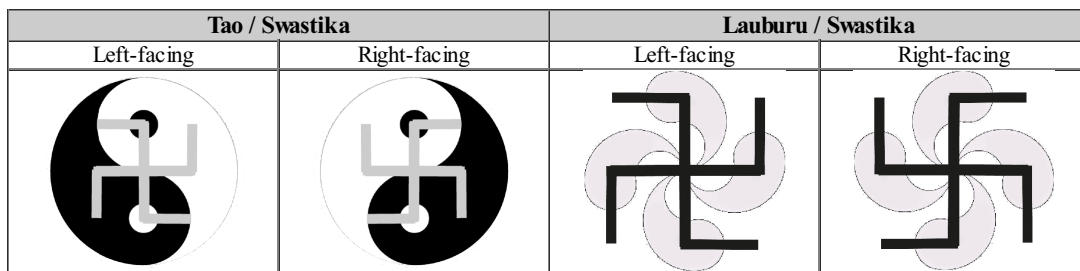
The process is evident in highly divisive debate at this time between Democrats and Republicans in the USA, between Tories and Labour in the UK, and between the extremes of the political spectrum in France, as in Germany. There would appear to be zero capacity to handle such interaction more fruitfully -- and no motivation or suggestion that this is vital at this time, especially since every strategic advocate has an unquestionable sense of what is "right". This is tragically evident at the time of writing with the pathetic chaotic processes in the UK Parliament with respect to Brexit.

This understanding is equally characteristic of intellectual, religious and philosophical commentary on such discourse. The possibility of any "oppositional logic" remains academically obscure, together with insights from [oppositional geometry](#), as discussed separately (*Oppositional Logic as Comprehensible Key to Sustainable Democracy: configuring patterns of anti-otherness*, 2018).

It is remarkably curious that the contrasting variants of the Swastika (otherwise implied in the Tao symbol and the Lauburu) are intimately related to the deep and unquestioning commitment to the "positive" claimed by advocates of any political strategy. This is matched by a radical commitment to the rejection of the "negative" seen as characteristic of any opposition -- also unquestioned ([Barbara Ehrenreich](#), *Bright-sided: how the relentless promotion of positive thinking has undermined America*, 2009).

Ironically this dynamic is evident despite the fundamental dependence on both positive and negative, whether in terms of the cybernetics of [positive feedback](#) and [negative feedback](#), or electrical wiring worldwide. Also unquestioned is the cognitive implications of directionality in reading and writing (*Unquestioned Bias in Governance from Direction of Reading? Political implications of reading from left-to-right, right-to-left, or top-down*, 2016). It is typical of strategies upheld as "positive" that their proponents have zero appreciation of "negative feedback".

In these strange times, in which those seen by others as exemplifying "evil" negativity identify with one form of the Swastika, the perception of problematic otherness could well be explored through the variants of that symbol, especially when otherness is increasingly understood as "evil" in some measure (whether or not it is labelled as fascist). It is the nature and possibility of reconciliation which clearly merits attention -- if only in geometrical terms. Such consideration calls for understanding as to the manner in which the left-facing [sauwastika](#) is a sacred symbol in the [Bon](#) and Buddhist traditions, whereas the right-facing swastika appears commonly in Hinduism and Jainism. The Nazi adaptation as the [Hakenkreuz](#) is based on an angular rotation to the left by 45 degrees of the right-facing variant.



The dynamics implied by the variants of the Swastika lend themselves to a variety of animations of relevance to understanding the Tao (*Swastika as Dynamic Pattern Underlying Psychosocial Power Processes: implicate order of Knight's move game-playing sustaining creativity, exploitation and impunity*, 2012). Especially noteworthy is the manner in which this can associate both the Knight's move across a chess board and the encoding of the Chinese [BaGua](#) pattern fundamental to understanding of the Tao. The earlier discussion notes both the strategic insights from that metaphor and ambiguity with regard to its appreciation (*Insights from Knight's move thinking*, 2012; *Knight's move thinking: appreciated or deprecated*, 2012).

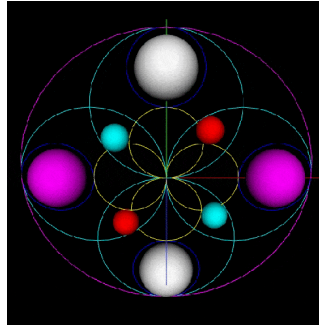
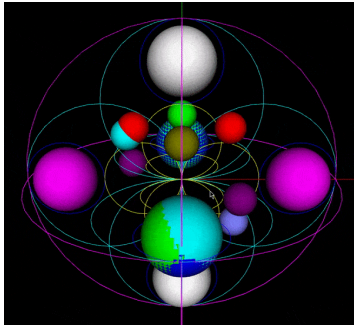
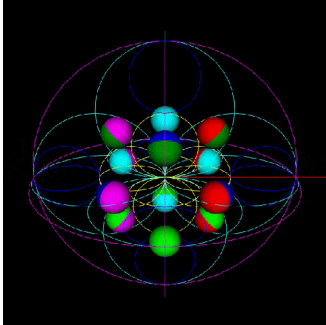
Superposition of the Swastika in animations in 2D of Knight's moves in relation to the Chinese BaGua pattern (using the BaGua "Earlier Heaven" Arrangement)					
Transformation of trigram coding consistent with Knight's move, namely reflection across the centre or change of line pattern for the "sting")			Engendering both forms of Swastika left-facing (green) and right-facing (red), switching in colour and direction -- to the "other" Swastika -- following each "move"		
Left-facing Swastika			Right-facing Swastika		

Reproduced from *Alternative representations: Knight's move, Swastika and BaGua?* (2012)

Understanding the Tao through animation of the Lauburu and the Swastika in 3D

One approach to the animation of the Lauburu in 3D is to treat the "curved-cone" (or "comma-shaped") elements as defined primarily by those dynamics -- namely as being traced out by a pattern of transformative movement of a sphere. The curved-cone elements of the Tao symbol are then to be understood as essentially dynamic rather than static, whether rendered in 2D or 3D.

In the case of the Lauburu this has been explored through contrasting animations based on 8, 16 or 24 curved-cone patterns or sphere pathways (*24-fold Pattern Implied by Dynamics of the Lauburu in 3D: visualization of the interplay of sets of voices in discourse*, 2016).

Screen shots and 3D animations of complementary "voices" using the geometry of mutually orthogonal Lauburu to frame pathways of emergence and reabsorption		
Single-plane auburn framework 8-voice dynamics	Double-plane lauburu framework 16-voice dynamics	Triple-plane lauburu framework 24-voice dynamics
		
Video (mp4). Virtual reality (x3d, wrl)	Video (mp4). Virtual reality (x3d, wrl)	Video (mp4). Virtual reality (x3d, wrl)

Mysterious role of the 12-fold: Given the manner in which the mutually orthogonal versions of the 4-fold Lauburu are used in these animations, especially the 12-fold variant, this suggests a means of exploring the 12 "voices" so strangely evident in a wide variety of articulations of strategic relevance (*Checklist of 12-fold Principles, Plans, Symbols and Concepts: web resources*, 2012). It is remarkable that the enthusiasm for the appropriateness of that pattern tends to go completely unquestioned -- with rare exceptions in relation to the size of juries.

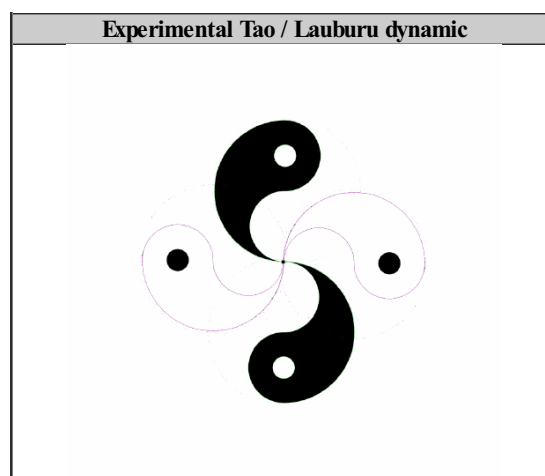
That pattern can be explored from other perspectives:

- *Eliciting a 12-fold Pattern of Generic Operational Insights: recognition of memory constraints on collective strategic comprehension* (2011)
- *Topological Clues to a Memorable 12-fold Systemic Pattern* (incomplete, 2011)
- *Enabling a 12-fold Pattern of Systemic Dialogue for Governance* (2011)

Of particular interest, given unquestioning enthusiasm for 12-fold *Round Tables* (of the Wise), is the case for *Provocative Mnemonic Aids to Systemic Connectivity? Possibilities of reconciling the "headless hearts" to the "heartless heads"* (2018). This concludes with discussion of:

- Dynamics of discord anticipating the dynamics of concord
- Associating significance with a dodecahedron
- Increasing the dimensionality of the archetypal Round Table?
- Necessity of encompassing a "hole" -- with a dodecameral mind?

As animations, especially as morphological transformations carrying cognitive implications, of further interest is how the more elaborate articulations based on the Lauburu may be "collapsed" into those of the Tao symbol (whether in 3D or 2D) and how they may "emerge" from that symbol, or be understood as implied therein. The following is an exercise in exploring some such dynamic.



Reconciliation of incommensurable differences implied by the mysterious "valley spirit"

Valley spirit of Taoism: There is a curious sense in which further insight may be enabled through what amounts to a topographical metaphor, as previously argued (*Naturomimicry: sourcing nature for strategic metaphors*, 2012). Represented in 3D and viewed from one side, the Tao symbol suggests two archetypal mountains:

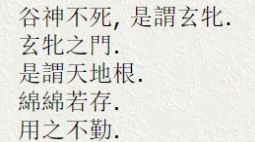
- the mountain of righteousness, rectitude, appropriateness, correctness, decorousness, decorum, etiquette, fitness, propriety -- of all that is upheld to be of the highest value. (*Your righteousness is like the highest mountains... Psalm 36:6; Righteousness and identity formation in the Sermon on the Mount, HTS, 2013; List of sacred mountains, Wikipedia*)
- the mountain of impropriety, indecency, indecorum, indiscretion debauchery, degeneracy, degradation, depravity, perversion, pervertedness, sinfulness crookedness, dishonesty, underhandedness, unscrupulousness -- of all that is most deprecated, if not simply evil (as with fictional mountains, such as the [Mount Doom](#) of *Lord of the Rings*)

Curiously, and appropriate to this argument, an aesthetic transformation between these interpretations has been studied (Marjorie Hope Nicolson, *Mountain Gloom and Mountain Glory: the development of the aesthetics of the infinite*, 1997).

As is especially evident in the 3D rendering of the Tao symbol, separating these mountains is a form of abyss, variously evident as a form of valley. In topographical terms it is this feature which reconciles the contrasting mountains. Typically water from neighbouring mountains gathers in such a valley via streams, and flows along it in the form of a meandering river. Symbolically the sense of "abyss" and "water" is conflated in one of the symbols of the 8-fold Taoist *BaGua* configuration (*Kan*, denoted by the character *Shui*). The sense of "mountain", and the portentous "thunder" with which it is associated, are represented by two of the other symbols (*Gen* and *Zhen*).

Whilst a form of "valley" is obvious in the 3D rendering, it is only implied by the meandering line which divides the Tao symbol in 2D.

It is however the references to a mysterious "valley spirit" in the *Tao Te Ching* which are suggestive of an elusive potential reconciliation between the mountains. The view from any mountain peak -- an experientially awesome dominating overview -- is readily associated with that from any preferred strategic perspective, whereas that potentially experienced within a valley is far more subtle and elusive. The former offers a particularly static sense of order, whereas the latter implies a process of containment which does not lend itself to simple description. In metaphorical terms this contrast readily lends itself to comparison with the strange dynamic between male and female which is so fundamental in every culture.

Alternative articulations of the "Valley Spirit" from the <i>Tao Te Ching</i> (chapter 6)			
 <p>谷神不死，是謂玄牝。 玄牝之門， 是謂天地根。 綿綿若存， 用之不勤。</p>	<p>The valley spirit not dying is called the mysterious female. The opening of the mysterious female is called the root of heaven and earth.</p> <p>Continuous, on the brink of existence, to put it into practice, don't try to force it.</p>	<p>The valley spirit never dies Call it the mystery, the woman. The mystery, the Door of the Woman, is the root of earth and heaven. Forever this endures, forever. And all its uses are easy.</p>	<p>The life-force of the valley never dies-- This is called the dark female. The gateway of the dark female-- This is called the root of the world. Wispy and delicate, it only seems to be there, Yet its productivity is bottomless.</p>
	Thomas Cleary	Ursula K. Le Guin,	Roger T. Ames and David L. Hall

The strangeness is usefully emphasized by that of the Taoist alchemical symbol (*xuanpin*) for the so-called valley spirit, or mysterious feminine, as widely discussed (*Embodying topological succinctness beyond questions*, 2014; Shuren Wang, *Returning to Primordially Creative Thinking: Chinese wisdom on the horizon of "Xiang thinking"*, 2018; Evgueni A. Tortchinov, *The Doctrine of the "Mysterious Female" in Taoism*, 1997; Ellen M. Chen, *In Praise of Nothing: an exploration of Daoist fundamental ontology*, 2010).

Dynamic engendered by the missing: In contrast with the explicit form of the mountains by which it is seemingly framed, the valley is characterized by its emptiness -- by seemingly "missing something". Taoism places great emphasis on that emptiness in cognitive terms.

It is appropriate to note that the role of the missing is the focus of the argument of Terrence Deacon (*What's Missing from Theories of Information?* 2010). Together these elements emphasize through their animation that **the elusive requisite comprehension of challenging systems is dynamic rather than the dangerously simplistic conventional implication that it is static**, as emphasized separately (*Engaging with Elusive Connectivity and Coherence: global comprehension as a mistaken quest for closure*, 2018).

As discussed separately (*Necessary incompleteness*, 2014; *Cognitive mystery of holes, lacunae and incompleteness*, 2014), for Deacon:

The problem is this: *Such concepts as information, function, purpose, meaning, intention, significance, consciousness, and value are intrinsically defined by their fundamental incompleteness.* They exist only in relation to something they are not.... The "something" that each of these is not is precisely what matters most. But notice the paradox in this English turn of phrase. To "matter" is to be substantial, to resist modification, to be beyond creation or destruction -- and yet what matters about an idea or purpose is dependent on something that is not substantial in any obvious sense. So what is shared in common between all these phenomena? In a word, nothing -- or rather, something not present. (*Incomplete Nature: how mind emerged from matter*, 2011p. 23, *emphasis in original*)

The fundamental value of focusing on what is "absent" from conventional explanation is introduced by Deacon by comparing it to the vital role of **zero** in the number system -- itself a great discovery (cf. Charles Seife, *Zero: the biography of a dangerous idea*, 2000; Robert Kaplan and Ellen Kaplan, *The Nothing that Is: a natural history of zero*, 2000). For Deacon:

Basically, it means that our best science -- that collection of theories that presumably comes closest to explaining everything -- does not include this one most defining characteristic of being you and me. In effect, our current "Theory of Everything" implies that we don't exist, except as collections of atoms. So what's missing? **Ironically and enigmatically, something missing is missing.** (p. 1, *emphasis added*)

Deacon uses this analogy to zero to demonstrate how a form of causality dependent on specifically absent features and unrealized potentials can be compatible with the best of science. Deacon sees this approach as offering a *glimpse of the qualitative outlines of a future science that is subtle enough to include us and our enigmatically incomplete nature, as legitimate forms of knotting in the fabric of the universe* (p. 17)

Encompassing differences: The engagement with the difference, experienced as so divisive in society at the present time, features notably in the arguments of Longxi Zhang (*The Tao and the Logos: Literary Hermeneutics, East and West*. 2012):

For many scholars, whether they accept or reject the Hegelian view, incommensurability or fundamental difference between cultural systems is still very much the accepted working assumption. Of course, difference is what makes things identifiable, interesting, even aesthetically appealing, and hermeneutic difference is where understanding begins, but total difference without any common ground would make hermeneutics utterly impossible. We may recall Dilthey's remarks on the realm of hermeneutics as a locale between the two extremes of total difference and total identity. The object of all hermeneutic activities, a speech or a text that calls for interpretation, is always some kind of expression of life (*Lebensäußerung*). "Interpretation would be impossible", says Dilthey, "if the expressions of life were totally foreign. It would be unnecessary if there were nothing foreign in them. **Interpretation therefore resides between the two opposed extremes. It is needed wherever there is something foreign, which the art of understanding should make one's own.**" [p. 22, emphasis added]

Intimations of the "valley spirit": Given its nature, that spirit necessarily eludes definitions and is therefore best suggested by a complex of metaphorical associations, especially those with an aesthetic emphasis. These might include the following, although each necessarily has its limitations in the spirit of *Neti Neti*:

- **Spiritual significance of valley:** There are many scriptural references to valleys which are a focus of commentary (*Valley*, BibleHub; *Valley*, International Standard Bible Encyclopedia; *Spiritual Meaning of Valley*, Bible Meanings; *48 Bible Verses about Valleys*, Knowing Jesus). The most relevant widely-known metaphorical allusion is perhaps: *Even though I walk through the valley of the shadow of death, I fear no evil, for You are with me...* (*Psalms 23:4*). This features as one of those in the commentary by Jack Hyles (*Seven Bible Valleys, From Vapor to Floods*, 1974, ch. 5). The relation to mountains is also the subject of commentary (Susan J Nelson, *Mountains and Valleys in the Bible and in Life*). The perspective of Judaism is highlighted in the Wikipedia indexing of *Hebrew Bible valleys* in the *Tanakh*.
- **Poems regarding the valley of the shadow of death:** Many poems focus on that theme, notably that of Lewis Carroll, Daniel Romero, and William Cowper, The valley of death is the frame offered for the famous poem by Alfred, Lord Tennyson (*The Charge of the Light Brigade*, 1854). The latter lends itself to a provocative adaptation to the "charge" of the "Fortune 500" -- in celebration of current problematic global strategic management initiatives.
- **Depression and despair:** Associated with recognition of the iconic "valley of the shadow of death" is the "slough of despond" and its archetypal framing of depression -- seemingly echoing the topography of a valley. Both figure in the classic Christian allegorical tale of John Bunyan (*The Pilgrim's Progress Pilgrim's Progress: from This World, to That Which Is to Come*, 1678). as discussed by Rod Giblett (*Environmental Humanities and Theologies: ecoculture, literature and the Bible*, 2018). Bunyan's tale also describes the "valley of humiliation" (W. White, *The Valley of Humiliation, The Bible Hub*). The "valley of despair" is recognized in relation to strategic management and the process of change (Jim Blanchet, *The Valley of Despair, Quora; What does "valley of despair" mean? Yahoo Answers*). It has notably been employed by Martin Luther King in his iconic speech *I Have a Dream* (1963).
- **Happy valley metaphor:** In contrast with the "valley of despair", this sense is evident in the naming of ideal locations, most notably towns, whether in reality or in fiction as imagined possibilities. Its illusory nature has been explored in a classic tale by Samuel Johnson (*The History of Rasselas, Prince of Abyssinia, or the Happy Valley*, 1851). As might be expected, happy valley is also used in urban slang as a geographic metaphor for female genitalia. and with reference to the cleft separating the buttocks of partners of either sex (as discussed below). The "valley of delight" continues to figure in allegory, poetry and song, with whatever allusion (Paul Crabtree, *The Valley of Delight: Death and Resurrection*, 2014). It is mentioned in *The Story of King Arthur and His Knights* (1903): *Nevertheless there lieth within Merlin and this forest that place which is called by some the Valley of Vivien come to Joyousness, and by others the Valley of Delight*. It features in a poem by the highly controversial Aleister Crowley (*How barren is the valley of delight*), as an interpreter of the original inspiration (*The Tao Teh King*).
- **Objective/Subjective response:** Termed the "uncanny valley", this is a hypothesized relationship in aesthetics between the degree of an object's resemblance to a human being and the emotional response to such an object. The extensively studied concept of the uncanny valley suggests humanoid objects which appear almost, but not exactly, like real human beings elicit uncanny, or strangely familiar, feelings of eeriness and revulsion in observers. *Valley* denotes a dip in the human observer's affinity for the replica, a relation that otherwise increases with the replica's human likeness (M. Cheetham, et al. *Perceptual discrimination difficulty and familiarity in the Uncanny Valley: more like a "Happy Valley"*. *Frontiers in Psychology*, 2014).
- **Spirit of Silicon valley:** Much is made of the innovative spirit of Silicon Valley. This has lent itself to various commentaries of some relevance, possibly reinforced by (unconscious?) Californian efforts to appropriate the "valley spirit" (*The Spirit of Silicon Valley: journeys and transformations beyond technology*, 2012; *What is the spirit of Silicon Valley? Quora*; Kimberly Amadeo, *Silicon Valley, America's Innovative Advantage, The Balance*, 2018).

- **Spirit of competition:** Given the creative competition that is exemplified by Silicon Valley, is the valley spirit to be compared in some way -- however problematic -- to the widely cited and cultivated "competitive spirit" or "spirit of competition" (*Bible Verses about Competitive Spirit*, *Bible Tools*; *5 Reasons Why Competition Is Good For Your Business*, *Forbes*; Jason Saltzman, *Why Competition Is Good*, *Entrepreneur*, 28 October 2014)? More intriguing is the manner in which those who consider it good would challenge any effort to question that appreciation, despite the controversy in that regard (*Is competition a good thing?* *Debate.org*). In a period in which nations continue to aspire to be "great again", the dedication to "crushing" and "eradicating" opponents is evident in the classic threat (Nick Cullather, *Bomb them Back to the Stone Age: an etymology*, *History News Network*; *General Curtis LeMay, "Bomb the North Vietnamese Back to the Stone Age": Quote or No Quote?* *BuzzKill*, 3 October 2017). In the absence of a **bipartisan spirit**, is achieving dominance in right-left wing politics to be understood as an ill-concealed aspiration to "bomb" any alternative "back to the Stone Age" -- in order to achieve **full-spectrum dominance**?
- **Valleys as boundaries:** Whilst mountain ranges are of significance in defining boundaries, this is far less the case with single mountains. A valley, especially when a river defines its lowest points, is however characteristic of many geopolitical boundaries (*List of international border rivers*, *Wikipedia*).

Cleavage: Other understandings of the valley spirit are suggested by the ambiguous connotations of **cleavage**, whether as epitomizing the problematic divisiveness of society or as perhaps the most fundamental attractor. This is explored separately more extensively (*Golden Globes Confusing Cleavage, Hype and Hypocrisy*, 2018), under the following headings: *Unacknowledged symbolism in relation to cleavage*; *Cleavage: metaphorical nexus of complexity and ambiguity*; *Cleavage as a global psychosocial metaphor*.

There it is noted that the use of cleavage as a metaphor is alleged to derive from the physical world rather than human biology where it is notable feature of the division of cells in the early embryo. The case for the physical derivation is made by Zsolt Enyedi and Kevin Deegan-Krause (*Cleavages and Their Discontents*, 2007):

"Cleavage" is one of any number of starting points for understanding social and political phenomena. In the social and political realm, "cleavage" is a metaphor, an image borrowed from geology: the crack in the rock that is the first to emerge under pressure. As such, the metaphor of cleavage organizes social and political phenomena around "sides" and (because unlike rocks, people often fear, desire, abhor what is on the other side) around competition and conflict between sides.

Insights into the nature of the valley spirit are variously implied by potentially problematic examples elaborated in that earlier discussion, including:

- **Social cleavage** as a concept used in voting analysis and is the division of voters into voting blocs.
- **Political cleavage**, from the perspective of political science, is the division of voters into voting blocs. Arguably the very organization of parliaments, according to the Westminster model, is an institutionalization of that cleavage between government and opposition (contrasting with those favouring hemicycles in which the cleavage tends to be radial)
- Socio-economic cleavage over the (re)distribution of economic resources is frequently seen as the most pervasive political conflict in modern democracies.
- Ideological and issue cleavages (Andrija Henjak, *Ideological Cleavages in Western Societies: Transformation of Cleavage Politics*, 2007)
- Cultural cleavage, curiously used to note that: *Bared bosoms have been deeply embedded in culture for hundreds of years* (Jocelyn Selim], *Cultural Cleavage*, *Discover Magazine*, 30 September 2004):
- Religious cleavage, as reported by Oddbjørn Knutsen (*The Religious Cleavage in 24 European Countries: a comparative study*, 2010)
- Moral and ethical cleavage
- Aesthetic cleavage
- Ethnic cleavage:
 - Anthony D. Smith: *Ethnic cleavage and conflict in the third world* (*Journal of Ethnic and Migration Studies*, 1987)
 - Robert M. Rosh: *Ethnic Cleavage as a Component of Global Military Expenditures* (*Journal of Peace Research*, 1987)
 - D. N. Posner: *Regime Change and Ethnic Cleavages in Africa* (*Comparative Political Studies*, 2007)
- Philosophical cleavage

Human psychodynamics associated with anatomical cleavages: Curiously, given the leading role played by the French fashion industry in defining cleavage, in French the emphasis in relation to breasts is on euphemistic use of *décolletage*. The term *clivage* is however used to distinguish many of the cleavages indicated above. This preference could be explored with regard to the sense in which *décolletage* offers an emphasis on what is covered or uncovered when cleavage is used in a psychosocial context where "cover-up" may be especially relevant, as discussed separately. Cleavage in such a context triggers responses familiar to entrepreneurs in quest of a market niche and the possibility of imagining a creative means of exploiting it.

Ironically the "cleavage" between the physical and biological derivations is "bridged" in psychological terms in one of the most popular Christian hymns *Rock of Ages* -- itself an inspiration for many musical renderings. The first stanza of the hymn is: *Rock of Ages, cleft for me, Let me hide myself in Thee*. This use of cleft is curiously consistent with a common male breast fantasy cultivated to their advantage by women. Ironically another is evident in the anatomical distinction of the **pudendal cleft**. This vaginal cleavage features extensively in literature and art as a focus of attraction (*A Dictionary of Sexual Language and Imagery in Shakespearean and Stuart Literature*, 2001, p. 249; *Vagina and Vulva in Art*, *Revolvy*).

Potentially of particular relevance to this argument is the nature of the cleft that is most "hidden", namely that separating the two **cerebral**

hemispheres -- and the linking function of the [corpus callosum](#). With the right and left hemispheres so readily recognized as "mountains" having complementary functions, insights into the nature of what separates and links them so evidently merits reflection in terms of the function of the valley spirit and the possibility for its comprehension. That reflection merits extension to any understanding of the [global brain](#), as variously presented (*Corpus Callosum of the Global Brain? Locating the integrative function within the world wide web*, 2014). There is a case for exploring the manner in which the cleavages in society echo or mirror those in the human anatomy, much as is recognized in the function of [mirror neurons](#).

Subliminal function of the valley spirit? As noted in the earlier argument, the manner in which symbolism functions may well elude recognition in conventional terms.

The point is usefully made by reference to perhaps the most prominent symbol worldwide -- beyond any associated with the United Nations or religions -- namely that of the hamburger chain [McDonald's](#). As noted by Carly Ledbetter (*There's A Subliminal Message Behind McDonald's Golden Arches Can you see it?* *The Huffington Post*, 14 February 2017):

When McDonald's was thinking about doing away with the arches in the 1960s, they hired design consultant and psychologist [Louis Cheskin](#). Cheskin wisely instructed the chain to keep the arches, for a very interesting reason:

He argued against completely eliminating the golden arches, claiming they had a great Freudian importance in the subconscious mind of consumers. According to Cheskin, the golden arches resembled a pair of large breasts: "mother McDonald's breasts". It made little sense to lose the appeal of that universal, and yet somehow all-American, symbolism. The company followed Cheskin's advice and retained the golden arches, using them to form the M in McDonald's.

The design has stayed relatively the same ever since. McDonald' didn't respond to our request for confirmation on this tale, but one thing is for sure -- you'll never look at those golden arches the same way ever again!

As *The Golden Arches Are Boobs*, this example is cited by Scott Hillard (*10 Logos That Mean Way More Than You Think*, *ListVerse*, 4 July 2013), and by others (George Harrison, *Still Lovin' It? There's something strange -- and a bit rude -- about the McDonald's logo which you've probably never noticed*, *The Sun*, 5 February 2017; Emily Hodgkin (*Did you know? Fast food chain McDonald's logo has a hidden sexual meaning... planted there by the man who designed it in the 1960s*, *Express*, 6 March 2017).

Association of liquidity and fluidity with the valley: The dynamic adaptation of the recycling symbol, as presented above, offers a reminder that metaphorical "mountains" are especially significant for the manner in which water flows down from them via streams into a valley where they typically form a river. Hence the association of "abyss" with "water".

This transition can be usefully understood in terms of the language of keynote presentation by [Maurice Yolles](#) to a symposium, themed around *Borders Without Borders: Systemic frameworks and their applications for sustainable well-being in the global era*, focused on the the **distinction between solid and liquid development** (*The Socio-Cultural Dynamics of Development*, 6th [Business Systems Laboratory](#) International Symposium, University of Pavia, January 2019). Yolles notes that:

[Modernism] was replaced by post-modernism after WWII, in which relativism rose to smite positivist views of reality, becoming a period that saw in the onset of socio-cultural uncertainty. This has transformed into Bauman's... notions of liquidity, in which uncertainty is a dominant feature [Z. Bauman, *Liquid fear*, World Social Summit, 2008]. So, the shift from modernity to post-modernity is an entry into a period of cultural instability. It has since then developed into the social liquidity of complexity and uncertainty. Here then we see movement from the solid certainties of modernity to the full-blown uncertainties of liquidity through the transition of post-modernism....

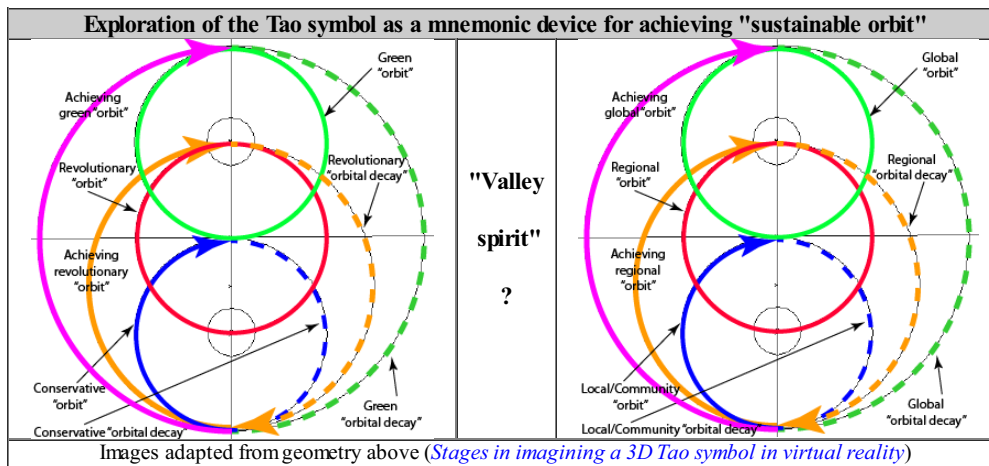
Liquid society... is defined by extended social dynamics, high levels of mobility and perpetual social change for interactions and relationships, and in the configuration of structures and social systems [E. Palese, *Bauman: Individual and society in the liquid modernity*, SpringerPlus, 2013]. It is a mobile, changing and precarious society in which values are transient, as are human relationships that are constantly in danger of disintegration... *the liquid perspective on society helps explain instabilities in the practice of public relations because the crisis has fuelled additional uncertainty to the state of liquid fear in a liquid society of liquid consumption*.

Essential ambiguity: The various possible connotations of the "valley spirit" are appropriately called into question in the spirit of Neti Neti, as noted above. The ambiguity is usefully framed by the complex of understandings of [liminality](#), as argued separately (*Living as an Imaginal Bridge between Worlds: global implications of "betwixt and between" and liminality*, 2011).

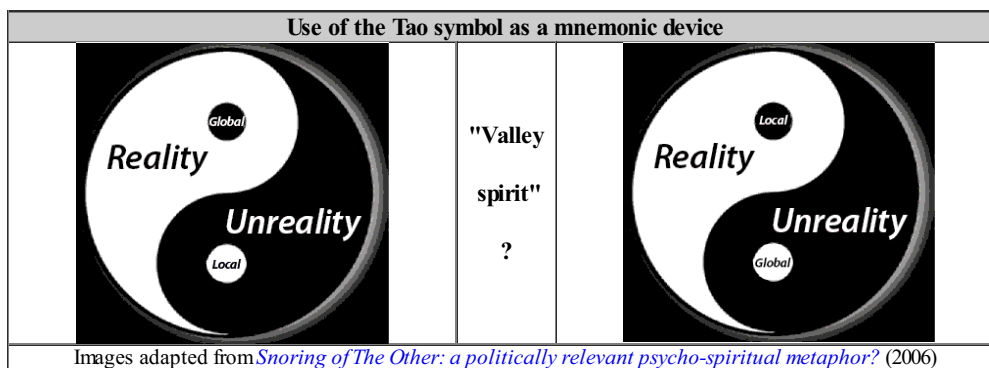
Tao comprehension in terms of "achieving orbit" -- and "orbital decay"

Importance attached to metaphors associated with growth and development, extending into achieving the strategic capacity to "fly" with its obvious challenges (*Counteracting Extremes Enabling Normal Flying: insights for global governance from birds on the wing and the dodo*, 2016; *Coordination of Wing Deployment and Folding in Politics: bird flight and landing as complementary metaphors of global strategic coherence*, 2018).

In metaphorical terms, "orbit" is commonly used with respect to psychosocial dynamics and human aspirations. There is therefore a case for exploring the manner in which any geometrical construction of the Tao symbol is indicative of the process of "achieving orbit", sustaining it, and the potentially problematic process of "orbital decay". It merits enrichment in the light of the challenges it poses in practice for rocket science, as with its more general implications (*Towards an Astrophysics of the Knowledge Universe: from*



The transition from a local to a global worldview could be seen as a cognitive process of "getting into orbit" -- whether this is seen as appropriate detachment or an inability to engage with local reality. The reverse process could be understood in terms of "orbital decay" -- whether this is seen as some sort of failure of a global perspective or a necessary "landing" in local reality. The issue of the relative reality or unreality of such perspectives is the focus of a separate discussion (*Local Reality of Overcrowding -- Global Unreality of Overpopulation: comprehensible reframing of engagement with global issues via metaphors of proximity*, 2019). The complementary images below were used to illustrate the paradoxes of that relationship. It is appropriate to recall the degree to which effective governance can be recognized as a riddle whose solution is widely experienced as an elusive (*Global Governance as a Riddle: but is a solution the answer to the question?* 2018).



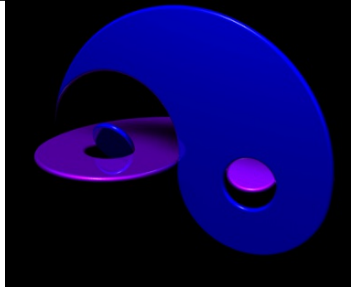
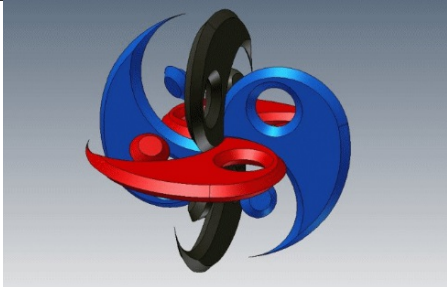
As emphasized above, the Tao symbol is best understood as psychoactive. This would imply that the nature of the engagement with it is intimately related to the paradox of what it implies. It eludes any effort to "grasp" its nature and constrain its dimensions by premature closure (*Openness and Closure in Pattern Language: geometry versus resonance*, 2012; *Avoiding distortions of premature cognitive closure*, 2013; *Beyond Harassment of Reality and Grasping Future Possibilities: learnings from sexual harassment as a metaphor*, 1996). Hence the emphasis on insights provided from the process of construction -- potentially consistent with the Chinese calligraphic 8 Principles of Yong (associated with the process of internal alchemy, known as *Neidan*).

The process of construction then merits reflection in terms of the fundamental geometric elements required, as discussed separately (*Engaging with Globality through Cognitive Lines, Circlets, Crowns or Holes*, 2009). This is consistent with the articulation by Francisco Varela (*Laying Down a Path in Walking: essays on enactive cognition*, 1997). In this sense the geometry of the Tao symbol, as constructed, can be understood as a set of pathways between modes of insight -- possibly to be understood as of greater or lesser "potential" as recognized with respect to [molecular orbitals](#).

As mentioned above, it is in this sense that the discussion of Arielle Saiber and Aba Mbirika of the three three rings (*tre giri*) of the Holy Trinity in *Paradiso 33* of the *Divine Comedy* is so appropriate (*The Three Giri of Paradiso XXXIII, Dante Studies*, 131, 2013, pp. 237-272). In cognitive terms their "interlocking" as [Borromean rings](#) also merits consideration (*Borromean challenge to comprehension of any trinity?*, 2018; *Comprehension of Unity as a Paradoxical Dynamic: metaphors reframing problematic engagement with otherness*, 2019; *Imagining a mnemonic device of requisite higher dimensionality*, 2019). With those rings to be considered as spheres in 3D, of some relevance are then the arguments of Peter Sloterdijk (*Bubbles: Microspherology*, 2011; *Globes: Macrospherology*, 2014; *Foams: Plural Spherology*, 2016) as indicated separately (*Pricking the Bubble of Global Complacent Complicity*, 2017; Fernando Garbini Cespedes, *Peter Sloterdijk's spherical communication*, 2018).

Experimental animation of the Tao in 3D

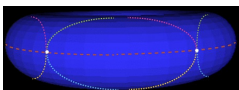
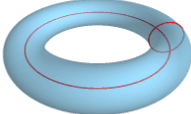
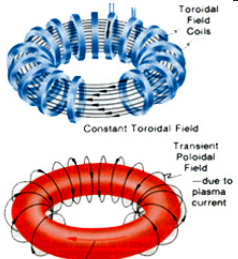
Prior experiments: As noted above, one insightful approach to such animation is that of Lance Skelly (*Sling Yang, 3D CAD Model Library*, 4 March 2013), explicitly inspired by that of Dave Goetsch *Yin-Yang Animation*, 24 January 2013), as indicated below. Rather than referring to the Tao symbol as such, these explore the yin-yang dynamic, also highlighted in a variety of video presentations. The "interpenetration" metaphor is especially intriguing given its cognitive implications.

Screen shots of experimental 3D animations of Tao symbol	
Dave Goetsch, <i>Yin-Yang Animation</i> (2013)	Lance Skelly, <i>Sling Yang</i> (2013)
	
Animated version in 3D CAD Model Library	Animated version in 3D CAD Model Library

Animation possibilities of existing design metaphor: The 3D model which is the theme of this argument employs a particular design metaphor which merits further development and refinement. However the elements by which the model has been constructed also suggest the possibilities for their animation (in addition to simple rotation of the whole, as indicated). Possibilities include:

- an animation in which the component elements are separated, variously juggled, and then recombined in order to suggest the nature of the disconnectivity and incomprehension which so obviously prevails -- and the puzzling cognitive challenge of fitting them together (*Governance as "juggling" -- Juggling as "governance" Dynamics of braiding incommensurable insights for sustainable governance*, 2018).
- introduction of dynamic gradients of shading (as indicated above) to suggest how the components could be better understood as standing waves and/or flow patterns in relation to the holes in the symbol
- use of methods in which the mesh of the wireframe rendering is treated as flexible rather than rigid -- potentially consistent with the manner in which a "mountainous topography" is built up and progressively eroded (down to the flat 2D representation)
- animation of the ("rubberised") flexible mesh of the four half-curved cones in a rhythmic pattern -- potentially reminiscent with the expansion and contraction of the four chambers of the human heart
- animation of the colouring of the four curved half-cones -- between 4-coloured distinctiveness to a 2-coloured form (as indicated in separate models above)
- an animation in which a 3D model is engendered from the 2D variant by other transformation processes
- a more complex animation integrating the 3D elements of the other symbols with which it can be associated (as tentatively indicated above)

Animations of higher dimensionality: Further possibilities to be considered derive from an appropriate assumption that any representation of the concept of the Tao merits recognition in terms of higher dimensionality than 3D or 4D. Such possibilities can usefully be explored in the light of the questionable relationship between use of sphere and torus in constructing the 3D model. The point is usefully emphasized by the following animation (below centre), notably featuring in a previous discussion (*Topological Clues to a Memorable 12-fold Systemic Pattern*, 2011).

Animation of blame game of Knight's moves on torus	Sphere / Torus transformation (from <i>Wikipedia</i>)	Toroidal design of fusion reactor (from <i>Wikipedia</i>)
		

The question would then be whether this type of transformation is effectively the characteristic dynamic in use of both sphere and torus in the model. The question applies both to the larger ends of the curved cones and to the encompassing sphere of the model -- then to be considered in terms of a hypersphere -- whether or not the torus takes the form of a horn torus (as mentioned above). Notably missing from models of lower dimensionality is the possible relation between the holes and the insights offered by the paradoxical Klein bottle, which features so extensively in the arguments from a cognitive perspective of [Steven Rosen](#) (*Topologies of the Flesh*, 2006; *Dimensions of Apeiron: a topological phenomenology of space, time and individuation*, 2004; *Quantum Gravity and Taoist Cosmology: exploring the ancient origins of phenomenological string theory*, 2017).

Of related interest is whether a reconciliation of use of sphere and torus (given their contrasting dimensions) could be explored by representing and positioning the smaller tori otherwise:

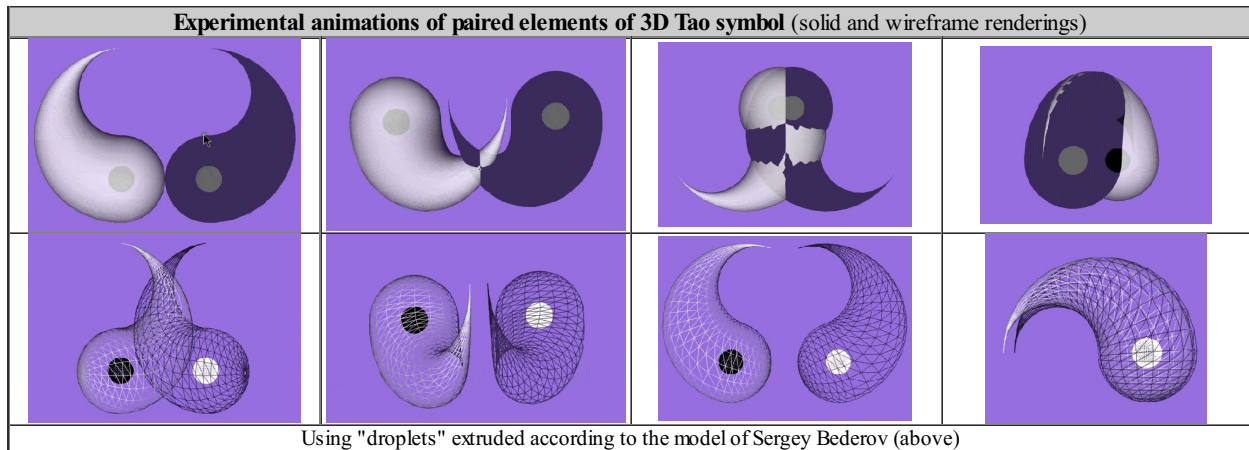
- at the larger end of each cone, aligned with the spine of the cone (rather than at right angles to it) -- suggesting a "mouth-like" function through which information is "digested down the spine", or "excreted" from it
- combining the conventional orientation of the torus with a second torus at the larger end of the cone (at right angles to it) -- thus achieving dynamically the spherical form of the end of each cone

The right-hand image above is included to indicate the potential relevance of the current design preoccupations of the [ITER nuclear](#)

fusion project, as discussed separately (*Enactivating a Cognitive Fusion Reactor: Imaginal Transformation of Energy Resourcing (ITER-8)*, 2006). In that spirit the relevance of higher dimensionality to addressing psychosocial divisiveness merits consideration in the light of the "big tent" metaphor, as argued separately (*Global Brane Comprehension Enabling a Higher Dimensional Big Tent?* 2011).

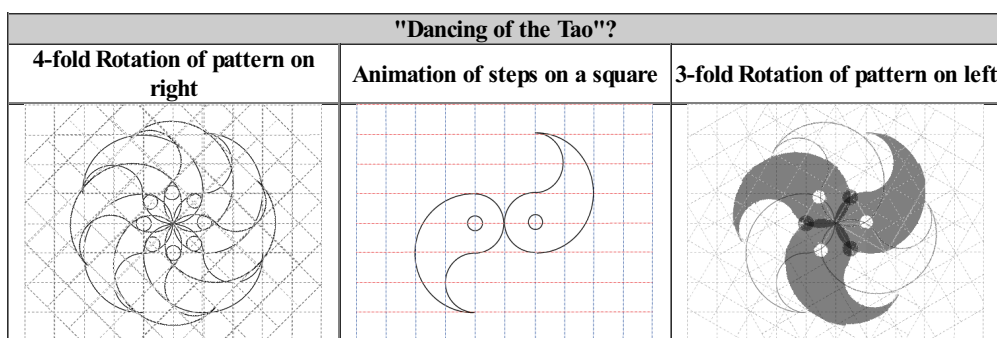
"Courtship" dynamics? The assumption can be explored that features signifying the Tao can only be comprehended as separated in some way, rather than through the subtlety of their integration (*Engaging with Elusive Connectivity and Coherence: global comprehension as a mistaken quest for closure*, 2018). The curved-cones of the 3D models above can then be animated in relation to one another -- as with couples in a dance, or in the dynamics of courtship, even that of birds.

Some examples are given below -- characterized by distinctive patterns of separation, rotation and cyclic rate. The asymmetric variant on the extreme right could be framed as more "problematic" -- especially when the dance is simplistically framed as between "good" and "evil".



Given the emphasis above on the "valley spirit" by which opposites are separated, such animations are indicative of means of distinguishing patterns of connectivity and disconnectivity -- prior to the "consummation" of which the Tao is then necessarily the epitome. The horn-like phases in some of the animations are consistent with bull mythology, sacred cows (protected by the constitution of India today), and the role of cow goddesses (most notably Hathor in ancient Egypt). Others recall the continuing fascination with breasts, noted above with respect to the "valley spirit". Arguably it is the manner in which these forms intimate the subtlety of the Tao which is the primary factor in their attraction.

Dancing the Tao? The variety of patterns in animations such as those above might readily follow from the possible axes of rotation in the geometry of the construction of the Tao symbol in 2D. One approach to this understanding is illustrated in the schematic animation (below centre) -- in 2D and without use of any black/white distinction. Further insight may be obtained from rotation of each pattern, as in the corresponding images in the animation (left and right below). These recall interest in the so-called flower of life and the study of flowers by Keith Critchlow (*The Hidden Geometry of Flowers: living rhythms, form and number*, 2011) following his various studies of patterns..



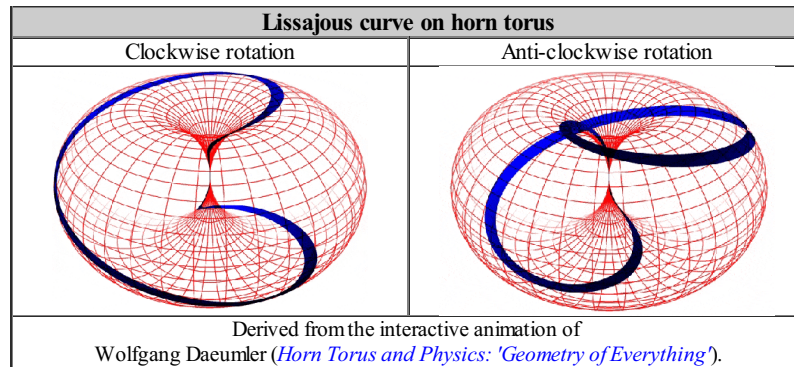
Widely employed, the dance metaphor is especially appropriate in implying and embodying an elusive synthesis dynamically, whether as understood in terms of a "Yin-Yang dance" or as "Dancing the Tao". One such understanding has been explored in the light of the work of Ursula Le Guin (*Sandra J. Lindow, Dancing the Tao: Le Guin and Moral Development*, Cambridge Scholars Publishing, 2012). The metaphor is employed in theatre and actual dance (*Dancing Tao*). The process of dance notation merits reflection from a "Yin-Yang" perspective -- even as a square dance. A related understanding is evident in the explanation of modern physics and quantum phenomena by Gary Zukav (*The Dancing Wu Li Masters*, 1979).

In the case of the animation in which black and white are distinguished, this recalls the remarkable insights of Nikola Tesla into the role of the rotation of a magnetic field of opposite charges in dynamos and motors (*Reimagining Tesla's Creativity through Technomimicry: psychosocial empowerment by imagining charged conditions otherwise*, 2014). Rather than the current preoccupation with "positive", through the deprecation of the "negative", this suggests a fruitful transcendent relationship between them through cyclic dynamics -- as with electrical processes dependent on both.

The current cultivation of the "positive" in governance of any kind could then be seen as a desperate effort to walk on one foot --

assumed to be the "right" one -- without recognizing that sustainability is achieved by walking on two feet (at least). As is only too evident in modern democracies, the capacity for the necessary alternation could be unfortunately compared with hopping, limping or various handicaps (*Policy Alternation for Development*, 1984). History is likely to see the desperate effort to ignore or deprecate the "other foot" as laughable or tragic (*Framing the Global Future by Ignoring Alternatives*, 2009; *Considering All the Strategic Options -- whilst ignoring alternatives and disclaiming cognitive protectionism*, 2009).

Tracing the Tao symbol dynamically? Of some interest to any animation of the encompassing horn torus (rendered transparent in the 3D models presented) is the dynamics of *Lissajous curves*, as indicated below from the interactive animation by [Wolfgang W. Daeumler](#). This is framed as an "intellectual game to reveal engrams of dimensional thinking and a proposal for a different approach to physical questions". The classic 2D Tao symbol could be understood as bearing a valuable resemblance to the forms traced dynamically in this way -- with that symbol then to be understood as a 2D static projection of those dynamics.



Given the relevance of the Möbius strip and Klein bottle to complex comprehension, as argued by Steven Rosen, it is noteworthy that these forms are themselves intimately related to the Lissajous curve. (cf. Elsa Abbena, et al, *Modern Differential Geometry of Curves and Surfaces with Mathematica*, 2017).

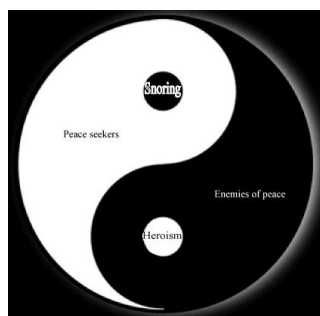
Tao of snoring?

As argued separately, snoring offers a provocative metaphor of relevance to insight into the nature of the Tao (*Snoring of The Other: a politically relevant psycho-spiritual metaphor?* (2006) as submitted to the [International Conference on "Engaging The Other": the Power of Compassion](#) (Kalamazoo, October 2006). This included sections on

- [Political affirmation: a metaphorical response to The Other](#)
- [Tao of Snoring?](#)
- [Higher dimensionality necessary for sustainable sharing?](#)
- [Mirroring and mixing metaphors](#)
- [Mirror symmetry within the semiosphere](#)

Although obviously a form of communication, snoring could be considered to be the antithesis of any aspiration to multivocal poetic improvisation. This is despite dormitory accommodation offering "multivocal" forms with distinctive rhythms, possibly to be understood as "poetic", if not creatively "improvised".

However snoring offers unusual clues to the relationship between what is valued and what is deprecated -- given the manner in which the snorer may be unconscious of that communication and even deny its existence. With the common reference to people and groups being "asleep", this offers a useful self-reflexive challenge to the paradoxical dynamics of awareness of one's personal condition. Reference is made there both to the Tao symbol and to the Lauburu.



Another metaphor offering similar insight into the paradoxical nature of alienating communication is that of odour, as separately (*Epistemological Challenge of Cognitive Body Odour: exploring the underside of dialogue*, 2006). Both metaphors are indicative of how failure to understand how one may be part of the problem may ensure failure to understand the nature of the solution required.

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