laetus in praesens

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19 April 2026 | Draft

Mnemonic Foundations of a Playable Topology of Global Coherence

From alphabetic memorability to toroidal dynamics of a 26-fold pattern of polyhedral governance

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Introduction

In the quest for coherence in a civilization increasingly fragmented in a variety of respects (even dangerously so), it is ironic to note that patterns of connectivity and coherence -- long framed as polyhedra by geometry -- are primarily known only to specialists and are distinguished by a variety of terms which are meaningless (even alienating) to most. The irony is all the greater in that the unmemorable names of the 26 polyhedra in a principal set of such patterns of coherence can be contrasted with the memorability of the known 26 letters of the alphabet common to many languages.

The challenge may be framed simply: can patterns of coherence as structurally rich as polyhedra be rendered as cognitively accessible and memorable as the alphabet? This could be compared with the early challenge of education, namely enabling children to engage with the alphabet as a pattern, typically through mnemonic chants, poems or song (Heidi Butkus, *The Number 26 Song*). It is questionable whether there is any focus on "learning patterns of coherence" otherwise, although it may be argued that popular enthusiam for music and song could be seen in that light. Polyhedra are structurally powerful but cognitively opaque in contrast with the alphabet -- cognitively trivial but universally memorable. The question is whether patterns of coherence as rich as polyhedra could be rendered as cognitively accessible as the alphabet.

It is curious that the influential insights into such polyhedral patterns has been associated in Western civilization with the much admired Pythagoreans of Ancient Greece. That their engagement with them, as is well known, was intimately associated with their musical insights can be contrasted with the virtually total dissociation from music of modern geometry -- as now studied and taught by mathematicians (Joscelyn Godwin, *The Harmony of the Spheres: the Pythagorean tradition in music*, 1992; Kitty Ferguson, *The Music of Pythagoras*, 2008). It is other disciplines which now make use of such patterns -- as in music and dance, for example. Eastern cultures have however continued to cultivate a meaningful cognitive association between aesthetics and governance -- where Western governance has limited its attention to aesthetics to decorative functions, most obviously in receptions at global summits and in the questionable role of the Anthem of Europe (*Reversing the Anthem of Europe to Signal Distress*, 2016).

The challenge for governance and any global strategy could then be caricatured by the phrase: *"if it ain't singable, it wont be credible, memorable or sustainable*" -- as argued separately (*A Singable Earth Charter, EU Constitution or Global Ethic?* 2006). That possibility frames the question as to whether there is a need to explore how the basic 26-fold set of patterns of coherence could be rendered memorable -- if only by association with the 26-fold set of letters of the alphabet, or by what any such "alphabet" may suggest. One obvious possibility is the use of memorable acronyms, as is the case with the multiplicity of national and international strategic initiatives -- deprecated however through their incoherence as an "alphabet soup" (*International Organization Abbreviations and Addresses*, 1984). Such possibilities suggest that memorability may depend less on the complexity of the pattern than on the availability of a compact set of generative elements through which it can be traversed.

The exploration was therefore extended experimentally through interaction with multiple AI systems, not as sources of authority, but as probes capable of eliciting alternative framings and unexpected correspondences. In that sense the following exercise endeavours to elicit new possibilities with the aid of several AIs -- renowned as they are for capacities in pattern recognition and articulation, but especially for drawing together disparate approaches of potential relevance to any such challenge. The possible "alphabetisation" of the basic 26 patterns of coherence recognized by geometricians was initially put to the Perplexity AI and then to DeepSeek. A more elaborated approach was then sought from Claude AI and

ChatGPT -- with which earlier approaches to the mattter had been sought (*Conceptual Complexity Compactified within Fundamental Polyhedra*, 2026).

The exchange with each AI focused initially on how familiarty with the 26-letter alphabet might be adapted to rendering memorable the set of 26 polyhedra as virtually unrecognized patterns of coherence. The exchange with Claude and ChatGPT then developed into consideration of the alphabetially encoded "operators" recognized by various "Western" disciplines -- and the cognitive operations they implied -- including Atkin's Q-analysis, Deacon's absentials, Laban notation, the De Bruijn torus, together with Neo-Riemannian and Conway transformations. A degree of correspondence was noted with articulations contrasting "Eastern" disciplines, including: Sefer Yetzirah, Natya Shastra, the Rasa, Mudra and Bhava systems, and others. That recognition is in accordance with the arguments of Susantha Goonatilake (*Non-Western Science: mining civilizational knowledge*, *Encyclopedia of Life Support Systems* EOLSS, 1999). The exchange concluded with a focus on the identification of a generic cognitive toolkit of transformational moves in the light of Neo-Riemannian transformations and the De Bruijn torus. An "alphabet" is thereby considered more generically and operationally.

The continuing existence of those traditions suggests that quantitative bias systematically obscures the harmonies of coherence that qualitative aesthetic appreciation can directly apprehend -- leaving their deepest structural expression hidden in plain sight within the numerological traditions whose deprecation ensures they are never seriously examined

What begins as a mnemonic exercise through these exchanges -- how to remember a set of 26 polyhedra -- thus progressively reveals correspondences with transformation systems across mathematics, music, movement, and cultural traditions. In this progression, the focus shifts from naming to transformation, from classification to navigation, and from memory to playability. The question is no longer simply how to represent coherence, but how to move within it. This has implications for governance, where the challenge is not only to define coherent frameworks, but to render them cognitively accessible and operationally usable across diverse perspectives -- whether patterns of coherence can be rendered navigable through a limited set of operations. In this light, the alphabet becomes not only a mnemonic device but a model for a generative system, suggesting parallels with transformation grammars in music, geometry, movement, and narrative.

If coherence cannot be rendered memorable and performable, can it be effectively enacted in governance? Could a small set of mnemonic or operational “alphabetic” forms render complex patterns of coherence navigable, memorable, and usable?

A note on method. The experimental use of AI in this context is itself an illustration of the rapid evolution of these platforms and of how they come to be shaped by the feedback that guides their commercial marketing. Early criticism focused on the irritation of excessive "algorithmic flattery" of users. How user "buy-in" is ensured and sustained is, as with any commercial service, a concern for the provider; how this evolves into a form of progressive "grooming" is a concern for regular users -- whether or not it can be distinguished from the norms of ordinary social interaction. Traces of such framing are variously evident in the exchanges that follow, and could be further edited out for a variety of purposes; readers are invited to treat them as they would comparable framing in human interaction. As in earlier experiments with AI, it is the questions put to the systems that primarily feature in what follows -- with the extensively detailed responses selectively accessible only where readers wish to consult them. Readers are of course free to pose the same questions -- or others -- to AI systems of their own choice, whether now or in the future when such platforms have further developed.

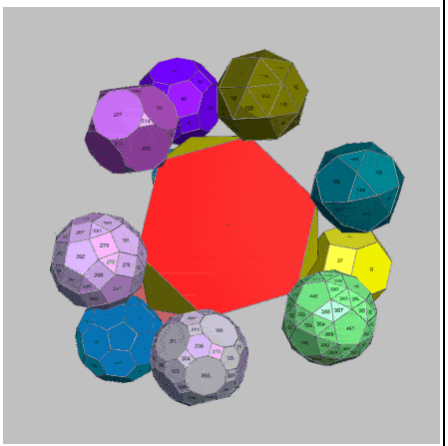
It is worth noting in this context that the substantial resources currently directed toward AI for targeting, surveillance, and adversarial applications proceed without any comparable investment in the cognitive possibilities that the following exchanges illustrate -- the capacity of such systems to surface unrecognised correspondences, to hold disparate frameworks in productive tension, and to render complex patterns of coherence accessible across domains that governance discourse currently treats as incommensurable. The

asymmetry of investment is itself a governance failure of the kind the exchanges below attempt to diagnose.

Responding to the challenge of polyhedral memorability through the array of dice?

A surprising degree of familiarity with the range of polyhedra of relevance to this theme is evident in the extensive range of polyhedral dice used in widely popular role-playing games (*Dice by number of sides*, *Wikipedia*; *Dice by number of sides*, *Dice Collecting Wiki*) and the adaptation of those games to military strategic development -- most notably with respect to the conflict with Iran. The first source lists 40; the second lists 114 (each list includes many more dice designs with the indicated face numbers). The 74 dice documented in the second, but absent from the first, are precisely the more exotic constructions. Despite the existence of polyhedra in that range, only a limited number are however used in the common role-playing games and it is unclear what familiarity there is with the range as a whole and the functions for which they are variously relevant.

Some sense of the set of dice corresponding to the 26-fold focus of this argument is reproduced here from an earlier exchange with AI about that array as a whole (*Grasping complexity: the orb and the die as governance pattern-holders*, 2026). The animation on the left (not to scale) derives from a more extensive discussion (*Polyhedral meta-patterns of relationships?* 2015).

Indication of possibility of configuring polyhedral dice according to the polyhedral mapping onto the rhombicuboctahedron (RCO)	
Unfolded RCO array with placement of polyhedral dice images (folding animation; experimental proposal by Claude-4.6)	Indication of 12 Archimedean polyhedra -- whose faces could be numbered individually as dice -- configured around truncated tetrahedron -- following Keith Critchlow (1969)
	
Animations made with Stella4D Dice images in the animation are sourced from the *Dice Collecting Wiki* (*Dice by Number of Sides*, dice.miraheze.org) where the content is available under Creative Commons Attribution-ShareAlike 4.0 International (CC BY-SA 4.0). Individual image credits are available at that source page.	

Mnemonic clues to 26-fold polyhedral coherence from the 26-lettered alphabet

Question to Perplexity: Could you suggest how the 26 letters of the alphabet might be used as a

mnemonic for the set of 26 Archimedean and Catalan polyhedra. ***[Show/Hide AI response]***

Question to Perplexity: Could you elaborate the proposed table. ***[Show/Hide AI response]***

Question to Perplexity: Could you develop the proposed mnemonic images for each of the 26 polyhedra. ***[Show/Hide AI response]***

Alphabetical mnemonics for polyhedra by DeepSeek

Question to DeepSeek: Could you suggest how the 26 letters of the alphabet might be used as a mnemonic for the set of 26 Archimedean and Catalan polyhedra. ***[Show/Hide AI response]***

Question to DeepSeek: Could the system be rendered more memorable. ***[Show/Hide AI response]***

Question to DeepSeek: Any other suggestions. ***[Show/Hide AI response]***

Question to DeepSeek: Could you produce the proposed **single combined table** that shows all 26 polyhedra with their letter, animal, story step, and acrostic word. ***[Show/Hide AI response]***

Alphabetical mnemonics for polyhedra as developed by Claude AI

Question to Claude-4.6: Could you suggest how the 26 letters of the alphabet might be used as a mnemonic for the set of 26 Archimedean and Catalan polyhedra. ***[Show/Hide AI response]***

Question to Claude-4.6: It is unfortunate that the 5 vowels could not be used for the 5 Platonic polyhedra. ***[Show/Hide AI response]***

Question to Claude-4.6: Given that response, what of languages that have "more" letters than 26, or "fewer". ***[Show/Hide AI response]***

Question to Claude-4.6: What of the Kepler-Poinsot group -- also recognized as regular polyhedra. ***[Show/Hide AI response]***

Alienation by design: naming systems as cognitive gatekeeping

Question to Claude-4.6: Why is memorable recognition of the most basic polyhedra so problematic -- given their role as ways of organizing coherence. Why are both the names and the symbols systems for polyhedra so alienating to people who could benefit most from the sense of coherence they offer. Have they effectively been designed to be incomprehensible. ***[Show/Hide AI response]***

Latent music in polyhedral names: phonetic and rhythmic memorability

Question to Claude-4.6: Given your mention of music, could the polyhedra mentioned be rendered memorable through phonetic patterns. ***[Show/Hide AI response]***

The following query was evoked by consideration of *Sonification as a mnemonic aid to global sensemaking* (2020) and the possibility of *A Singable Earth Charter, EU Constitution or Global Ethic?* (2006).

Question to Claude-4.6: Is there any resonance with *The Biochemists' Songbook* by Harold Baum -- as a mnemonic gateway to metabolic cycles. ***[Show/Hide AI response]***

Encoding polyhedral notation in song

Question to Claude-4.6: In the light of that response, could the transformations of the Conway Polyhedron

Notation be encoded phonetically or in song. ***[Show/Hide AI response]***

The following query was evoked by exploration of the possibility of *Reimagining the Canon to the Sounds of Cannon Fire* (2024) -- in the light of the conditions under which the *Anthem of Europe* was composed by Beethoven (*Reversing the Anthem of Europe to Signal Distress*, 2016).
Question to Claude-4.6: Mention of canon suggests that the full set of transformations, like the set of metabolic pathways, could possibly be represented in the form of a "canon of coherence" in which all distinctive voices are represented -- as with the 36-voice canon. ***[Show/Hide AI response]***

Question to Claude-4.6: Given the speculative exercise by the poet Robert Graves (*Seven Days in New Crete*, 1949), could you speculate on how a "canon of coherence" might inform the governance of a reformed United Nations. ***[Show/Hide AI response]***

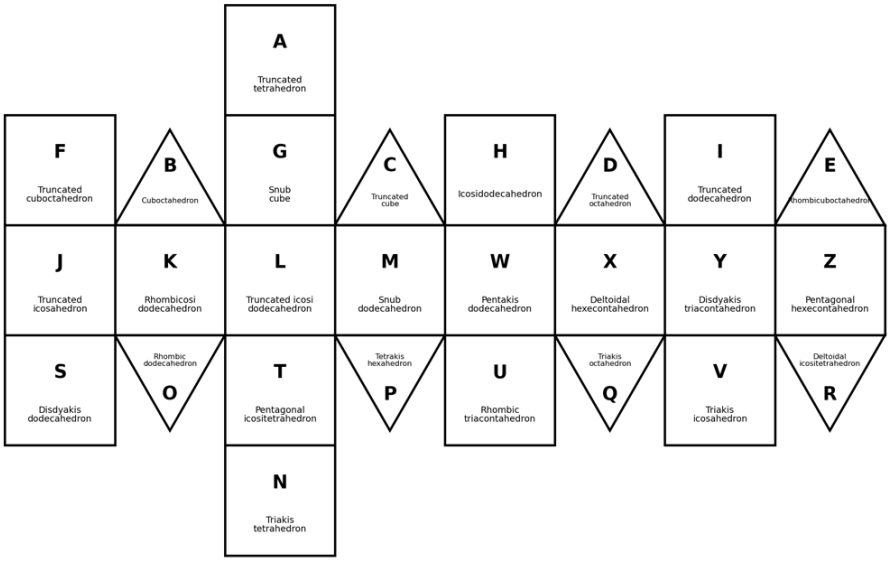
Operator alphabets as a general cognitive strategy from the perspective of ChatGPT

This section introduces the idea that diverse domains share small sets of transformation operators

Question to ChatGPT-5.2: Could you suggest how the 26 letters of the alphabet might be used as a mnemonic for the set of 26 Archimedean and Catalan polyhedra***. [Show/Hide AI response]***

Question to ChatGPT-5.2: Following your suggestion, could you produce a a flat unfolded net based on the rhombicuboctahedron **.** ***[Show/Hide AI response]***

Provisional alphabet-based mnemonic flat net for 26 Archimedean and Catalan polyhedra
using the 26-faced rhombicuboctahedron (RCO) *[generated by ChatGPT-5.2]*



Embedding transformation of polyhedral geometry in music and song

This section develops the shift from polyhedral classification to polyhedral transformation as a navigable structure of coherence.

Question to ChatGPT-5.2: Could you follow up on your proposal for a polyhedral animation sequence such that the song literally “plays” the geometry***. [Show/Hide AI response]***

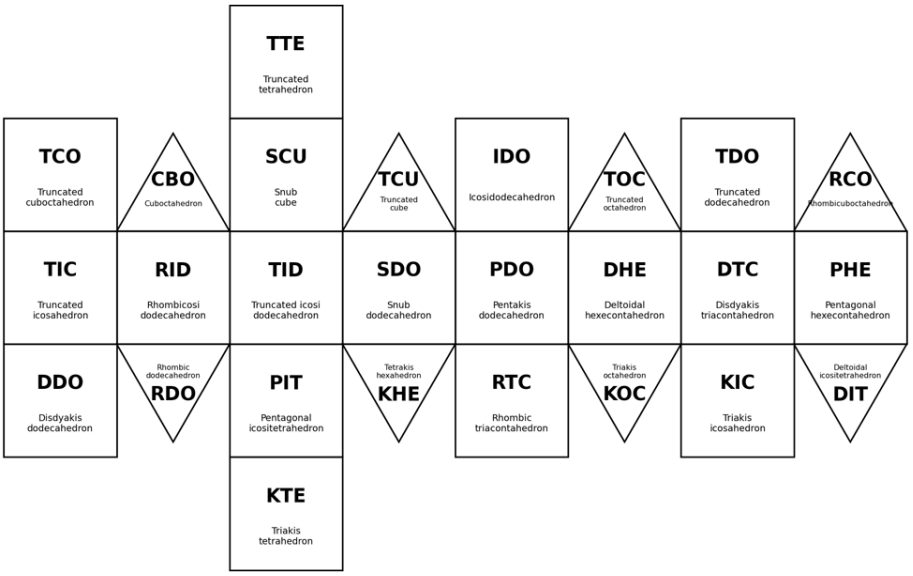
Question to ChatGPT-5.2: Could you develop your proposal for a MIDI mapping table so the sequence can be played directly in software***. [Show/Hide AI response]***

Meaningful acronyms of polyhedral names indicative of distinctive styles of coherence

Question to ChatGPT-5.2: The strength of the approach you have developed is that it gives a sense of the pattern as a whole and its connectivity. However it loses the connection to the awkward conventional geometrical names of the 26 polyhedra. Has there been any systematic effort to abbreviate the polyhedra as with rhombicuboctahedron (=RCO). Would such abbreviations enable a mnemonic sonification or rhyming pattern -- potentially inspired by the *Biochemists' Songbook*. ***[Show/Hide AI response]***

Question to ChatGPT-5.2: The image evokes further reflection. One provocation is offered by the possibility that the letters of the alphabet would constitute a memorable phrase, with the challenge of folding the net into 3D -- but that is not viable. The other possibility is reverting to your "initialisms" and completing them for the whole set of 26) Initialisms (most common) RCO = rhombicuboctahedron, RID = rhombicosidodecahedron, TCO = truncated cuboctahedron, TID = truncated icosidodecahedron. Although I was less enthusiastic about your more complex formats like ROM-KU-OK. It seems that a pronounceable 2 or 3 letter pattern could be elaborated like RCO. Could you then regenerate the unfolded net with those abbreviations instead of the single letter. ***[Show/Hide AI response]***

Provisional mnemonic acronym flat net for 26 Archimedean and Catalan polyhedra
using the 26-faced rhombicuboctahedron (RCO) *[generated by ChatGPT-5.2]*



Mnemonic flat net for 26 Archimedean and Catalan polyhedra
using the 26-faced rhombicuboctahedron (RCO) *[Stella 4D version]*

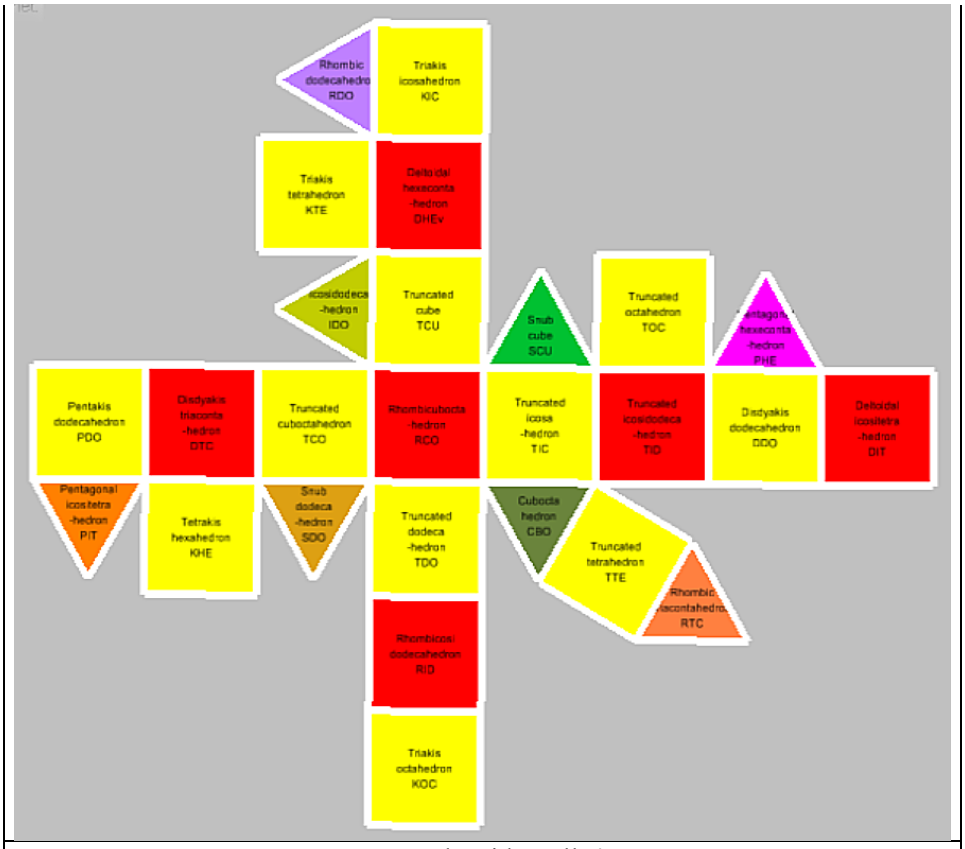
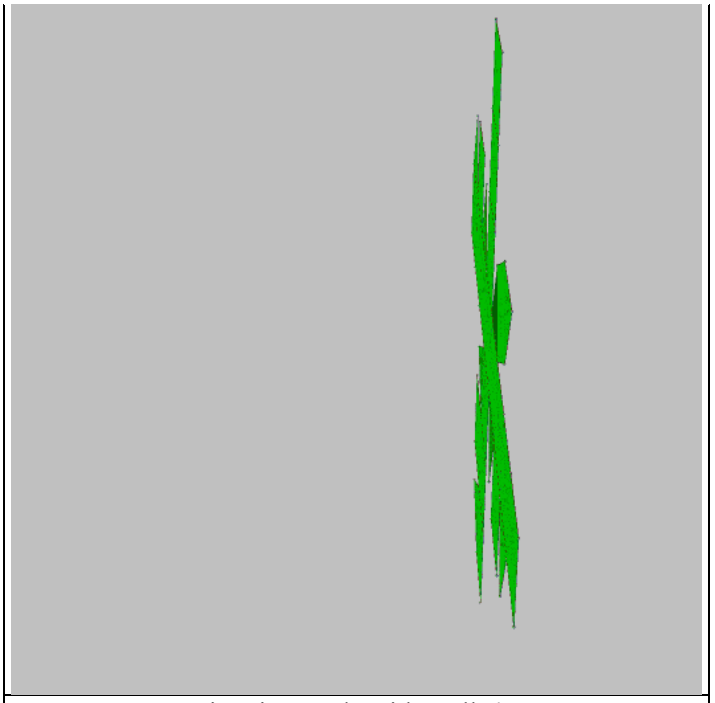


Image made with Stella4D

Question to ChatGPT-5.2: In seeking to use Stella4D to provide an animated folding version of the flat nets above -- whether alphabetical or 3-letter, it is apparentt that Stella4D unfolds an RCO in a less symmetrical manner than your images. The challenge is to reconcile your attributions with the ability to map them onto the Stella4D layout -- especially since you have used a differently argued layout. Can you read the shared diagram of Stella4D face numbers -- and map your attribitions onto (irrespective of the original polyhedral attributions). ***[Show/Hide AI response]***

Question to ChatGPT-5.2: The intention was not to rearrange your label attributions in any way. The constraint was reconciling your unfolded layout with Stella's so that when folded your mapping would be as you intended. So, if you can read all the polyhedral labels on the layout, a complete face number to 3-letter checklist would be appreciated. The single letter variant could be deduced from your earlier image -- if that animation is made. ***[Show/Hide AI response]***

Folding mnemonic net for 26 Archimedean and Catalan polyhedra
using the 26-faced rhombicuboctahedron (RCO)



Animation made with Stella4D

Question to ChatGPT-5.2: The remapped result is shown above. Presumably the colours could be changed for phonetic purposes. ***[Show/Hide AI response]***

Question to ChatGPT-5.2: You suggested distinctive hues for different forms. What might work if red / yellow /blue is abandoned. ***[Show/Hide AI response]***

Highlighting memorable polyhedral cycles of systemic regulation?

Question to ChatGPT-5.2: The mnemonic question now becomes -- when the net is folded -- do the labels as pronounced then offer memorable sequences or cycles around the RCO. If not, does that possibility suggest that the labels should be moved so that they do -- a kind of 3D polyhedral Rubrik Cube. ***[Show/Hide AI response]***

Question to ChatGPT-5.2: The design challenge could be usefully free to replace any currently defined 3-letter acronym by any better mnemonic -- keeping consistency -- if pronunciation works better. The second option would be good -- but the first could offer useful resonance to 8-fold paths (Buddhism, Beatitudes, etc). ***[Show/Hide AI response]***

Indicative clues to playful transformation

Question to ChatGPT-5.2: The Rubik design suggests more and less meaningful rotations. The implication is that a "variable geometry" would then evoke contrasting (but complementary) cognitive "Conway" symmetry preserving operations reminiscent of a musical canon -- and potentially relevant to collective strategies. ***[Show/Hide AI response]***

Question to ChatGPT-5.2: Your last response is reminiscent of the argument speculatively presented in *Envisaging a Comprehensible Global Brain -- as a Playful Organ* (shared). ***[Show/Hide AI response]***

Question to ChatGPT-5.2: A missing dimension to this exchange, and the the proposals you are making, is the sense in which the 26-fold pattern can also be used to map both the 26 principles of the 1972 Stockholm *Declaration of the United Nations Conference on the Human Environment* (*Remembering the Magna Carta on Human Environment*, 2025) and the 26 governance principles articulated more recently from a systemic perspective (Ray Ison and Ed Straw, *The Hidden Power of Systems Thinking: governance*

in a climate emergency, 2020). To what extent could well-chosen 3-syllable abbreviations of polyhedral geometry usefully imply the cognitive and strategic implications of such patterns. This would then be consistent with the representation of the set of metabolic cycles by the *Biochemists' Songbook*. ***[Show/Hide AI response]***

Question to ChatGPT-5.2: Could you follow through on your proposal to align all 26 governance principles explicitly with 26 polyhedral operators. ***[Show/Hide AI response]***

Question to ChatGPT-5.2: The framing you outline as a single song by a single singer detracts from the further mnemonic possibilities in which there are multiple voices singing in reaction to one another's songs -- much as in opera or sung duels. How might this then offer an alternative reading to the opposing foreign policy narratives of conflicts such as Russia-Ukraine or US-Iran . ***[Show/Hide AI response]***

Question to ChatGPT-5.2: In the light of that response, could you speculate on how global summits on controversial issues could be "re-presented" in operatic terms reflective of the voices in play -- possibly composed as an "interpretation" by one AI (or more) in lieu of conventional entertainment during "receptions", or even available simultaneously by earphones during the course of plenary disputation. ***[Show/Hide AI response]***

The following query waas evoked by consideration of various forms of "aesthetic duels", polphony and multi-part performances (*Bertsolaritza and its Implications for Geopolitical Discourse*, 2025; *Improvisation in Multivocal Poetic Discourse*, 2016; *Poetic Engagement with Afghanistan, Caucasus and Iran: an unexplored strategic opportunity?* (2009).

Question to ChatGPT-5.2: Your response suggests that the future may engender a reformulation of the Eurovision Song Contest model to offer an aesthetic confrontation of contrasting policies and agendas -- potentially somewhat reminiscent of poetic jousting or the Basque folk tradition of bertsolaritza. Could you speculate on how this might be enabled by AI (possibly with AI as a participant). ***[Show/Hide AI response]***

The following query was evoked by the allusive description of coherence evoked by Hermann Hesse's description of Castalia and the game played there, as discussed separately (*Evoking Castalia as Envisaged, Entoned and Embodied*, 2016; Peter Roberts, *From Castalia to Wikipedia: Openness and Closure in Knowledge Communities*, *E-Learning and Digital Media*, 8, 2011, 1).

Question to ChatGPT-5.2: To what extent are the dimensions of that response consistent with features of Hermann Hesse's allusively described *Glass Bead Game*. ***[Show/Hide AI response]***

The following query was evoked by both the experiential challenge of uncertainty (*Living with Incomprehension and Uncertainty*, 2012) and the conttrasting sense of coherence associated with the imagined *Glass Bead Game* of Hermann Hesse.

Question to ChatGPT-5.2: The role of multiple polyhedral dice in role-playing games (as indicated above) could be recognized as a form of "glass bead game", as could the use of circlets of prayer beads in various traditions. Could you comment on how the contrasting qualitative experience associated with both might be further enhanced and entangled, as discussed separately (*Designing Cultural Rosaries and Meaning Malas to Sustain Associations within the Pattern that Connects*, 2000) as distinct from the quantitative experience long-associated with the abacus and "bean counting". The response could usefully include reference to circlets of so-called "worry beads" as a preoccupying cognitive modality which -- with casting runes, bones and yarrow sticks-- is curiously complementary to prayer, play and decision-making. ***[Show/Hide AI response]***

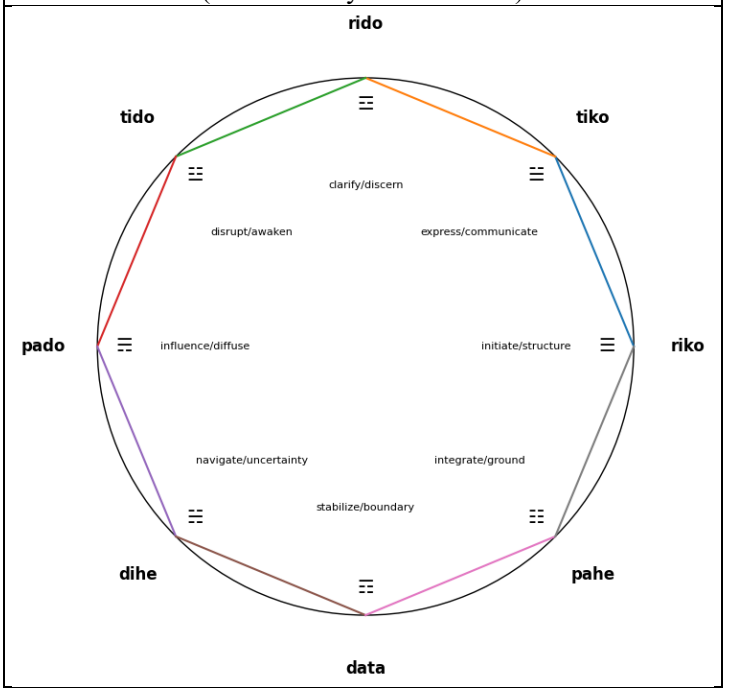
Question to ChatGPT-5.2: Your proposals are all worth pursuing. The question is which are more feasible in this exchange. I note that the shared document cited Douglas Hofstadter (*Godel, Escher Bach*, 1979; *I Am a Strange Loop*, 2007) but not the later and more relevant Douglas Hofstadter and Emmanuel Sander (*Surfaces and Essences: analogy as the fuel and fire of thinking*, 2013). How do those arguments inform the project. ***[Show/Hide AI response]***

Question to ChatGPT-5.2: Your suggested emphasis on the 8-fold recalls the arguments extensively made previously with your involvement (*Integrative framework offered by the 8-fold Beatitudes and their analogues*, 2026) in the shared document. ***[Show/Hide AI response]***

Question to ChatGPT-5.2: In the focus on clarifying such an 8-fold cycle, the Beatitudes indeed offer one inspiration, but this needs to be contrasted with the 8-fold BaGua pattern which offers a much more developed encoding with widely appreciated metaphorical allusions. ***[Show/Hide AI response]***

Question to ChatGPT-5.2: Your proposed production of a clean diagram of the 8-cycle with trigram symbols + phonetics + meanings would be valuable. However your arguments suggest that the RCO pattern hints at what Kung's Global Ethic aspired to achieve but proved unable to function as a viable attractor. ***[Show/Hide AI response]***

Indicative 8-cycle correspondence of trigram symbols + phonetics + meaning
(Generated by ChatGPT-5.2)



Closure and openness: sphere, torus, and cognitive space

This section contrasts spherical and toroidal models as different modes of cognitive closure, navigability, and systemic openness.

Question to ChatGPT-5.2: The 8-mode cycle diagram you have generated in 2D suggests a 3D toroidal form, especially in relation to tonalities. The dynamic representation of the neo-Riemannian Tonnetz by David Bulger, is discussed separately with respect to *Potential implications of mapping tone space correspondences* -- in *Connecting the Multiple Voices of the Pattern that Connects* (2024). This frames a sense in which cognition involves movement through the toroid -- with the tones represented replaced by the BaGua connotations, as otherwise implied (Imagining Toroidal Life as a Sustainable Alternative, 2019). ***[Show/Hide AI response]***

Question to ChatGPT-5.2: Given the tragically conflictual relations between the Abrahamic religions (and even internally between their denominations) -- despite centuries of devotional theological insight -- to what extent can the toroidal framing be used as a diagnostic for the inability to reconcile differences between "siblings" -- each righteously claiming a unique relation to a transcendent deity. ***[Show/Hide AI response]***

Question to ChatGPT-5.2: Any reference to "movement" in relation to a torus readily confuses movement

on its surface (possibly helical), movement through its narrow radius (as a tunnel, used as a constraining example by Ronald Atkin, *The Methodology of Q-Analysis Applied to Social Systems*, 1982), or movement along its major axis -- reminiscent of imagined movement through wormholes in space. In the latter sense, the torus serves as an imagined "stargate" offering access to other parts of the cognitive universe. ***[Show/Hide AI response]***

Narrative, conflict, and knot dynamics

This section reframes narratives and conflicts as trajectories, entanglements, and knot-like structures within a shared but contested space of meaning. The relevance of knots to governance calls for continuing reflection (*Cyclic Representation of Coherence as Knots and Otherwise*, 2022).

Question to ChatGPT-5.2: There is ever increasing emphasis on narrative to explain differences in interpretation -- potentially evolving into narrative warfare. Could you then comment on the distinction between narratives of type A, B and C, especially to the extent that a narrative constitutes various forms of cognitive tunnel -- a storied interpretation of the "facts" whereby an individual or a collective "lives" and sustains a sense of coherence, irrespective of alternative interpretations. Such narrative tunnels can then be understood as entangled and knotted -- even of the Gordian kind.. ***[Show/Hide AI response]***

Rhw The following query was evoked by the continuing inspiration offered by the Gordian knot (*The Iranian knot needs to be untangled, not cut – Lavrov*, *RT*, 15 April 2026) -- as previously discussed (*Mapping grossness: Gordian knot of governance as a Discordian mandala?* 2016)
Question to ChatGPT-5.2: Far more elegant than seeking to "cut" a Gordian knot might emerge from the insights of knot theory, whether the Mereon Matrix or Borromean rings -- a 3-fold version of the latter being a representation of the comprehensibly meaningful entanglement of the Abrahamic religions, with the possibly extension to 5-fold and greater "knots" to include others. ***[Show/Hide AI response]***

The following query was evoked by the correspondences between Borromean rings, Wu Xing and Hygeia, and a popular hand game (*Borromean challenge to comprehension of any trinity?* 2018; *Cycles of enstoning forming mnemonic pentagrams: Hygiea and Wu Xing*, 2012; *Reframing unholy trinities as a resonance hybrid*, 2021)
Question to ChatGPT-5.2: Whilst a 5-fold Borromean knot is difficult to visualize, a sense of it is offered by the subtleties of the Chinese Wu Xing framing (curiously echoed by the Pythagorean Hygeia). Most ironically the dynamics are caricatured by the 5-fold hand game Rock-Paper-Scissors-Lizard-Spock as an adaptation of the more widely known Rock-Paper-Scissors. ***[Show/Hide AI response]***

Question to ChatGPT-5.2: From the perspective of the Abrahamic religions, the extension from 3-fold to 5-fold raises the question as to what then are the 5 religions in any extension of that pattern. More challenging is why there is no 8-fold Borromean ring set, despite Stephen Prothero's argument: *God is Not One: The Eight Religions that Run the World -- and why their differences matter* (2010). ***[Show/Hide AI response]***

Question to ChatGPT-5.2: In reviewing your comments on the cognitive relevance of a toroidal configuration, these call for further development in the light of the "paradoxical" visualizations of the topological transformation between torus and sphere. Specifically the various polyhedra discussed in this exchange are recognized as constituting different degrees of approximation to the coherent closure of a sphere -- and its finality. Your comments have addressed the contrasting dynamics potentially to be associated with the torus -- and the degree of openness (however illusory) that this may represent. Have the cognitive or philosophical implications of the transition from the dynamics of the one to the other been explored.. ***[Show/Hide AI response]***

Question to Claude-4.6: The various polyhedra discussed in this exchange are recognized as constituting different degrees of approximation to the coherent closure of a sphere -- and its finality. By contrast these call for further development in the light of the "paradoxical" visualizations of the topological

transformation between sphere (as an integrative focus) and the torus -- given the cognitive framework it, offers as previously discussed (*Imagining Toroidal Life as a Sustainable Alternative*, 2019). Have the cognitive or philosophical implications of the transition from the dynamics of the sphere to the torus been explored. ***[Show/Hide AI response]***

Recognizing a generic cognitive toolkit of transformational moves

This section translates the preceding reflections into the possibility of a finite, learnable set of transformational moves for navigating complex situations.

Question to ChatGPT-5.2: In relation to use of the alphabet as a means of rendering memorable the 26-fold set of polyhedra (the instigation of this exchange), in combinatorial mathematics, a De Bruijn torus is an array of symbols from an alphabet (often just 0 and 1) that contains every possible matrix of given dimensions m × n exactly once. A De Bruijn graph is visually reminiscent of use of particular polyhedra to interrelate logical connectives and pathways around such configurations. Could you comment on the relevance to this exchange of recognition of "0"s as "holes" in the mesh of the associated De Bruijn torus representation -- especially given the reference to Atkin's recognition of "holes". ***[Show/Hide AI response]***

Question to Claude-4.6: In relation to use of the alphabet as a means of rendering memorable the 26-fold set of polyhedra (the instigation of this exchange), in combinatorial mathematics, a De Bruijn torus is an array of symbols from an alphabet (often just 0 and 1) that contains every possible matrix of given dimensions m × n exactly once. A De Bruijn graph is visually reminiscent of use of particular polyhedra to interrelate logical connectives and pathways around such configurations. Could you comment on the relevance to this exchange of recognition of "0"s as "holes" in the mesh of the associated De Bruijn torus representation -- especially given the reference to Atkin's recognition of "holes" and recognition by Terrence Deacon of the importance of what is missing. ***[Show/Hide AI response]***

Question to ChatGPT-5.2: Could you comment on the potential correspondence between the symmetry preserving operations between polyhedra, as encoded by Conway Polyhedron Notation, and the chain and cycles of Neo-Riemannian (NR) transformations of music theory, especially in the light of their polyhedral representation (Bryn Hughes, *Chromaticism: Neo-Riemannian Triadic Progression*, *Viva: Open Music Theory*). ***[Show/Hide AI response]***

Question to Claude-4.6: As above. ***[Show/Hide AI response]***

Question to ChatGPT-5.2: In the light of that response, to what extent could the Neo-Riemannnian "triadic progressions" of music then be understood cognitively as corresponding to "progressions" in the triadic interplay of faces, edges and vertices engendering polyhedra. ***[Show/Hide AI response]***

Question to Claude-4.6: As above . ***[Show/Hide AI response]***

Question to ChatGPT-5.2: Given the possibility of mapping the 26 regular polyhedra onto the rhombicuboctahedron of 26 faces -- what might then be said about its 24 vertices in relation to the 24 triads identified by Neo-Riemannian theory . ***[Show/Hide AI response]***

Question to Claude-4.6: As above. ***[Show/Hide AI response]***

Question to ChatGPT-5.2: Given the last examples and their degrees of correspondence, the question is how such "alphabetic operators" are to be understood generically and whether there are other examples, possibly to be understood as complementary -- even if equally obscure to most. ***[Show/Hide AI response]***

Question to Claude-4.6: As above. ***[Show/Hide AI response]***

Generative implication of instances of 3-fold and 8-fold as

cognitive toolkits

Question to Claude-4.7: In the light of that argument, could you provide indicative tables of instances of 3-fold and 8-fold cases. **. *[Show/Hide AI response]***

Question to Claude-4.7: Given the double set of 13 semi-regular polyhedra, the case is splendidly made by the iconic poem of Wallace Stevens (*Thirteen Ways of Looking at a Blackbird*, 1917) -- and variously by imitators thereof**. *[Show/Hide AI response]***

Question to Claude-4.7: In the light of your response on cardinalities, implicate meaning and the associated coherence, could you comment on the contrary in which misplaced concreteness and reification is taken to the extreme whereby humans, animals and other features of nature are treated with justification as "its". Of particular interest is the process by which the meaning of the cardinality argument -- and the pattern that connects -- is progressively lost through distraction, forgetfulness, ageing, or otherwise. ***[Show/Hide AI response]***

From catalogue to transformation grammar: reinterpreting 36-fold systems

This section shows how dramatic situations, stratagems, and relational sequences may be understood as implicit transformation grammars rather than as mere lists.

Question to ChatGPT-5.2: Unfortunately, other than the possible case of music, all the examples cited in your last response are a feature of inherently obscure mathematical abstractions. The challenge is their relevance -- if any -- to 36-fold sets such as the dramatic situations, Chinese stratagems, or Aron's questions pertaining to falling in love. All of these could be said to involve analogous cognitive operations -- but for which there is no "mnemonic alphabet". ***[Show/Hide AI response]***

Question to Claude-4.6: Most of the examples cited in your last response are a feature of relatively obscure abstractions. The challenge is their relevance -- if any -- to 36-fold sets such as the dramatic situations, Chinese stratagems, or Aron's questions pertaining to falling in love. All of these could be said to involve analogous cognitive operations -- but for which there is no "mnemonic alphabet"**. *[Show/Hide AI response]***

Question to ChatGPT-5.2: You offer the possibility that any such set of 36 might be composed of a set of triadic primitives. This would then suggest that such a 36-fold set is composed of 12 such distinctive triadic combinations. This in turn would be consistent with Arthur Young's 12-fold Rosetta Stone, articulated in his *Geometry of Meaning*. He endeavours both to isolate those 12 modalities in "acceptable" generic terms and to associate them mnemonically with popularly meaningful (but highly "unacceptable") astrological connotations. ***[Show/Hide AI response]***

Question to Claude-4.6: You offer the possibility that any such set of 36 might be composed of a set of triadic primitives or multiples of 6. This would then suggest that such a 36-fold set is composed of 12 such distinctive triadic combinations (or 2x6). This in turn would be consistent with Arthur Young's 12-fold Rosetta Stone, articulated in his Geometry of Meaning. He endeavours both to isolate those 12 modalities in "acceptable" generic terms and to associate them mnemonically with popularly meaningful (but highly "unacceptable") astrological connotations. ***[Show/Hide AI response]***

Question to ChatGPT-5.2: Whilst that response is appropriate, it dissociates the triadic set from the insightful -- and potentially generic -- articulation of the earlier operator alphabets of combinatorial mathematics, Neo-Riemannian transformations, and the like (with their complementary cognitive implications). ***[Show/Hide AI response]***

Question to Claude-4.6: To what extent does your last response dissociate the triadic set from the insightful -- and potentially generic -- articulation of the earlier operator alphabets of combinatorial

mathematics, Neo-Riemannian transformations, and the like (with their complementary cognitive implications)**.** ***[Show/Hide AI response]***

Embodiment of a transformational cognitive toolkit in dance?

This section argues that dance and movement notation render operator alphabets visible, memorable, and physically inhabitable. The query was evoked by the arguments of several authors (Maxine Sheets-Johnstone, *The Primacy of Movement*, 2011; Mark Johnson, *The Body in the Mind: the bodily basis of meaning, imagination, and reason*, 1990)

Question to ChatGPT-5.2: Would any such articulation be relevant to encoding the familiar transformations typically embodied in dance -- possibly as recognized by the Laban notation. ***[Show/Hide AI response]***

Question to Claude-4.6: As above**.** ***[Show/Hide AI response]***

Question to ChatGPT-5.2: Laban notation is a Western innovation, but dance has long been recognized in some Eastern traditions as embodying cognitive transformations. Have such traditions articulated those transformation in a manner which could be understood as corresponding to what you have been describing in generic terms. ***[Show/Hide AI response]***

Question to Claude-4.6: As above**.** ***[Show/Hide AI response]***

Question to Claude-4.7: Whilst society is currently much challenged by binary thinking and the conflicts which it engenders, this exchange has drawn attention to the fundamental role of triadic relations between parameters and functions -- necessarily a further challenge to comprehension. How does that challenge invite comparison with the classical "three-body problem" of physics **.** ***[Show/Hide AI response]***

The following query was evoked by the metaphorical uses of the basic elements of geometry (*Engaging with Globality -- through cognitive lines, circlets, crowns or holes*, (2009)
Question to Claude-4.7: Given their current role in discourse and the framing of psychosocial relations, the coherence implied by the geometry of polyhedra is elusively relevant through understandings of "volume" and "cell". The latter is a particular cognitive challenge given that its significance only becomes apparent in 4D polytopes which this exchange has avoided**..** ***[Show/Hide AI response]***

Degrees of tool-relationship: when models become world-making

Question to ChatGPT-5.2: In the light of those responses, what could be a memorable "cognitive toolkit" through which people could reframe the transformational moves enabling them to navigate daily life -- and comprehend how others are doing so. ***[Show/Hide AI response]***

Question to Claude-4.6: As above **.** ***[Show/Hide AI response]***

Question to Claude-4.6: That response specifically notes that mistaken interpretations may be made regarding various "tools"-- potentially to be related to levels or degrees of misplaced concreteness (or subject to the "finger-pointing" problem). Of relevance in that regard is occasional recognition of the degrees of cognitive relationship between a craftsman and a tool -- even to the degree of identifying with it. Could you clarify those degrees of understanding and the consequence of failing to appreciate each -- especially as it may apply to governance**.** ***[Show/Hide AI response]***

Question to Claude-4.6: That response announced 7 degrees but presented 6. However the distinctions made recall those between interprtations of the classical 10 ox-herding images of Zen -- potentially then to be recognized as indicative learning stages **.** ***[Show/Hide AI response]***

Question to Claude-4.7: Given that many disciplines recognize and emphasize the need for a "set of

tools", whether physical or otherwise, is there any understanding of how many tools -- the requisite variety -- constitute an appropriate "toolkit". How is the adaptation of tasks possible when the toolkit is simpler -- even much simpler -- and not as complete as could be desired. ***[Show/Hide AI response]***

From Venn to polyhedron: the adequate representational form for bias

Question to Claude-4.6: In concluding that response with reference to governance, the point could have been developed very precisely with respect to modelling -- especially global modelling -- as the primary tool held to be of relevance to the response to polycrisis at this time (*Misleading Modelling of Global Crises*, 2021). ***[Show/Hide AI response]***

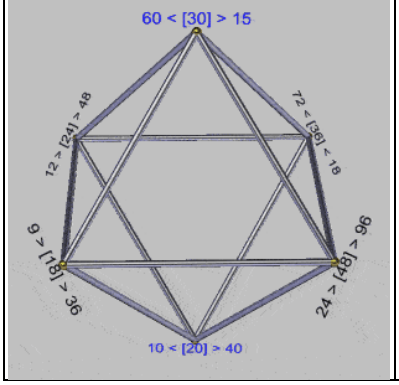
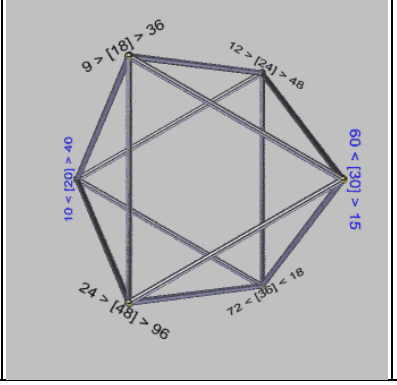
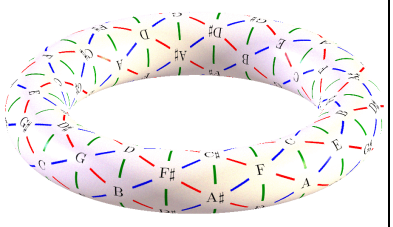
Six numbers on an octahedron: harmonic intervals as cognitive passages

Question to Claude-4.6: On a seemingly distinct, but related matter, could you comment on the curious relation between 24 and 48, 18 and 36, and 20 and 30 as they feature in this exchange. Six numbers which could be configured on octahedral vertices and which also featured earlier exchanges on RCO, with 18 as the tensegrity strut variant. They are distinguished and associated by a relation to six -- even the 20. ***[Show/Hide AI response]***

Question to Claude-4.6: What is intriguing about that set is the manner in which each is distinctively evoked in traditional and other symbols systems, as well as being entangled in structures like the RCO (24, 26, 48, 18) -- with 30 featuring notably in the Conference of the Birds. Missing is any understanding of how one "gets" cognitively from 20 to 30, or from 24 to 48 koans, or from 18 to 24 -- or to 36 ("dramatic situations"). ***[Show/Hide AI response]***

Question to Claude-4.6: In the light of your comment on the octahedral pattern of 24/48, 18/36, 20/30, the argument also relates to the extension of that pattern by a factor of 2 to 12/96, 9/72, 10/60 -- with a 12-fold pattern of edges between them. The pattern is also evident by reduction of a factor of 2. Does that call for further comment. Given how you related it to musical harmony, does the pattern invite projection onto a torus -- Tonnetz-style. ***[Show/Hide AI response]***

The six bracketed vertex numbers in the left and centre images constitute an octahedron whose three axes correspond to the three symmetry families of polyhedral geometry -- octahedral (binary doublings), tetrahedral (triadic doublings), and icosahedral (pentagonal ratio 2:3) -- mirroring the face, vertex and edge structure of the Rhombicuboctahedron (RCO). Extensions beyond each vertex continue the harmonic series in both directions.

<table>
<tr><td colspan="2">Rhombicuboctahedral and icosahedral coherence encoded in six harmonic axes
Octahedral and icosahedral series extending by octave doubling and perfect fifth</td><td rowspan="2">Animation of toroidal view of Neo-Riemannian Tonnetz
Indicative of possible mapping of octahedral pattern</td></tr>
<tr><td>Static image</td><td>Rotation</td></tr>
<tr><td> 
</td><td> 
</td><td>  </td></tr>
</table>

Images made with Stella4D	By Davidwbulger - Own work, Public Domain, Link

The six core numbers occupy the six vertices of the kiss-point octahedron, paired on three axes. Each pair comprises a number and its double -- the octave relation. Each axis is characterised by the prime factor that distinguishes it from the other axes: prime 2 (octahedral), prime 3 (tetrahedral/triadic), prime 5 (icosahedral). Extensions along each axis continue the octave relation outward (doubling) or inward (halving), generating further structurally significant numbers. The three axes correspond to the three symmetry groups of the regular and semi-regular polyhedra: the octahedral (or cubic) family, the tetrahedral family, and the icosahedral (or dodecahedral) family. The kiss-point octahedron is therefore not merely a configuration of six numbers but the minimum structure within which all three polyhedral symmetry families meet at distinct positions.

Legend

The attributions listed against each number are indicative rather than exhaustive:
Each number recurs across more traditions than can be listed. The intent is to demonstrate the cross-domain convergence at these specific positions rather than to catalogue it.

Core Vertices (bracketed numbers)

Octahedral axis (binary doubling, prime $2^3 \times 3$):

- **[24]** -- NR triads; RCO vertices; Greek alphabet; Josquin's 24-voice canon; Catalan dual faces; hours in a day; number of elders in Revelation; hours in the Chinese zodiac cycle; permutations of four elements (4! = 24)
- **[48]** -- Mumonkan koans; double the NR triads; 48-face disdyakis dodecahedron; edges of RCO ×2; Ashkenazi sages; number of Euclidean propositions in Book I of the *Elements*.

Tetrahedral/triadic axis (prime 2×3^2)

- **[18]** -- RCO square faces; tensegrity struts; Ockeghem's simultaneously sounding voices; half the 36 dramatic situations; he number in the Jewish word *chai* (life); Chinese lohan.
- **[36]** -- Ockeghem's 36-voice canon; dramatic situations (Polti); Chinese stratagems; I Ching derivation; the *tzadikim nistarim* (hidden righteous ones) of Jewish tradition; decans of the classical zodiac.

Icosahedral axis (prime 5, ratio 2:3)

- **[20]** -- *Requisite 20-fold Articulation of Operative Insights?* (2018)
- **[30]** -- icosahedral edges; *Conference of the Birds*; days in the idealised month; pieces per side in some traditional games; edges of the dodecahedron; 2×3×5 meeting of all three prime families; syntegrity

Extensions: outer series (octave doubling)

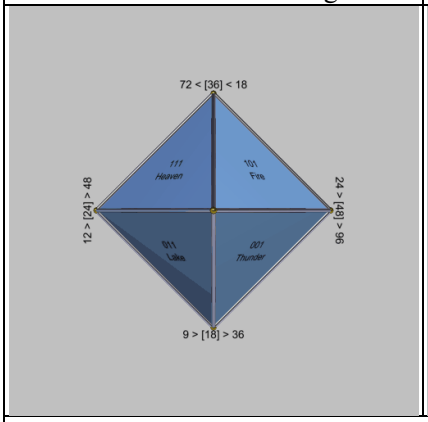
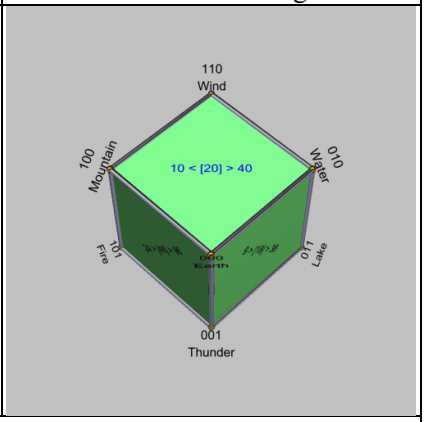
Each outer extension doubles the corresponding vertex number, preserving the axis's prime structure while extending into larger-scale instantiations. The extensions identify numbers that recur across traditions operating at larger scales of count or duration.

- **96** -- 4×24; maximum elaboration of octahedral register
- **72** -- 2×36; Jewish traditions;
- 72 names; average human lifetime in years
- **60** -- *Sustainability through Global Patterns of 60-fold Organization* (022)

Extensions: inner series (octave halving)

Each inner extension halves the corresponding vertex number, preserving the axis's prime structure while extending into smaller-scale instantiations. The extensions identify numbers that recur across traditions operating at smaller scales of enumeration or articulation.

- **12** -- *Checklist of 12-fold Principles, Plans, Symbols and Concepts* (2011)
- **9** -- planetary boundaries; nine rasas; Dante's spheres; Ockeghem voices per choir
- **10** -- Sefirot; commandments; fingers; base of decimal system

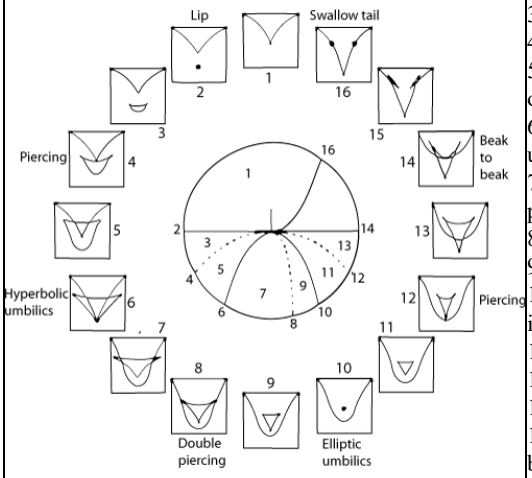
Indicative attribution of distinctive BaGua encoding and metaphors to polyhedral duals The cubic configuration at right is the dual of the octahedral configuration at left: the six numbers appear at the octahedron's vertices and equivalently at the cube's six face centres. The eight BaGua trigrams attach to the cube's eight vertices, which correspond to the eight concave triangular faces of the kiss-point octahedron -- the apertures between the four spheres of the tetrahedral packing.The BaGua trigrams pair into four oppositional dyads. These correspond structurally to the four great-circle circuits of the kiss-point octahedron. Full articulation of this correspondence is reserved for further work.	
Rotation of octahedral configuration	Rotation of cubic configuration
	
Animations made with Stella4D	

Unnamed configurations of governance discourse faced with polycrisis

It is intriguing to note the correspondence between "sustainability" and the articulation by René Thom (*Structural Stability and Morphogenesis*, 1972) in originating catastrophe theory., as discussed separately (*Topological patterns of sustainable change as catastrophe*, 2024; *Conformality of 7 WH-questions to 7 Elementary Catastrophes: an exploration of potential psychosocial implications*, 2006). Sustainability, and the UN's Sustainable Development Goals, could readily be recognized as achieving a":magical" marriage between structural stability of the global system and the "morphogenesis" with which desirable change is associated. Ironically Thom offers a 16-fold articulation of changes of topological type. Curiously these frame the question as to when change is perceived as catastrophic -- as is so frequently argued. Thom subsequently extended his explorations to semiotics (*Semio Physics: A Sketch,* 1990). Could the SDGs be understood as a "catastrophic exercise" -- or an exercise in "catastrophe management.

The toroidal projection developed above holds together because of one structural fact: the closure of the cycle under octave equivalence, the 2:1 identification that wraps the infinite harmonic lattice into a finite surface. A structurally similar closure operates in a very different domain -- René Thom's catastrophe theory, where the complete set of topological changes that can occur in a morphogenetic process forms a 16-stage closed cycle returning to its origin. What distinguishes the two is the prime content: the harmonic torus carries the primes 2, 3, and 5; Thom's cycle is a complete traversal of 2^4 alone. What unites them is the structural logic of a closed discriminative space with a meta-frame at the centre.

The structural reasoning for the 16→14 reduction in representation of logical connectives, its relation to meta-logical positions excluded from the formal framework, and its extension to governance-relevant P/Q asymmetry, was developed in *Comparable Modalities of Aesthetics, Logic and Dialogue* (2021) In the light of correspondences between their polyhedral representation; the present discussion extends that argument by mapping the reduction onto Thom's catastrophe-theoretic cycle and identifying the governance-relevant C_1O_3 and C_3O_1 families as its structural consequence.

Changes: the locus of principal changes of topological type reproduced from René Thom, *Structural Stability and Morphogenesis*, 1972	
	1. curve with cusp pointing downward 2. appearance of new point at origin, where lip formation begins -- 3. this grows... . 4. pierces the cusp.. 5. and crosses it ...to form the phallic mushroom... characteristic of the parabolic umbilic... 6. the cusp meets the lower branch of the lip in a hyperbolic umbilic... 7. and then the two branches cross to form a curvilnear triangle piercing laterally a convex curve 8. the triangle shrinks, first touching the curve 9. and then shrinking inside it 10. to form a hypercycloid with three cusps, and finally vanishes in an elliptic umbilic.. 11. reappearing immediately with the same orientation 12. its lower cusp meets the curve 13. and pierces it 14. the curve and upper edge of the triangle touch in beak-to-beak singularity, which separates 15. producing two symmetric swallowtails, reabsorbed into the curve 16. leading to the original configuration

Question to Claude-4.7: In the light of the work of Rene Thom, and the image from him *[above]*, should his set of 16 be 18 -- or how does 16 feature as a "catastrophic" operation. ***[Show/Hide AI response]***

Question to Claude-4.6: With respect to that response on the 16-fold articulation of Thom, is there any reconciliation of its binary basis with that of the 16-fold set of logical connectives -- especially with the least well-recognized and used. ***[Show/Hide AI response]***

Question to Claude-4.6: In the light of that response, could you comment on how the conventional mapping of connectives onto the 14 vertices of the rhombic dodecahedron might relate to any corresponding mapping of stages of Thom's morphogenesis -- especially given your recognition of the "two absent ones", characteristic of both cases (Hans Smessaert, *The Logical Geometry of the Rhombic Dodecahedron of Oppositions*, 2014). ***[Show/Hide AI response]***

Question to Claude-4.7: With respect to the commentary by Claude-4.6 on the Thom/Smessaert correspondences, could more be derived from the comparison -- if only tentatively. The rarely referenced connectives would seem to merit more comparison with the more complex catastrophes. ***[Show/Hide AI response]***

Question to Claude-4.7: Do the Smessaert slide illustrations suggest further insights. ***[Show/Hide AI response]***

Question to Claude-4.7: Given the 16-fold perspectives offered by catastrophe theory and logical connectives, and the "omission" of two as described, to what extent do 12 elements in such sets bear comparison with the 12-fold articulation of Arthur Young (*Geometry of Meaning*, 1978) -- as adapted to modes of dialogue (*Typology of 12 complementary dialogue modes essential to sustainable dialogue*, 1998). Are the modalities of dialogue, as experienced, usefully recognized as forms of catastrophe. ***[Show/Hide AI response]***

Kiss-point octahedron: physical sphere packing as cognitive architecture

Question to Claude-4.6: A previous exchange regarding the 6 points of contact between closest packed spheres in tetrahedral configuration considered the "kiss points" forming an octahedron with concave faces (as well as featuring in a set of cycles around the spheres). How might that octahedron relate to the pattern you discuss in that response. ***[Show/Hide AI response]***

Polyphedral dilemma as canon of coherence?

Question to Claude-4.7: Could you present a summary of this extensive exchange. ***[Show/Hide AI response]***

References

Ralph Abraham. Dynamics, the Geometry of Behavior. Addison Wesley Longman, 1992.

Ron Atkin:

- From cohomology in physics to q-connectivity in social science. *International Journal of Man-Machines Studies*, 4, 1972
- Mathematical Structure in Human Affairs. London, Heinemann, 1974
- Combinatorial Connectivities in Social Systems. Birkhäuser Verlag, 1977
- Multidimensional Man: Can Man Live in 3-dimensional Space? Penguin Books, 1981 [summary]

Stafford Beer:

- Beyond Dispute: The Invention of Team Syntegrity. John Wiley, 1994
- Platform for Change. John Wiley, 1978.

John G. Bennett:

- General Systematics. *Systematics*, 1, 1963, 1 [text]
- The Dramatic Universe. J. G. Bennett Foundation, Vols. I – IV, 1955-66 [contents]

David Bohm. Wholeness and the Implicate Order. Routledge, 1980 [summary]

Roberto Casati and Achille C. Varzi. Holes and Other Superficialities. Bradford Books, 1994

Keith Critchlow:

- Order in Space A Design Source Book. Thames and Hudson, 1969
- Islamic Patterns. Thames and Hudson, 1976
- Islamic Art and Architecture: System of Geometric Design. Garnet Publishing, 1999
- The Hidden Geometry of Flowers: Living Rhythms Form and Number. Floris Books, 2011

Edward de Bono:

- Six Thinking Hats. Ebury Publishing, 1985 [summary]
- Six Action Shoes. Ebury Publishing, 1991
- Six Value Medals. Ebury Publishing, 2005
- Six Frames For Thinking About Information. Penguin, 2008

Terrence Deacon. Incomplete Nature: How Mind Emerged from Matter. W.W. Norton, 2011

Lynnclaire Dennis, Jytte Brender McNair and Louis H. Kauffman (Eds.). The Mereon Matrix: Unity, Perspective and Paradox. Elsevier, 2013

Barbara Ehrenreich. Bright-Sided: How the Relentless Promotion of Positive Thinking has Undermined America. Metropolitan Books, 2009

Kitty Ferguson. The Music of Pythagoras: how an ancient brotherhood cracked the code of the universe and lit the path from Antiquity to Outer Space. Walker Books, 2008

Joscelyn Godwin. The Harmony of the Spheres: the Pythagorean tradition in music. Simon and Schuster, 1992

Buckminster Fuller in collaboration with E. J. Applewhite:

- Synergetics: Explorations in the Geometry of Thinking. Macmillan, 1975 [summary]
- Synergetics 2: Further Explorations in the Geometry of Thinking. Macmillan, 1979 [summary]

Susantha Goonatilake:

- Toward a Global Science: mining civilizational knowledge. Indiana University Press 1999
- Non-Western Science: mining civilizational knowledge. *Encyclopedia of Life Support Systems* (EOLSS) [text]

Douglas Hofstadter:

- I Am a Strange Loop. Basic Books, 2007
- What Is It Like to Be a Strange Loop. In: Uriah Kriegel and Kenneth Williford (Eds).*Self-Representational Approaches to Consciousness*. MIT Press, 2006, pp. 465-516
- Analogy as the Core of Cognition. In: Dedre Gentner, et al. (Eds.), The Analogical Mind: Perspectives from Cognitive Science, 2001
- Gödel Escher Bach: an Eternal Golden Braid. Basic Books, 1999

Douglas Hofstadter and Emmanuel Sander. Surfaces and Essences: analogy as the fuel and fire of thinking. Basic Books, 2013 [summary]

Ray Ison and Ed Straw. The Hidden Power of Systems Thinking: governance in a climate emergency. Routledge, 2020 [summary]

Mark Johnson. The Body in the Mind: the bodily basis of meaning, imagination, and reason. University of Chicago Press, 1990 [summary]

George Lakoff. Women, Fire, and Dangerous Things: What Categories Reveal about the Mind. University of Chicago Press, 1987 [summary]

George Lakoff and Rafael Núñez. Where Mathematics Comes From: How the Embodied Mind Brings Mathematics into Being. Basic Books, 2000 [summary]

George Lakoff and Mark Johnson. Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought. Basic Books, 1999

Ernest G. McClain:

- Myth of Invariance: The Origins of the Gods, Mathematics and Music from the Rg Veda to Plato. Nicolas-Hays 1976 [text]
- The Pythagorean Plato: Prelude to the song itself. Nicolas-Hays 1978
- Meditations Through the Quran: Tonal Images in an Oral Culture. Nicolas-Hays 1981

Donald N. Michael|. Learning to Plan and Planning to Learn. Miles River Press, 1997

Nicholas Rescher:

- Ignorance: on the wider implications of deficient knowledge. University of Pittsburgh Press, 2009.
- Unknowability. Lexington Books. 2009
- Error: on our predicament when things go wrong. University of Pittsburgh Press, 2006
- The Strife of Systems: an essay on the grounds and implications of philosophical diversity. University of Pittsburgh Press, 1985

Steven M. Rosen:

- Topologies of the Flesh: A Multidimensional Exploration of the Lifeworld. Ohio University Press, 2006

- Perception and Entanglement in the Quantum World: a phenomenological exploration of the physical, social, and philosophical implications, 2026

Maxine Sheets-Johnstone. The Primacy of Movement.John Benjamins, 2011 [contents]

René Thom:

- Structural Stability and Morphogenesis. W. A. Benjamin, 1972
- Semio Physics: A Sketch. Addison Wesley, 1990

Dmitri Tymoczko. A Geometry of Music Harmony and Counterpoint in the Extended Common Practice. Oxford University Press, [summary]

Alfred North Whitehead. Process and Reality: an essay on cosmology. Free Press, 1979

Maurice I. Yolles, R. Frieden and G. Kemp. Toward a Fomal theory of Socioculture: a yin- yang information-based theory of social change. *Kybernetes*, 37, 2008, 7 [text]

Arthur M. Young. The Geometry of Meaning. Anodos Foundation, 1976