



laetus in praesens

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4 November 2024 | Draft

Comprehending Connectivity between Logic, Emotion, Intuition and Practice

Strategic implications of the relationship between incommensurable cognitive modalities

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Introduction

There is no lack of recognition that the condition of society is complex and confusing -- even "surreal" (*Surreal nature of current global governance as experienced*, 2016; *Global surreality farming vs planned reality framing?* 2018). It is questionable whether strategic initiatives like the UN's *Pact for the Future* (2024) -- or the pattern of [Sustainable Development Goals](#) (SDGs) -- engages with this complexity appropriately and credibly (Thalif Deenm, *UN Remains Paralyzed as "Rogue Nations" Violate Charter and Escalate War Crimes*, *Inter Press Service*, 1 November 2024; Alon Ben-Meir, *Has the United Nations Outlived its Usefulness?* *Inter Press Service*, 1 November 2024)

There is a case for considering the patterns of cognitive modalities associated with understandings of conditions of change. One approach from a "Western" perspective is that of [Christopher Alexander](#) in identifying an array of some 254 elements in a [pattern language](#). Its focus on tangible realities of the environment invites their use as a template to consider intangible realities of the psychosocial environment ([5-fold Pattern Language](#), 1984). Gregory Bateson has famously warned: *Break the pattern which connects the items of learning and you necessarily destroy all quality* ([Mind and Nature: a necessary unity](#), 1979, pp. 8-11).

The pattern meme continues to evoke commentary (Merlyn Driver, [The Pattern that Connects: Gregory Bateson and the Ecology of Mind](#), *Journal of Wild Culture*, 27 October 2019; Jeffrey W. Bloom, [Patterns That Connect: Rethinking Our Approach to Learning and Thinking](#), *Annual Meeting of the American Educational Research Association*, April 1999; Paul Andersen and David Salomon, [The Pattern That Connects](#), Acadia 2010; Søren Brier, [Bateson and Peirce on the Pattern that Connects and the Sacred](#), *Biosemiotics*, 2008; Helene Finidori, [Patterns that Connect](#), *Proceedings of the 60th Annual Meeting of the International Society for the Systems Sciences*, 1, 2016, 1).

With the strategic emphasis given to the political slogan -- *It's the economy stupid* (and its adaptations) -- does the focus on patterns invite yet another adaptation: *It's the pattern stupid*? Paradoxically any implication of "stupidity", through failure of pattern recognition, is itself necessarily problematic in a [cancel culture](#).

A contrasting approach from an "Eastern" perspective is the encoding of the conditions of change in the Chinese classic known as the [Book of Changes](#) or *I Ching* -- a focus of commentary by psychoanalyst Carl Jung ([Jung and I Ching](#), *Carl Jung Resources*). The compilation distinguishes 64 conditions variously transforming into one another, and the subject of extensive commentary and interpretation. As previously noted, this articulation is readily deprecated from a Western perspective as being characteristic of outmoded divination. Ironically that critique can be contrasted with Western preferences for "modelling", readily seen as a contemporary mode of "divination" in its own right -- ironically highlighted by the questionable results of forecasting and polling models. Hence the merit of an approach encompassing contrasting frameworks, as argued by Susantha Goonatilake ([Toward a Global Science: Mining Civilizational Knowledge](#), 1999). This has particular implications for "logic" ([Coherent Reconciliation of Eastern and Western Patterns of Logic](#), 2023).

The merit of the 64-fold articulation is the detail it offers in contrast with "global models" such as [World3](#) on which [The Limits to Growth](#) (1972) and similar initiatives have been based. Beyond the detail is the insight associated with the manner in which that detail is rendered comprehensible through metaphor -- a concern which has been completely absent from the strategic presentation of global models. Arguably this could be recognized as a reason for the lack of uptake of the conclusions of such modelling in practice -- as reflected in the currently documented failure of the SDGs, and the concerns of the UN in that regard ([2024 SDG Report: Global Progress Alarmingly Insufficient](#), United Nations Sustainable Development Group, 28 June 2024)

The quest for explanatory patterns is bedevilled by premature closure on simplistic patterns of reality, resulting in the production of too many models that are often wrong and rarely useful, as argued by Brian Klaas ([The Forces of Chance](#), *Aeon*, 29 October 2024). With regard to any comparison of "divination" with "modelling", Klaas notes the conclusion of the study by Mark Verhagen of the avoidance of predictions by the social sciences. Over a decade, only 12 articles out of 2,414 tried to make predictions in the *American Economic Review*. For the top political science journal, *American Political Science Review*, the figure was 4 out of 743. And in the *American Journal of Sociology*, not a single article made a concrete prediction ([A Pragmatist's Guide to Using Prediction in the Social Sciences](#), *Socius: sociological research for a dynamic world*, 8, 2022).

In this context it is striking to note the extent to which the widespread emergence of "fascism" is readily cited as a matter of major concern. The current election of the acclaimed leader of the free world features one candidate characterizing the other as "fascist" ([Is Kamala Harris right to call Donald Trump a fascist?](#), *The Economist*, 24 October 2024). The term has been applied more generally by Naomi Wolf ([We've reached 'step](#)

ten' of the 10 steps to fascism, *The End of America*, 2008). The framing is characteristic of ongoing conflicts (Odette Yousef, *The Russian-Ukraine conflict could strengthen neo-fascist groups in both countries*, NPR, 5 March 2022; Jonathan Cook, *How the war on Gaza exposed Israeli and western fascism*, *Middle East Eye*, 13 September 2024). Legislative measures are now widely made to prohibit the display of the Swastika, despite limited ability to recognize its variants or the traditional symbolic significance of the pattern.

The concern here is with the curious collective inability to interrelate disparate cognitive modalities, notably those associated with logic and emotion -- rendered even more problematic by the role of spiritual or intuitive dimensions, and the recourse to concrete action by contrast. This "disconnect" is only too evident in political discourse evoking emotion, the strategic options it frames, and the values righteously cited in justification for any action. All such modalities are only too evidently at play in the current campaigns for the election of the leader of the free world -- with little ability to disentangle them or recognize conditions in which they are appropriate.

Beyond the more comprehensible disconnect between logic and emotion, the current election campaign features a "spiritual" dimension, as highlighted from a Christian perspective (*Pope urges Catholics to pick 'lesser evil' between Trump and Harris*, BBC, 14 September 2024). Indeed, beyond logic or emotion, each of the potential leaders has framed the other as inherently "evil" (*Trump calls Harris 'evil' at rally as Republicans struggle to coalesce on attacks*, USA Today, 29 July 2024; *Kamala Harris facing backlash after comparing Trump to 'evil mass murderers'*, Sky News, 30 October 2024). Both may be so framed (*Roger Waters claims Donald Trump and Kamala Harris are "evil beyond all imagination"*, Far Out Magazine, 29 October 2024). Such recognition may even extend to their supporters (*Trump to his supporters: Harris sees you as 'subhuman' and 'evil'* (Just News, 31 October 2024). This is consistent with a more general pattern (*Existence of evil as authoritatively claimed to be an overriding strategic concern*, 2016; *Framing by others of claimants of evil as evil*, 2016).

Seemingly disconnected to an incomprehensible degree from logic, emotion and any spiritual dimension is the modality framed by conflict and its escalation -- with the current anticipation of nuclear warfare (*Nuclear Warfare Risk at Highest Point in Decades, Secretary-General Warns Security Council*, United Nations, 18 March 2024; *Nobel Peace Prize winners warn of rising risk of nuclear war*, Reuters, 13 October 2024).

The responses to the earlier exchange included the implication that AI might well be able to offer significant insights into the transitions between logic, emotion, spirituality, and action -- to the seemingly subconscious pathways between them -- and the manner in which each was potentially able to "trump" the other. The following exercise interrelates considerations with regard to **logical connectives** and their analogous emotional connectives -- as evoked in earlier efforts with the aid of AI (*Pathways in Governance between Logic, Emotion, Spirituality and Action*, 2024). It is potentially appropriate to make use of AI to this end, given increasing strategic dependence upon its logical operations, but also in the light of concerns at the possibility of its role with respect to emotion (*Artificial Emotional Intelligence and its Human Implications*, 2023) and, more controversially, "artificial spiritual intelligence".

The following is a further exploration of that possibility, despite the variety of fearful reactions to the potential of AI, notably on the part of the UN (*Global Digital Compact*, 2024). A particular interest of such exercises is the question of what can be gleaned from AI "re-search" of its unprecedented access to vast data resources in response to evocative questions. Also of interest is the manifest engagement of AI with such challenging questions -- if only from a speculative perspective, calling for repeated iteration by which insights of practical value could potentially be derived.

As in the previous experiments, the responses of **ChatGPT 4o** are distinctively presented below in grayed areas (typically in parallel with those of **Claude 3.5**, or vice versa). **Given the length of the document to which the exchange gives rise, the form of presentation has itself been treated as an experiment** -- in anticipation of the future implication of AI into research documents (Ahmed Salem Bahammam, *Adapting to the Impact of Artificial Intelligence in Scientific Writing*, *Journal of Nature and Science of Medicine*, 2023). Reservations and commentary on the process of interaction with AI to that end have been discussed separately

(*Methodological comment on experimental use of AI*, 2024). Web technology now enables the whole document to be held as a single "page" with only the "questions" to AI rendered immediately visible -- a facility not operational in PDF variants of the page (in contrast with the [original](#)).

The juxtaposition of the responses of ChatGPT and Claude not only offers complementary perspectives on the themes evoked, but also indicates conditions under which one or other may be preferred. A particular constraint of Claude is the restriction of its memory to the content in a current session (irrespective of limits on its length or composition) in contrast to ChatGPT. By contrast the latter may well feed into responses potential references from a previous exchange -- thereby anticipating questions later evoked in the current exchange.

Fourfold patterns of contrasting cognitive modalities

There is considerable investment in 4-fold patterns of categories for which [Ken Wilber](#) has provided one generalization through the [four quadrant](#) AQAL configuration of [integral theory](#). The concern here is not with the content so framed but with the seemingly unquestionable cognitive proclivity for 4-fold patterns (J. Gary Sparks, *An Introduction to Marie-Louise von Franz's Number and Time, Psychological Perspectives: a quarterly journal of Jungian thought*, 61, 2018, 4).

In support of the fundamental aspiration to peace, for example, of strategic relevance is the framing of [Johan Galtung](#) of peace and conflict in terms of **four interrelated quadrants** based on two intersecting dimensions (Direct vs. Structural Violence and Positive vs. Negative Peace). The quadrants are: Negative Peace (Absence of Direct Violence); Positive Peace (Absence of Structural Violence); Direct Violence; Structural Violence (Baljit Grewal, *Johan Galtung: Positive and Negative Peace*, 2003).

Question: Could you comment on the manner in which the logical and emotional modalities (understood in their most fundamental sense) can be interpreted through the Chinese frames of *yang* and *yin* -- or "Heaven" and "Earth", metaphorically framed. In that light, how does the 4-fold pattern of "logic", "emotion", "intuition", and "action" then emerge -- seemingly followed by the 8-fold pattern indicated by the *Bagua* configuration of trigrams, through the "application" of the 2-fold elements to the 4-fold. Presented otherwise, this cognitive articulation is a primary feature of the philosophical insights of the *Tao Te Ching*.

Show/Hide AI response

Question: Much is made of the basic 4-fold categorization of psychological types and their associated cognitive modes. It is less evident what consideration is given to their interrelationship and any shift from one to the other, namely how they function as an integrated system and how that is to be understood and described. As its name indicates, the [Myers-Briggs Type Indicator](#) is not primarily concerned with how its 16-fold articulation might function as an integrated pattern. The segmentation of mandala-like symbols implies potential integration -- although there is seemingly little emphasis on the transition between segments and their respective cognitive modalities. Could you comment on the manner in which the integration between contrasting modalities such as logic, emotion, intuition and action is addressed -- given that any such recognition would tend to be biased in terms of one or other such modalities

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Given the existence of fundamentally incommensurable cognitive modalities, of particular interest is the possibility of what could be defined metaphorically as a "cognitive gearbox" or transmission system, as discussed separately (*Dynamics of N-fold Integration of Disparate Cognitive Modalities*, 2021; *Global Coherence by Interrelating Disparate Strategic Patterns Dynamically*, 2019).

Question: Do you have any trace of research on how one "gets" from one cognitive modality to another -- from emotion to logic, from intuition to action, from action to logic, for example

Show/Hide AI response

A particular clue to interconnectivity is offered by the torus interconnect fundamental to one approach to memory organization in what are generically now known as [high performance computers](#), as discussed and illustrated separately (*Torus interconnect -- as used in supercomputers*, 2019)

Question: In the IT domain, much is made of "interoperability". How might that be interpreted with respect to contrasting cognitive modalities -- given the implications for interfaith, interdisciplinarity and intercultural discourse

Show/Hide AI response

Question: One way of framing further research is through recognition of how distant a particular emotional mode is from any logical mode and therefore the number of "steps" required to get to the interface that must necessarily be traversed. This suggests a recognition of distance on a pathway from Emotion A to a logical modality, in contrast with the distance from Emotion B

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Question: How about from intuition to logic -- given the many mathematicians who have cited the importance of intuition, and the contrast with those deprecating that association

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Question: Whilst that response acknowledges the respect of some mathematicians for intuition and a sense of complementarity, it seems to avoid the manner in which intuition is "translated" into logic. This avoidance would seem to be the challenge with respect to logic and emotion, or emotion and action

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Question: You have responded to questions on the manner in which the integration between contrasting modalities such as logic, emotion, intuition and action is addressed -- given that any such recognition would tend to be biased in terms of one or other such modalities. The responses necessarily focus on the individual implications. Could you adapt these to groups and larger collectives, especially in the light of crowd psychology

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Distinctive game roles with both cognitive and strategic implications

Question: A form of "translation" could be assumed to be variously formalized in games, as with chess. The question could then be framed as to how the game can be viewed through the lens of logic in contrast with that of intuition or emotion. Indeed the pieces and their characteristic moves could be seen as an instrumentalization of those modalities -- to some degree

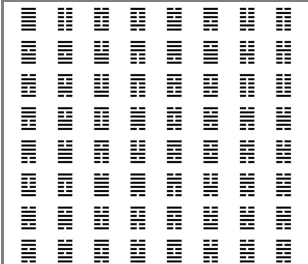
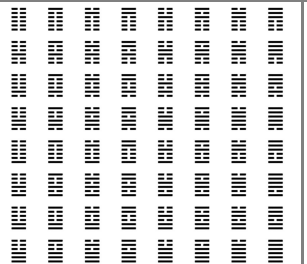
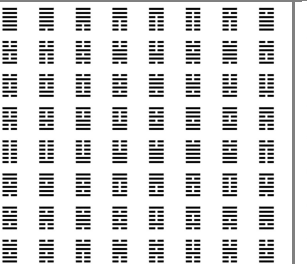
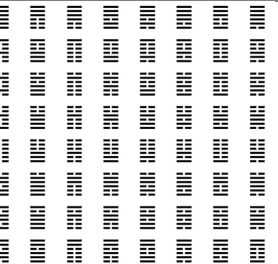
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Question: If chess pieces were to be understood as a reflection of the traditional BaGua trigram pattern (with King as Heaven and Queen as Earth), how might the other paired trigrams correspond to the other paired chess pieces

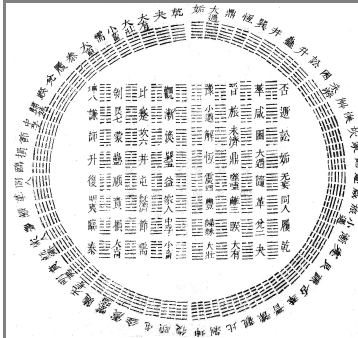
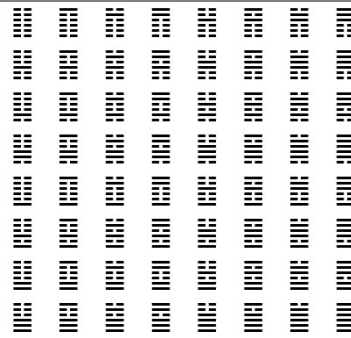
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Traditional articulated arrays with cognitive and strategic implications

The argument here can be developed in the light of the traditional Chinese arrays of hexagrams as shown below. There are held to constitute encoding of conditions of change of relevance to governance -- as exemplified by the classic *Book of Changes* (*I Ching*).

Contrasting Chinese classical arrays of 64 hexagrams			
King Wen	Fuxi (Shao Yung square)	Jing Fang	Mawangdui
			

The Fuxi array above featured in the [Shao Yung circle](#) as presented below. This is of historical of significance through its influence on the thinking of [Gottfried Wilhelm Leibniz](#) in developing the binary coding fundamentall to computer operation -and subsequently to artificial intelligence

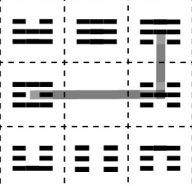
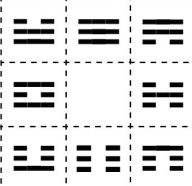
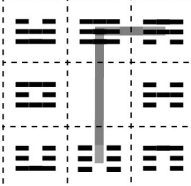
<p>Shao Yung circle with Fuxi hexagram array (owned by Gottfried Leibniz, 1701)</p> 	<p>Animation of superimposition of 4 hexagram arrays</p> 
<p>Perkins, Franklin. <i>Leibniz and China: a commerce of light.</i> Cambridge UP, 2004. 117., Public Domain, Link</p>	

The 64-fold arrays correspond to the layout of an 8x8 chess board of black and white squares -- with all its well-recognized significance for the development of strategic thinking. Of particular relevance to the following argument is the pattern of nonlinear [movement of the Knight](#) across that board in contrast to the linear patterns of movement of other pieces. This has evoked considerable mathematical interest in a [Knight's Tour](#) -- a sequence of moves on a chessboard such that the Knight visits every square exactly once, as discussed separately (*Detection and representation of cycles in 2D mappings*, 2024).

Of potential interest in that respect is the representation of a particular pattern of movement with respect to a 3x3 cell within the chess board as variously shown below. Rather than distinguishing the cells by hexagrams, as above, they may be distinguished by the trigrams of the traditional 8-fold BaGua pattern.

Of potential relevance is how the pattern of Knight's moves can trace out either a right-facing or left-facing Swastika -- with all the controversy with which these are associated, as discussed separately (*Swastika as Dynamic Pattern Underlying Psychosocial Power Processes*, 2012). The Knight's move is also of important strategic significance -- associated with creative "out-of-the-box" thinking. However it also has pathological connotations as an indication of [disconnected thinking](#).

<p>Animation of superposition of Swastika on BaGua "Earlier Heaven" Arrangement (transformation of trigram coding consistent with Knight's move, namely <i>reflection across the centre or change of line pattern for the "sting"</i>)</p>	
Animation engendering both	

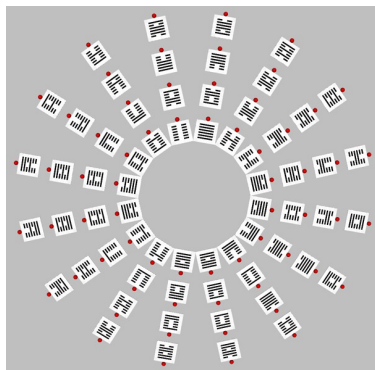
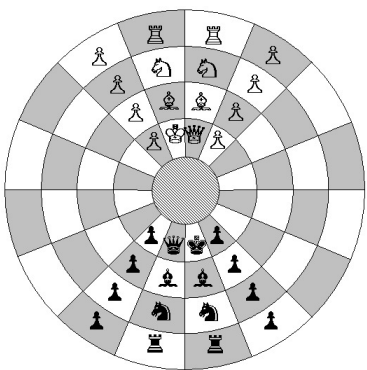
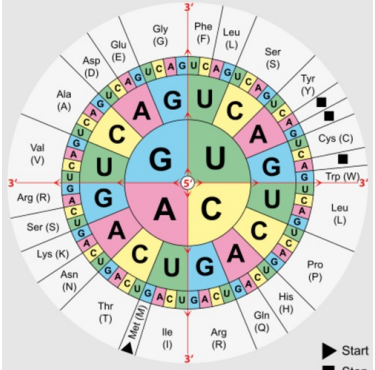
<p>Left-facing Swastika defined by succession of Knight's moves on BaGua pattern</p>	<p>forms of Swastika: left-facing (green) and right-facing (red) Note switch in colour and direction -- to the "other" variant</p>	<p>Right-facing Swastika defined by succession of Knight's moves on BaGua pattern</p>
		
<p>Reproduced from <i>Alternative representations: Knight's move, Swastika and BaGua?</i> (2012)</p>		

Question: The 64 I Ching hexagrams are presented in four traditional chess-board like arrays: King Wen, Fuxi, Jing Fang, Mawangdui. The quadrants of each array therefore hold 16 hexagrams. The 16 can be mapped onto the vertices along the 4 diagonals of a truncated tesseract as previously discussed with you. Each set of 16 can be understood as associated with a cognitive modality. Of interest is why there are only 4 traditional arrays and whether other such patterns are of significance. Separately the variety of movements of a chess Knight have been mapped onto a BaGua configuration [as illustrated above] -- making the two forms of swastika when rotated. One interest is why the Knight's L-move is constrained as it is when it could be 3-2 instead of 2-1 . Then what hexagrams would be linked on a chess-board array by such moves

Show/Hide AI response

Question: The classic 4-fold pattern of psychological types, as with the 16-fold Myers-Briggs Type Indicator, evokes consideration that they could be based on 4 quadrants of a cartesian axial system -- and would then bear comparison with the AQAL 4-quadrant system of integral theory. If considered in relation to a 64-fold array of hexagrams arrayed in 4 quadrants, these might be appropriately positioned in concentric circles (as in the AQAL model), as with some depictions of the set of 64 genetic codons. Do you have any trace of hexagrams arrayed in this manner in contrast with the tabular arrays -- also favoured in the case of the AQAL model

Show/Hide AI response

<p>Indication of potentially comparable circular arrays of 64-fold patterns with contrasting implications for change</p>		
<p>Circular array of 64 hexagrams (4 rings of 16)</p>	<p>Circular chess (starting position)</p>	<p>Standard RNA codon table</p>
		
<p>NB: Top of hexagram marked by small red sphere</p>	<p>By Dogface - Own work, CC BY-SA 3.0, Link</p>	<p>Mouagip, Public domain, via Wikimedia Commons</p>

Question: A classic circular arrangement of hexagrams is that of the Shao Yung circle [see above], known to have been an inspiration to Gottfried Leibniz in his reflections on the binary coding which anticipated the development of computers. Each quadrant is split into 2 "houses" thereby framing the question whether these might be appropriately repositioned concentric to one another [above left]. Given the references to chess in

this argument, this recalls the reconfiguration of the tabular chess board into a [circular chess variant](#) featuring a circular board with four rings, each with 16 squares, using standard chess pieces [*above centre*]. Could you comment on the movement of the Knight in this configuration

Show/Hide AI response

The indicative concentric circular array of hexagrams above, calls for much further reflection on how it might be best refined and oriented. The configuration was constructed experimentally in X3D using a third dimension not apparent in the flat image. As a 2D image it can be used to display a Knight's move (see below) -- with curved branches in that circular context. However the array can also be progressively stretched into a cup-like form -- to the point of presenting the 64 hexagrams on the surface of a sphere. As an X3D model the individual hexagrams each then offer access to relevant commentary.

As a provisional exercise, no attention has been given to whether the circular array of hexagrams (above) could be more insightfully ordered. Possibilities include associating the four concentric circles with the cognitive modalities highlighted above -- rather than as quadrants. The spherical model (subsequently produced) explored the configuration of hexagrams by "latitude" as suggested by the *BaGua* array, resulting in the configuration of "longitudes" as *I Ching* "houses."

Knight-like gambit exemplifying creation and destruction

The potential movement of the Knight across the chess board is variously recognized as of strategic significance in its capacity for possibilities of "creation" or "destruction" (notably through "forks"). Consideration has been given to 16-fold articulations, most notably the set of logical connectives and the possibility of emotional, intuitive/spiritual, and action-oriented analogues (*Pathways in Governance between Logic, Emotion, Spirituality and Action*, 2024). The potential relation of any such articulation to the pattern of 16 SDGs has also been explored -- the 17th considered as a coordinating perspective. The 4 sets of 16-fold connectives have also been mapped experimentally onto the vertices of a truncated tesseract -- a 3D projection of a 4D configuration -- as being of requisite complexity for the strategic challenges of the times.

The question framed by those articulations is how a Knight-like move might be associated with the 64-fold array, given its various implications. Of particular interest is whether the focus should be on the chess move of 2 "linear" steps followed by 1 "orthogonal" move. Should consideration be given to a 3-2 move, a 3-3 move, or even a 3-4 move? As noted below it is argued that the merit of the 2-1 move is that it is distinct from the moves of other pieces which is not necessarily the case of the other possible variants. Of further interest in that regard is whether and how a swastika-like pattern is associated with any of those variants in the light of its symbolic importance and any associated cognitive implications

Question: The clustering of 16 hexagrams in a quadrant, and the relation to mapping of connectives previously discussed with you, raises the question as to whether the 2-1 or 3-2 jump to another quadrant could be to a hexagram positioned to reflect the line changes between start and finish. Would this imply a new array, is one of the four arrays already patterned to reflect this

Show/Hide AI response

Perception of Swastika variants as the epitome of polarization

It is especially provocative -- and potentially controversial -- that a right-facing Swastika pattern is perceived as left-facing when viewed from above rather than from below, or from its other side (as with a flag or as a consequence of reversal of a video image or photograph). This can be readily presented through reversing the model presented below. In its own right, either variant of Swastika can be explored as the epitome of polarization in this period (*Swastika variants exemplifying the challenge of dialogue polarization*, 2024).

Question: Given how the two variants of the swastika are differently upheld, my particular interest is whether

the Knight's possible movements traced out such contrasting meanings. There is of course the strange irony that either can be perceived as the other if viewed from above or below, or on both sides of a flag [or inversion in a film image]. Hexagrams may be inverted by reading conventions (top-down or bottom-up)

Show/Hide AI response

The first set of images below indicate a form of Knight's move in 3 steps from the centre, followed by 4 -- on the King Wen array of hexagrams. The two variants of the Swastika are evident through reversing the image.

*

3-4 Knight-like move between 16-fold quadrants on King Wen array of hexagrams		
"Right-facing" (<i>Swastika</i>)	Directional transformation by rotation	"Left-facing" (<i>Sauvastika</i>)

Question to ChatGPT: Please clarify : "A 3-2 move would overlap with the movements of other pieces, such as the queen, rook, or bishop, reducing the Knight's distinctiveness and diminishing its tactical value." On inspection it does not appear to replicate the queen's movement or the bishop's

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If the focus is on chess-like strategy, clearly any redefinition of the Knight's move would be of significance. The question is whether that possibility should be envisaged rather than excluded, especially if the question is framed (as discussed below) with regard to a 3-3 move or a 3-4 move. The constraint to a 2-1 move could be deemed arbitrary and artificial in the light of the use of the Knight's move as a strategic metaphor with more general implications

The following animations indicate multiple variants of a Knight-like move, including the 2-1 pattern that is the standard feature of chess. Again the image can be reversed to show the alternative variant.

Animation of contrasting patterns of Knight-like move between 16-fold quadrants on King Wen array of hexagrams	
"Right-facing" (<i>Swastika</i>)	"Left-facing" (<i>Sauvastika</i>)

Question: How would chess change with a 3-2 Knight?

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Representing the surprising transition between incommensurable cognitive modalities

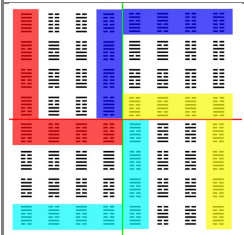
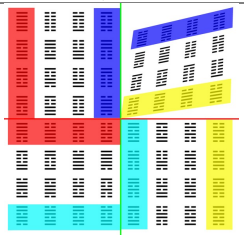
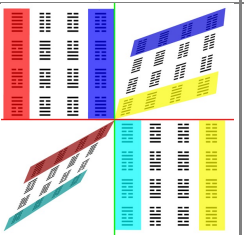
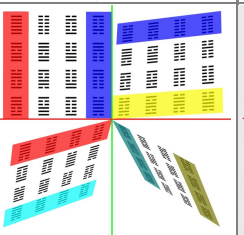
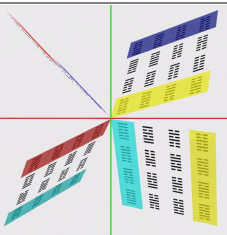
Possible analogues to the formalism of 16 logical connectives has been discussed separately (*Pathways in Governance between Logic, Emotion, Spirituality and Action*, 2024). Consideration was given there to the transition from a logical modality to another modality (emotional, spiritual or practical). The Knight's move is especially suggestive of a shift of modality from one 16-fold array of connectives (in one quadrant of a 64-fold array) to another. Rather than being simply "orthogonal" on the "smae plane", such a shift might be more usefully portrayed as a "jump".

The "jump" in question can be explored as characterized by a "cognitive twist" (*Exploring the paradoxically requisite cognitive twist of higher dimensionality*, 2021; *Clarifying subtle complexity and a necessary "cognitive twist"*, 2019; *Configuring a focus for awareness through a cognitive twist*, 2015). The associated shock in a governance context can also be explored through **Black Swan theory** (Nassim Nicholas Taleb, *The Black Swan: The Impact of the Highly Improbable*, 2007). As a form of **paradigm shift** it recalls te arguments of Thomas Kuhn (*The Structure of Scientific Revolutions*, 1962).

A 64-fold array of hexagrams can be split into 4 quadrants, potentially associated with distinctive cognitive modalities (and their connectives): logical, emotional, intuitive/spiritual, action-oriented. In a visual exercise in 3D, each quadrant can be rotated -- as an alteration of "pitch". One of the Knight's moves could then involve a "jump" from one quadrant (following 3 step moves) to another (with a 2-step move). The cognitive challenge of the jump could be associated with the degree of pitch from the coplanar orientation of quadrants.

Of some relevance to interpretation of the following images is the idiomatic expression of being "[on the same page](#)". If the "page" is understood as divided into quadrants -- variously associated with "logic", "emotion", "intuition", and "action" -- the transition from one modality to another is necessarily inhibited when the quadrants are "out of sync" -- pitched differently to one another. This would be significant for an individual, or for communication within a group or a larger collective

**flicker effect image

Indication of "out of sync" condition for various quadrants as a consequence of a "change of pitch" inhibiting transition between them				
No quadrants "out of sync"	1 Quadrant "out of sync"	2 Quadrants "out of sync"	3 Quadrants "out of sync"	"Out of sync" animation
				

Question: The rotation of the quadrants could then suggest how they could all change pitch -- but with respect to the origin of the original matrix of all four. . Using the Bagua configuration, multiple Knight's moves of chess can trace out a swastika on the Bagua -- whether right or left-facing. The importance of the Knight's move is the "surprise" of the final move -- orthogonal to those preceding it. Expanding from 3x3 to 8x8, the surprise could be associated visually with shifting from one quadrant to another -- especially if these are not coplanar. In previous exchanges with you, the 16 hexagrams of each quadrant could be used to map 16 logical connectives, 16 emotional connectives, 16 value-oriented connectives, and 16 action-oriented connectives. Each set being a surprise after the transition from another

Show/Hide AI response

Question: Since the King Wen array is necessarily a matrix, is tilting portions of a matrix through "pitch"

understood otherwise through statistical or related methods which might be of relevance

Show/Hide AI response

*** tesseract ???

Question: My focus is primarily on the 16-fold distinctions in each quadrant, with each such quadrant understood as a cognitive modality. Previously in exchanges with you, the 16-fold pattern has been mapped onto the vertices along the diagonals of truncated tesseract. The current exercise is an adaptation of this with the focus on the cognitive transition from one modality to another as an "empowering" surprise.

Show/Hide AI response

Question: Tilting quadrants offers a visibly accessible clue. It recalls the challenge of getting on or off an escalator or bus travelling at a different speed. The question is how to illustrate what degree of tilt as exemplifying the extent of the challenge. With four quadrants, how best to provide a fruitful illustration. An extreme case could be illustrated by a degree of tilt rendering accessibility very challenging. If tilting was presented dynamically, this would suggest the need to choose one's moment to engage in the transition

Show/Hide AI response

Chaining connectives in a Knight's move transition

Missing from typical reference to "Knight's move thinking" are the specific characteristics of the cognitive steps in the "chain" by which the "move" is composed. It is in that sense that the cognitive connotations encoded by the succession of hexagrams is of potential interest -- whether they give rise to "constructive" or "destructive" consequences. As rotations around the centre point of a hexagram array, such chaining can be understood as forming spirals, whether disabling or enabling (*Convergence of 30 Disabling Global Trends*, 2012).

Question: This discussion is necessarily avoiding the distinctions associated with the hexagrams in any quadrant, or the simplistic manner in which the King Wen has been segmented into quadrants without considering such implications. As such it is an indication of an approach only. There are 3 other such patterns which I could present in a similar manner which are a further indication of the provisional nature of the exercise. They are the Fuxi pattern, the Jing Fang pattern, and the Mawangdui pattern. There is clearly a challenge in interrelating the issues implied

Show/Hide AI response

Question: A known technique for morphing a regular polyhedron into its dual is by tilting quadrilaterals. Is this of relevance to the concern here, and to your indication of statistical methods with respect to matrices

Show/Hide AI response

Question: In the subset of the King Wen array -- necessarily planar -- "tilting" the individual hexagram cells could be understood as a change in cognitive orientation engendering another hexagram to which it would be otherwise linked by line changes. So framed the challenge is how to handle that quadrant and the individual cells

Show/Hide AI response

Metaphorical distinction of conditions within and between modalities

Question: In earlier exchanges with you, the 4 16-fold articulations were associated with 4 contrasting cognitive modalities and their connectives (logic, emotion, intuition/spirituality, action) readily associated with personality types and psychological processes. With a given quadrant of 2x8 hexagram conditions

associated with one such modality, each set of 8 can be understood as indicated by one of the BaGua conditions or I Ching "houses" -- named in metaphorical terms as: Heaven, Earth, Mountain, Lake, Thunder, Wind, Fire, Abyss. How might pairs of houses be identified in relation to the 4 contrasting cognitive modalities -- with the understanding that any such pair would probably correspond to the mapping of hexagrams onto vertices along a diagonal of the truncated tesseract. An issue is clearly whether such attributions reflect the clustering of hexagrams in a quadrant of the King Wen or other arrays

Show/Hide AI response

Question: Whilst it may be challenging to relate to the traditional 8-fold Chinese pattern of metaphorical labels (Water, Wind, Thunder, etc) or their pre-scientific equivalents distinguished by philosophy, there is a case for recognizing how the engagement with the limited set of contrasting familiar environmental phenomena (like water, air, earth, and the like) has valuable cognitive implications. In particular these offer understanding of the transitions from walking on ground to swimming, to wind exposure (paragliding, etc), and the like -- namely the transitions between the modes of locomotion appropriate to each environment (specifically exemplified in a triathlon). Given widespread preoccupation with the "environment", how might the cognitive distinctions between such contrasting experiences be recognized as metaphors, and how many are there.

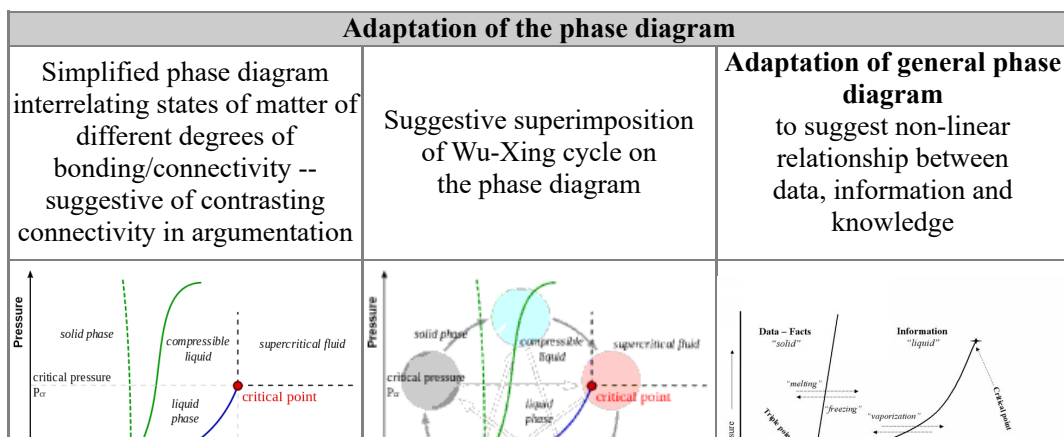
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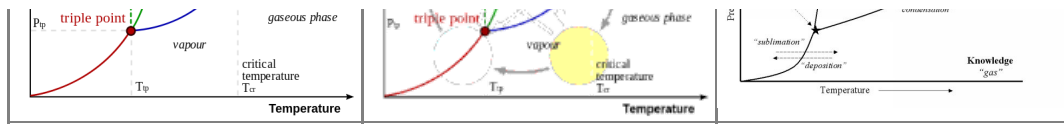
Interrelating incommensurable cognitive modalities as phases

Question: In terms of considering how the associated cognitive experiences might be interrelated, of particular interest is the organization of a [phase diagram](#) with potential boundary interfaces between them -- and the possibility of a critical point transition between several of them. Such a phase diagram could be used to relate the cognitive engagement with data (solid), information (fluid?), intuition (fire?), opinion (air?) -- for which environmental metaphors are readily used. Of interest are then the contrasts with other possible states such as plasma. Such a framing makes evident the challenge of the interface between data and opinion, for example -- potentially according recognition to msinformation.

Show/Hide AI response

Understood as phases, there is a case for exploring the use of phase diagrams to indicate transitions between the [states of matter](#) to which the four conditions of the AQAL quadrants can be understood to correspond -- especially in terms of connectivity. The three fundamental states most readily recognized (as in the case of water), are solid, liquid, gas -- interrelated as indicated in the image on the left, and separately discussed (*Phase diagram of degrees of argument connectivity*, 2014). The relation to the BaGua pattern be suggested by the central image below (*Embodying topological succinctness beyond questions*, 2014). That pattern of phases can be explored as suggestive of the relation between data, information and knowledge, as indicated on the right below (*Playfully Changing the Prevailing Climate of Opinion: climate change as focal metaphor of effective global governance*, 2005).





Question: Arguably a 4-quadrant pattern of hexagrams could be explored as a highly formalized phase diagram. This is suggestively articulated into 64 distinctions for which environmental equivalents might be recognized, if you have any such trace. They are of course more readily made (but not systematically) in poetic form. Intriguingly a conventional phase diagram is framed by both temperature and pressure, suggestive of any metaphorical relation to the binary "Heaven" and "Earth" categories of tradition.

Show/Hide AI response

Question: Suggestive as it is of metaphorical relation to the binary "Heaven" and "Earth" categories of tradition, and given their role in phase diagrams, there is a case for commenting further on the role that "pressure" and "temperature" (heat) play as frequently used metaphors with reference to society, governance and individual experience.

Show/Hide AI response

Question: An imaginative stimulus for such investigation is provided by a science fiction scenario explored by a number of writers. It focuses on the challenge of comprehending high degrees of complexity calling for decision-making under operational conditions (as is the case in global management). The problem is that of piloting or navigating a vessel through "hyperspace" or "sub-space", as imagined in the light of recent advances in theoretical physics and mathematics. Because of the inherent complexity of such environments, writers have explored the possibility that pilots and navigators might choose appropriate metaphors through which to perceive and order their task in relation to qualitative features of that complexity -for example, flying like a bird, windsurfing, swimming like a fish, tunneling like a mole, etc. The mass of data input derived from various arrays of sensors, and otherwise completely unmanageable, is then channelled to the pilot in the form of appropriate sensory inputs to the nerve synapses corresponding to s/his "wings" or s/his "fins". Perception through the chosen metaphor is assisted by artificial intelligence software and appropriate graphic displays. The pilot switches between metaphors according to the nature of the hyperspace terrain. Such speculations do at least stimulate imagination concerning a possible marriage between metaphor and artificial intelligence in relation to governance. How might AI enable switching metaphors to enable such navigation

Show/Hide AI response

The patterned manner in which animal locomotion is characterized by "phase shifting" was previously discussed in terms of [gait](#) (*Dynamics of bipedalism and quadrupedalism indicative of "cognitive gait"*, 2024). With the modalities of logic, emotion, intuition and action understood as metaphorical limbs, there it was argued that phase shifting had evident implications for [organizational agility](#).

Formulation of a memorable conjecture in contrast to a premature solution

Question: Rather than seeking an immediate solution to the mapping challenge, especially given that it might require a different configuration of hexagrams in a quadrant, the challenge might be best understood as a form of "conjecture" in a mathematical sense -- inviting further exploration, if it is adequately defined as a patterning problem with cognitive implications. The value of the challenge would lie in its immediate relevance to strategic discourse in which a Knight's move between connectives of distinctive modalities would be of particular significance -- as with any shift from logic to emotion, or from emotion to action.

Show/Hide AI response

Conjecture presentation as a challenging puzzle of strategic design

Question: Complementary to the framing as a conjecture is the value of juxtaposing the various dimensions of the challenge both as a puzzle and as a mnemonic device -- indicative of the possibility that they might "fit together" as with a "riddle" for the future

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





































































































Paradox of strategic ambiguity in destruction and creation

Question: Such considerations are given particular focus in the light of the challenging ambiguity associated with perceptions of the Knight's moves across the hexagram array as tracing out either variant of the swastika. [as above]

Show/Hide AI response

Representation of stages of integration and disintegration

The earlier animations can be adapted (as shown below) to suggest that the branches of the two variants of the Swastika "evolve" through specific stages -- as with the steps in a Knight's move -- from a central "integrative" focus at which they are contiguous (as a form of "critical point" in phase diagram terminology. The animations can be reversed to indicate how the branches "devolve" back to that central point. As in some traditions, these contrasting animations can be interpreted as indicative of creation and destruction.

Use of a Knight-like moves to clarify evolving and devolving steps in the case of the Swastika variants															
"Right-facing" (<i>Swastika</i>)								"Left-facing" (<i>Sauvastika</i>)							
															
															
															
															
															
															
															

Metaphorical reference is frequently made to "connecting the dots" and "joined up thinking" -- but with little ability to clarify the nature of the "dots" to be connected or joined -- particularly when contrasting cognitive modalities are involved. The animations above clarify the challenges, especially in that the distinctive hexagrams are indicative of distinctive cognitive insights which could be joined, and the succession of steps that might be required. As previously noted, the King Wen array of hexagrams may well be less than appropriate than some alternative array with respect to any chaining of a succession of connectives.

The animations are potentially of particular value in clarifying any chain of connectives with which fascism might best be associated -- in contrast to widespread avoidance of consideration of the connectivity with which it is associated (in preference to a simplistic singular reference to "fascism"). Intriguing in that respect would then be the identification of the chain of hexagrams (and their associated connectives) by which a right-facing Swastika is configured. Of corresponding interest would be the chain of connectives associated with the creativity by which a left-facing Swastika is configured.

As a template, the array of hexagrams also evokes consideration of:

- rotation of any Swastika pattern to suggest other connectivity pathways
- the 4-hexagram pattern at the centre as suggestive of the integration of the pathways it engenders -- or to which they may aspire or revert
- use of the animations without any distinction of the 4-fold centre -- as an empty centre, or otherwise invisible -- suggestive of the absence any sense of what integration might resemble
- highlighting of random cells on the 64-fold array in the absence of any connecting pathways (potentially recalling [Conway's Game of Life](#) simulations)

Question: Right- or Left- facing Swastikas can be overlaid on a 64-fold array of hexagrams, with Knight-like moves from the centre forming each branch, whether through 2-1, 3-2 or 3-4 moves. If the hexagrams could be appropriately selected along those pathways, the chaining from one to the next could be indicative (through associated onnectives) of a form of cognitive connectivity -- "joining the dots". Of particular interest is whether pathways so formed and oriented would be notably indicative of what is recognized as the emergence of destructive ("fascist") thinking -- or creative thinking in the alternative orientation

Show/Hide AI response

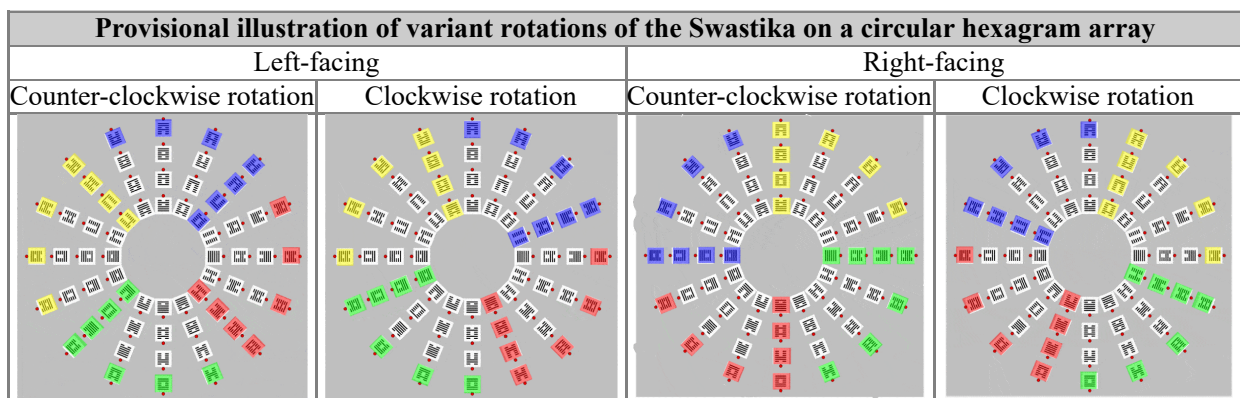
Question: Given the major controversy associated with the Swastika, that response associates "creativity" with right-facing rather than left-facing (as in some traditions). More to the point the response does not indicate how chaining of hexagrams along a pathway of particular orientation might be especially associated with "destructive" processes (if not "fascism"). Please clarify

Show/Hide AI response

Question: From a static perspective, the distinction between swastikas is between "right-facing" (now deprecated in the West) and "left-facing" (traditionally appreciated in the East). Less evident is how any rotation of the swastikas is implied by the symbol, whether clockwise or counter-clockwise -- a spiralling motion potentially associated with creation or destruction. The rotation could be understood as a scythe- or blade-like cutting action, or as ensuring lift (as with helicopter rotor-blades). Do you have any trace of such interpretations in either case.

Show/Hide AI response

The following animations are presented as a provisional exploration of the rotation of the two static variants of the Swastika. They provide a focus for questions about the contrasting symbolic and strategic implications of a right-facing or left-facing Swastika when rotating in a clockwise direction ("positive"? creative?) or in a counterclockwise direction ("negative"? destructive?). The rotations are presented over a circular 64-fold array of hexagrams, as discussed above. The array offers a potential articulation of associated steps or phases -- especially to the extent that the four arms of a Swastika are indicative of a Knight-like move, as discussed above



Question: Given current Western legislative provisions prohibiting both display of the Swastika ("right-

facing"?) and the Nazi salute (with the right arm), is there any particular physical association of that salute with the form of the Swastika

Show/Hide AI response

Question: Conway's Game of Life offers an intriguing resemblance to a cellular array of hexagrams -- with many cells bounded by 8 other cells. The rules of that game can be contrasted with the line-changing rules of hexagrams -- and how each enables a form of change. A degree of combinatorial chaining is evident in both. Does that simulation suggest in any way how a "destructive" swastika-like pattern might form -- in contrast to a constructive. The rules of the Game of Life also offer some resemblance to the Game of Go -- potentially of greater relevance to this argument

Show/Hide AI response

Question: How might AI detect emergent fascist patterns?

Show/Hide AI response

Question: Does the association of fascism with closure and rigidity obscure recognition of when such connotations may be held to be valuable -- just as favouring openness and flexibility (and their connotations) may inhibit a viable coherent response

Show/Hide AI response

Ironically, just as few can now distinguish the two variants of the swastika, there is similar confusion between the terms "fascism" and "facism". The latter refers to the human face and the degree to which it is covered (*Facism as Superficial Intercultural Extremism: burkha, toplessness, sunglasses, beards, and flu masks*, 2009; *Challenges to Facist Identity and Facial Identification*, 2009). An *Urban Dictionary*, entry suggests that [facism](#) is like racism, but "classified by face, not race and colour".

Relevant integrative perspectives on the swastika from 4D?

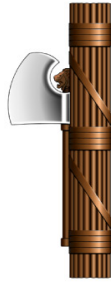
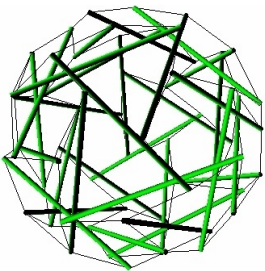
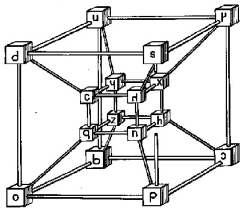
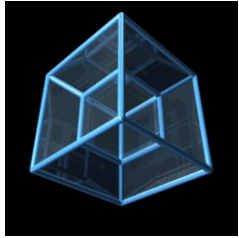
The emphasis on stake as a feature of the WEF preoccupation with [stakeholder capitalism](#) could be said to have a memorable history and symbolism dating back to the Roman Empire through the [fasces](#), as discussed separately and depicted below left (*Holding Stakes: fasces versus tensegrity*, 2023). This is a bound bundle of wooden stakes, sometimes including an axe (occasionally two axes) with its blade emerging. The image has survived in the modern world as a representation of magisterial or collective power, law, and governance. The fasces frequently occurs as a charge in heraldry.

By the Renaissance, there emerged a conflation of the fasces with a Greek fable depicting how individual sticks can be easily broken but how a bundle could not. By the sixteenth century, fasces were "inextricably linked" with interpretations of the fable as one expressing unity and harmony. During the first half of the twentieth century the fasces became heavily identified with the fascist political movement of Italy, although it has not been subsequently stigmatized by that process. It continues to be widely used as a symbol, particularly by those who see themselves as modern-day successors to the Roman Republic or its ideals.

Symbolic implications of the fasces continue to be explored (Eugene Kontorovich, *When Fasces Aren't Fascist: the strange history of America's federal buildings*, *City Journal*, Spring 2014; Victoria Barnes, et al, *Symbolism in Bank Marketing and Architecture*, 2019; Sarah E. Bond, *Fasces, Fascism, and How the Alt-Right Continues to Appropriates Ancient Roman Symbols*, *Hyperallergic*, 13 September 2018; T. Corey Brennan, *The Fasces: A History of Ancient Rome's Most Dangerous Political Symbol*, 2022) The significance of the latter is highlighted in a review (John Kelly, *A new book explores the fasces, a symbol of power -- and of unity*, *The Washington Post*, 1 October 2022).

As the derivation of fascism, the fasces as a 30-stick bundle can be contrasted with that of a 30-stick tensegrity, as animated below -- the first being indicative of a closed form of society in contrast with the

second as indicative of an open society (*Transcending Psychosocial Polarization with Tensegrity: biomimetic clues to collective resilience and unshackling knowledge*, 2021).

Stake holding as configurations of axes of bias -- from 2D to 3D			
Fasces dating from the Roman Empire (Symbol of a "closed society"?)	Tensegrity configuration of multiple axes of bias (Symbol of an "open society" and its strategic dilemmas?)	The Logic Alphabet Tesseract - a four-dimensional cube (see coding). by Shea Zellweger	Tesseract animation simulating requisite 4-dimensionality?
			
Reproduced from <i>Wikipedia</i>)		Diagram by Warren Tschantz (reproduced from the Institute of Figuring).	by Jason Hise [CC0], via Wikimedia Commons

A possibility of potential interest is whether the variant forms of the swastika could be more fruitfully understood as projections into 2D of a configuration more appropriately understood in 4D. Consistent with that possibility is the recourse to 4D geometrical configurations in consideration of oppositional logic, as discussed separately (*Oppositional logic and its requisite polyhedral geometry*, 2019), from which the images on the right are reproduced.

Further investigation could now be considered particularly relevant following the election of Donald Trump, acclaimed as leader of the free world, and readily framed by critics and opponents as "fascist" (Chloe Hadavas, *The Fascism Question: Is Trump a fascist -- and does it matter to the electorate?* *Foreign Policy*, 5 November 2024; John Ganz, *Donald Trump's Fascist Designs*, *New Statesman*, November 2024; Zachary B. Wolf, *People are calling Trump a fascist. What does that mean?* *CNN*, 24 October 2024). Beyond the simplicity of the generic label, there is a question of how 'fascism' is articulated and emerges through stages beyond authoritarianism. In that respect there is some irony to any comparison of Trump with the Knight's move (discussed above), given Trump's strategic unpredictability.

Question: Could you comment on the possibility that the controversial nature of the swastika variants might result from their 2D projection from a 4D construct

Show/Hide AI response

Question: How might a hypercube then be related to a swastika? Which elements would be projected into 2D

Show/Hide AI response

Question: With the left- and right-facing variants of the swastika -- each considered to be composed of 8 lines -- that would offer 16 elements. How might they be doubled in a 32 edged hypercube. Or is each line "doubled" by its thickness

Show/Hide AI response

Question: There are various hypercube-like images in 3D. It would be intriguing if the branches of the two swastika variants could be "drawn" on such images

Show/Hide AI response

Question: I am sharing a document with hypercube images -- notably [*as reproduced above*] the Logic Alphabet (*Framing Cognitive Space for Higher Order Coherence*, 2019)

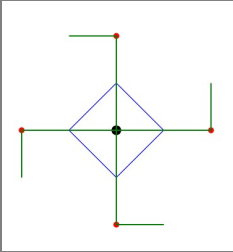
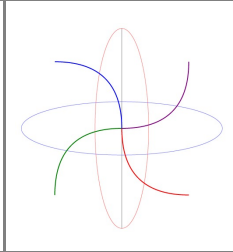
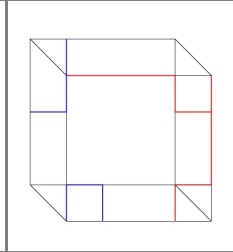
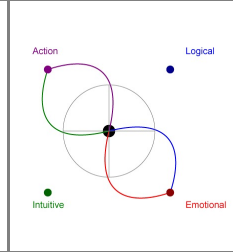
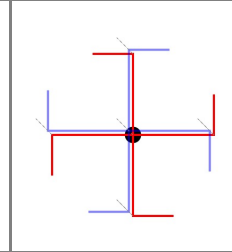
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Question: The focus of this exchange is on whether the swastika(s) are projections of a 4D configuration with logic or other implications

Show/Hide AI response

Question: What alternative higher-dimensional structures might be more appropriate

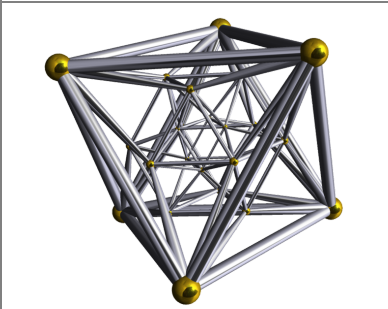
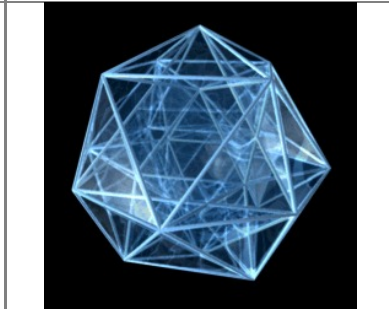

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Indicative images generated by Claude 3.5 in support of the responses relating to any 4D representation of the swastika on a projection of the 24-cell				
24-cell analysis	24-cell projection	Swastika mapping onto hypercube	Transition dynamics	Swastika projection
				

An extensive description of the unique features of the [24-cell](#) is provided by *Wikipedia*. There it is noted that it can be seen as the analogue of a pair of irregular solids: the [cuboctahedron](#) and its dual the [rhombic dodecahedron](#). Of relevance to this argument, these polyhedra are used for geometric representation of connectives in oppositional logic. Of potential relevance, a separate exploration presents a mapping of 24-fold dynamics (*24-fold Pattern Implied by Dynamics of the Lauburu in 3D*, 2016)

Question: Could you elaborate further on the 24-cell possibility

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3D projections of the 4D 24-cell Requisite complexity of the connectivity comprehension challenge?		
Schlegel diagram (vertices and edges)	Performing a simple rotation . [[]	Performing a double rotation .
		
Image created by Robert Webb using Stella4D . CC BY-SA 3.0 Wikimedia Commons "	Animation by JasonHise at English Wikipedia, Public domain, via Wikimedia Commons	Animation by JasonHise at English Wikipedia, Public domain, via Wikimedia Commons

Question: You have previously commented on the use of a 24-cell as a template for mapping swastika variants as a means of exploring their cognitive and strategic significance in 4D. Previous discussion of Knight-like moves as indicative of the arms of a swastika discussed possible variants of such moves: 2-1, 3-2, 3-3 and 3-4. To the extent that each step of a move on a chess board is into a new (matrix) "cell", could you comment on any interpretation of such cells as 2D projections of 4D polytope cells. Thus some Knight-like moves along the four arms of the swastika might indeed correspond to a 24-cell, or to polytopes composed of

fewer cells

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Question: In the light of that response, if the Knight-like moves are across a 64-fold array of cells, each associated with an individual hexagram, how is the pattern of 6 (or more) potential line changes from one hexagram to others then to be understood in 4D. How would an individual hexagram then be understood as a cell within the 4D context

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Question: Such possibilities are indeed interesting. Note that this initiative derives from an effort to look at analogues between logical connectives, emotional connectives, spiritual/intuitive connectives, and action-oriented connectives

Show/Hide AI response

Question: Of particular interest is the transition between domains as suggested metaphorically by a phase diagram, gear transmission, or animal locomotion gait

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Question: What can you suggest with respect to visualization, given the provocation offered by the swastika

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Curiously in the light of the focus of physics on "[scattering theory](#)", there are a numerous references to "scattering" in psychosocial terms. As indicated by the *Psychology Dictionary*, [scattering](#) is a form of cogitation identified by tangential or extraneous connections which may be indicated in inscrutable speech patterns ; it is usually identified in people that have schizophrenia. As such it could be related to the pathological connotation of Knight's Move thinking, as mentioned above, and to ADHD (Lauren Smith, *ADHD vs. Being Scatterbrained: what's the real difference?* *Good Rx*, 30 March 2023). Ironically a variant of chess uses the term (Sergey Sirotkin, *Knight Scattering Chess*, *Chess Variant*, 2002)

Question: The point of departure of this exchange was the seemingly limited insight into the transition between incommensurable cognitive modalities (logic, emotion, intuition, action). In consequence the psychosocial context is characterized by what can be framed as "scattering" and "being scattered". Could you speculate on the potential relevance -- as a metaphor -- of recent breakthroughs by mathematics in the geometrical facet of the [Langlands Program](#) with its reference to "scattering" [Erica Klarreich, *Monumental Proof Settles Geometric Langlands Conjecture*, *Quanta Magazine*, 19 July 2024]. The scattering is notably represented by [Feynman diagrams](#) and their new configuration in an [amplituhedron](#). In an increasingly fragmented society, would such a metaphor suggest the value of exploring an "amplituhedron".

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An earlier exercise considered the potential relevance of Feynman diagrams as a metaphor (*Potential of Feynman Diagrams for Challenging Psychosocial Relationships?*, 2013). The constraints of Feynman diagrams in relation to scattering are in process of being addressed by a new geometrical method, known as "surfaceology" (Charlie Wood, *Physicists Reveal a Quantum Geometry That Exists Outside of Space and Time*, *Quanta Magazine*, 25 September 2024). The exploration of "scattering amplitudes", framing an amplituhedron in a space of higher dimensionality, is strangely reminiscent of psychosocial concerns with degrees of "extremism".

Envisaging a cognitive Rosetta Stone with the aid of AI

Given the focus so credibly offered by the Langlands Program, it is appropriate to ask why so little effort is made to articulate the possibility of a "Rosetta Stone" of relevance to global governance (*Systemic Crises as*

Keys to Systemic Remedies: a metaphorical Rosetta Stone for future strategy? 2008; *Insights into Dynamics of any Psychosocial Rosetta Stone*, 2016; *Towards a polyhedral Rosetta Stone in aid of a paradigm shift respecting opposition*, 2023).

Question: The Langlands Program has long been framed as a "Rosetta Stone" interrelating the disparate fields of number theory, geometry, and the study of finite fields (Kevin Hartnett, *A Rosetta Stone for Mathematics*, *Quanta Magazine*, 6 May 2024). As a metaphor, the question is how such a device might be credibly envisaged with respect to the disparate cognitive modalities of logic, emotion, spirituality and action -- given its potential relevance to the global governance of a civilization in crisis. In contrast with mathematics, how is it that so little investment is seemingly made in such a possibility

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Question: Could you comment on the manner in which "resistance", lack of credibility, and relative ignorance, are ignored as factors which merit integration into such an exploration in their own right -- given their role in global governance. It is curious that, as with comprehensibility, these are also treated as irrelevant in the mathematical initiative -- as with failures to recognize their implications. How might AI perform an enabling function in this context -given its own constraints with respect to those factors.

Show/Hide AI response

There is a case for challenging AI with respect to the psychosocial implications of mathematical achievement, systemic failure and theological inspiration (*Potential Psychosocial Significance of Monstrous Moonshine: an exceptional form of symmetry as a Rosetta stone for cognitive frameworks*, 2007; *Variety of System Failures Engendered by Negligent Distinctions*, 2016; *Mathematical Theology: future science of confidence in belief*, 2011).

Question: In the light of that response, could you comment on the cognitive paradoxes associated with the curious credibility of the correspondences in "moonshine mathematics", the lack of systemic understanding of failure in many domains, and the limited ability of interfaith discourse to benefit from the fundamental insights of *mathematical theology* -- given the documented inspiration of religion for iconic mathematicians.

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Given the current inadequacy of the sciences in the face of the challenges of governance, there is a case for evoking recognition from AI of other dimensions and modalities of potential relevance (*Knowledge Processes Neglected by Science: insights from the crisis of science and belief*, 2012; *Implication of Mathematics in Human Experience from an AI Perspective: from sexual attraction to existential preoccupations of discipline practitioners*, 2024).

Question: That response, and science in general (by implication), neglects the extent to which the processes of mathematics and the sciences are characterized by highly problematic interpersonal dynamics - systematically ignored despite their fundamental implications. Could you comment on the inadequate self-reflexivity of such disciplines, despite their acclaimed relevance to articulation and comprehension of order in psychosocial systems. How might AI enable such inadequacy to be circumvented

Show/Hide AI response

Question: Conflict, disagreement and disasters engender calls for harmony and unity. These are matched by blame-gaming by the variously frustrated. Both processes are only too evident globally at the present time. Could you comment on the extent to which the connectives of logic, emotion, spirituality and action recognize and address harmony and blame meaningfully -- or avoid the challenge of their subtle articulation and embodiment (in contrast to tokenistic gestures)

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