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Destabilizing Multipolar Society through Binary Decision-making Alternatives to "2-stroke democracy" suggested by 4-sided ball games

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Prepared on the occasion of the historical [Brexit referendum](#) through which the UK decided to leave the European Union -- in a period in which popular concern was primarily focused on the outcome of [Euro 2016](#). Aspects of the arguments were previously developed in *Improvisation in Multivocal Poetic Discourse: Basque lauburu and bertsolaritza as catalysts of global significance* (2016)

Introduction

Upheld as an exemplar of the participative democratic process, the United Kingdom voted on 23rd June 2016 to leave the European Union. Some 51.9% voted to leave, with 48.1% voting to remain. These proportions recall the earlier democratic vote in Austria in which 50.3% voted for an environmentalist president and 49.7% voted for a president from the far right (*Austria elects Green candidate as president in narrow defeat for far right*, *The Guardian*, 23 May 2016).

The overly evident triumphalism of the majority in each case obscures the regrets of the minority -- if not their profound anxiety and despair. Somehow that is considered appropriate in a democratic society in which the majority is unquestionably "right" and the minority is simply "wrong" -- and must "live with it". Curiously the pattern is evident to an even higher degree in international ball games, as is the case with the [2016 UEFA European Championships](#) or those of [Eurovision 2016](#). One national team will "win" and much will be made of its triumph. All others will "lose" -- readily to be disregarded as "losers" -- to the existential despair of their supporters.

Why is this pattern considered to be so appropriate and healthy in a multifaceted democratic society? How to involve those framed as the minority who lost -- beyond the platitudes and tokenism of the majority leadership, variously claiming to "reach out" to "them" inclusively? As with any victory, their subservience to "us" is of course a prerequisite (*Us and Them: Relating to Challenging Others*, 2009). Can democracy seriously be upheld as meaningfully sustainable when 49% are of one view and 51% are of another? Will the future consider this to be totally surreal -- a cause for hilarity and tears over centuries to come?

The inadequacy of this process is strikingly evident in the current period through the number of major strikes and demonstrations in European countries by those who claim their voices are not heard by those "in power". The level of dissatisfaction is indicated -- following Brexit -- by the number of countries, regions and factions who are now mobilizing their efforts for a similar disassociation in their aspiration for a form of independence. Ironically many in the "defeated" anti-Brexit minority have since initiated a formal petition for a new referendum under new rules (*EU referendum petition signed by more than 2m*, *BBC News*, 25 June 2016; *Petition to hold second EU referendum reaches 2m signatures*, *The Guardian*, 25 June 2016). Another petition calls for the independence of the City of London from the UK -- possibly implying that citizenship itself is constrained by overly simplistic thinking in a world in which many have multiple passports and allegiances.

The "European Project" itself faces a crisis of major proportions, which was preceded by variously detectable [foreshocks](#) (Edward Harrison, *The Ugly Heart of the European Project*, *Foreign Policy*, 12 July 2015; Ferruccio Pastore, *The Migration and Asylum Crisis as a Transformative Shock for Europe*, *Istituto Affari Internazionali*, 2015; John Lichfield, *Lamps out over Europe as Brexit marks the end of the European Union*, *The Independent*, 24 June 2016; Henry Porter, *Terrorism, Migrants, and Crippling Debt: is this the end of*

Europe? Vanity Fair, 7 January 2016; *George Soros: "Europe Is On The Verge Of Collapse"*, *Zero Hedge*, 21 January 2016).

It remains to be seen whether this disaffection engenders new questions of relevance to genuine "reform" -- or whether radical creativity is systematically repressed by outdated conventional reactions. As a key player in the European Project, the French approach to any form of imaginative radical thinking is far from encouraging (*Radical Innovators Beware -- in the arts, sciences and philosophy: terrifying implications of radical new deradicalisation initiative in France*, 2016). As the main promoters of the European Project, the tragedy is their conviction that they know unquestionably what is appropriate and have always known what is "right". All that is "wrong" is the failure of others to agree with them. Seemingly there is a failure to recognize that if one does not know how one is part of the problem, one is unable to understand the nature of the solution required.

From that perspective, it is therefore completely unnecessary for new kinds of questions to be asked, however "wrong" events may prove the mindset to be. Is there any evidence that "radical" questions have been asked by the EU as an institution -- especially having launched the [Radicalisation Awareness Network](#) (RAN) in 2011? Are such questions valued or deprecated? Has any capacity to ask new kinds of questions been developed with respect to democratic governance?

Such outdated complacency has been challenged by a strong statement by [Alexis Br  zet](#), managing editor of *Le Figaro*, as reported by the BBC (*Brexit: Europe's media eye more referendums*, 27 June 2016). The [front-page editorial](#) calls on the EU not only to reform -- a common European media theme in recent days -- but to rebuild itself through a new treaty that must be ratified by referendums in all member states. Br  zet warns France and Germany to avoid the "temptation to try to patch things up": *l'Europe doit se reconstruire, changer de gouvernance, de politique, de philosophie. Et s'appuyer sur les peuples*.

As to the "ugly heart" of Europe, what of the extent to which the migration crisis has been triggered and exacerbated by simplistic economic arguments for the sale of arms by European countries to the countries from which migrants are thereby driven, as separately argued (*Evaluating the Grossness of Gross Domestic Product: Refugees Per Kiloton (RPK) as a missing indicator?* 2016). The binary framework is curiously mirrored by the definition of migrants as seeking to come from "out" to "in". There is little consideration of how their numbers have been engendered by a perverse form of surrogate paternalism, nor of the non-binary nature of any diaspora (*Affinity, Diaspora, Identity, Reunification, Return: reimagining possibilities of engaging with place and time*, 2013).

In this context it is intriguing to note the almost complete lack of research on alternatives to democracy as currently conceived. This is exemplified by the slogan notoriously proclaimed by [Margaret Thatcher](#): *There Is No Alternative* (TINA). Is it possible that the collapse of the European Project will be recognized by the future as due to a pathetic "failure of imagination" -- as with the authoritative assessment of the intelligence failure which gave rise to 9/11?

The concern here is the extent to which this pattern is reinforced by 2-team ball games -- like football, rugby, basketball, and the like -- which are such a focus of popular attention, most notably through the media. Are there indeed no other approaches which might emerge from a minimal degree of investment in research on more complex forms of "democracy"?

Could such possibilities be explored with [computer simulations](#) -- given their ever increasing sophistication with respect to strategic pattern detection in game playing? Why do international organizations make no effort whatsoever to encourage such research?

In quest of alternatives to binary decision-making

Democratic obsolescence? There is of course some research on voting systems, [proportional voting](#), and the like. There are of course proposals for a variety of forms of community and [consensus decision making](#). It is however the case that these have not been effectively or systematically explored as alternatives to "democracy". The latter increasingly acquires the status of an unquestionable religious belief system -- one to which all right-thinking people are expected to subscribe as a bizarre surrogate for "Christianity".

In a period in which millions engage in online computer games of ever increasing complexity, democratic voting could be deemed to be of a level of simplicity which could well be characterized as obsolete -- and in urgent need of an ["upgrade"](#). This is curiously exemplified by the manner in which citizens are increasingly obliged to conduct their financial transactions via the internet -- denying issues of age, competence and connectivity.

There is however the strange irony that there is no implication that democratic voting could be enabled in this way -- especially in response to the levels of [absenteeism](#) (partly due to the inconvenience of transportation to a voting station and queuing). There is a curious contradiction between the supposedly greater reliability of a physical vote and that questioned with respect to internet financial transactions (on which people are personally dependent to a much higher degree). In the absence of internet voting, given the discouraging levels of rainfall on the occasion of the Brexit vote, could this be said to invalidate its democratic quality?

Recourse to artificial intelligence? Ironically it is increasingly recognized that the combination of computer gaming and [artificial intelligence](#) is engendering new insight with potential implications for governance ([Karen Schrier](#), *Knowledge Games: how playing games can solve problems, create insight, and make change*, 2016). A review of the latter notes their potential relevance to the solution of the intractable [wicked problems](#) of governance (Douglas Heaven, *Can video games really create new knowledge?* *New Scientist*, 25 May 2016).

Such examples suggest that artificial intelligence and [neural learning](#), benefitting from the records of online gaming strategies of millions, may enable discovery of unsuspected patterns of considerable significance to democratic governance -- in terms of their memorability, credibility, and despite their complexity (Michael A. Nielsen, *Neural Networks and Deep Learning*, Determination Press, 2015).

The predicted role of artificial intelligence in the immediate future therefore merits the greatest attention. Its neglect with respect to democracy is matched by its neglect in debate on the leading argument for the UK to leave the EU, namely job protection. Almost no mention was made of the threat to jobs from "home grown" robots (*Robots threaten 15m UK jobs, says Bank of England's chief*

economist, *The Guardian*, 12 November 2015).

Other applications of Brexit logic? How is it that society is so locked into "2-stroke" binary decision-making? As stressed by the President of the EU Commission, Jean-Claude Juncker, with respect to Brexit -- the UK is either "in" or "out", righteously echoing Margaret Thatcher. Is policy making curiously framed by the metaphor of a switch (*The Implicit 'Switch' Metaphor*, 1990)? Is this pattern of thinking adequate to the governance of complex societies?

Should desperate migrants be "in" or "out"? Should Turkey? The further irony to the pro-Brexit argument for independence from the EU is that many of the points apply equally well to cessation of membership of NATO, OECD, ILO, FAO, UNESCO, and other intergovernmental institutions whose decisions impose constraints on individual countries. Should these now be subject to referenda?

In the aspiration to be "great" again, governments could well seek to get "out" of painfully negotiated intergovernmental agreements (*Donald Trump would 'cancel' Paris climate deal*, *BBC News*, 27 May 2016; *Donald Trump vows to cancel Paris agreement and stop all payments to UN climate change fund*, *The Telegraph*, 27 May 2016).

The pattern is echoed with respect to many forms of disagreement, especially those engendering conflict. There is even a possibility that such a "democratic process" will be shortly used by NATO to decide on whether to engage in a war with Russia and its allies -- a democratically engendered World War III (Michel Chossudovsky, *Towards a World War III Scenario: the dangers of nuclear war*, *Global Research*, 31 March 2016; *US-NATO Aggression and the Risk of World War III: selected articles*, *Global Research*, 19 May 2016).

Beyond conventional game-playing?

Is there a way of reframing the focus of extreme attraction associated with 2-team games in which each seeks to defeat the other? How does the cognitive engagement in such games "work"?

Why has the pattern proven to be far more appealing and satisfying than the "peace games" variously promoted (*Games for Peace; The World Peace Game; Global Peace Games*)?

The current pattern of game-playing thereby frames the widespread recourse to conflict and war and their celebration in the media and online gaming -- with the binary emphasis on targetting? When any aspect of governance fails, the pattern is also exploited in the so-called **blame-game**, as separately explored (*Collective Mea Culpa? You Must be Joking ! Them is to blame, Not us !* 2015).

Competition vs Cooperation: There is a fundamental contrast between the high degree of **competition** cultivated in many 2-team ball games, as compared with the high degree of **cooperation** cultivated in multi-person juggling. It is of course the case that the governance of many countries is primarily inspired by the first, most obviously in 2-party systems of ruling (majority) party and opposition -- and the kind of competitive discourse characteristic of legislative assemblies. The unprecedented "invasion" of the US Senate (controlled by the Republican Party) by House Democrats offered a striking example immediately prior to the UK Brexit vote (*Democrats continue House sit-in demanding vote on gun control*, *The Guardian*, 23 June 2016).

Whilst the latter lend themselves to description in terms of factional game-playing, it would appear that they are far less "fit for purpose" than the times require. They could be understood as a continuing glorification of the pattern of **duelling** practiced over centuries, with the sole objective of fatally wounding the "other" -- if only symbolically and metaphorically. The practice of duelling was notably condemned by a Pope, as usefully described by Shaun McAfee (*This 1891 Encyclical on Dueling is Surprisingly Relevant Today*, *National Catholic Register*, 29 March 2016). The pattern if course extends to "eradication" (*Eradication as the Strategic Final Solution of the 21st Century?* 2014).

Beyond binary games? Curiously the card game of **contract bridge** (and its variants) is indicative of a strange combination of competition and cooperation, with four players in two competing partnerships, which could offer clues to exploration of 4-sided ball games.

It is therefore interesting to reflect speculatively on the possibility of 4-team ball games. Of equal interest, however, is exploration of the seeming total lack of incentive to their experimental development -- despite the multiplicity of forms of 2-team games (in terms of number of players per side). It would appear that **there is a very heavy commitment to the continued glorification of binary logic** embodied in **zero-sum games**, given the kind of "energy" and interest they engender.

There is frequent promotional allusion to "the spirit of the game" (Mihir Bose, *The Spirit of the Game: how sport made the modern world*, 2012). However such zero-sum games clearly reinforce a pattern of violence -- currently exemplified by the violence between supporters at Euro 2016. What indeed is the spirit of the game between Israelis and Palestinians, or between Sunni and Shiite?

More fundamentally, is there a contradiction between that spirit and the inequality engendered by any institutionalization of the quest for "champions"? If only some can aspire so explicitly to greatness, what of the rest so effectively remaindered (*Reintegration of a Remaindered World*, 2011)? How are such objects of systemic neglect to be "cognitively recycled"?

The question would appear to be neglected in the various books produced on the philosophical underpinnings of various ball games (Michael W. Austin, *Football and Philosophy*, 2009; Eric Bronson, *Baseball and Philosophy*, 2004; Jerry L. Walls, *Basketball and Philosophy*, 2008; Ted Richards, *Soccer and Philosophy*, 2010). The problematic implications for world governance may well be indicated by other books (Sal Paolantonio, *How Football Explains America*, 2008; Franklin Foer, *How Soccer Explains the World: an unlikely theory of globalization*, 2004).

Modelling games: Widely studied as **game theory**, this is the mathematical modelling of conflict and cooperation between intelligent rational decision-makers. It is notably of relevance to economics, political science, and psychology, as well as logic, computer science,

and biology -- and human behavioural relations in general.

There is some interest in many player, N-person games, especially in the case of multi-stakeholder games. The [Wikipedia list of games in game theory](#) specifically distinguishes the number of players (sides) in those "most commonly studied". Of the 33 games listed, 21 are indicated as 2-sided games. 11 are indicated as N-sided, and one is indicated as 3-sided. Curiously the latter is termed [true](#), namely a duel amongst 3 parties -- related to a [Mexican standoff](#).

In developing the argument here, it is vital to avoid premature closure on conventional categories, notably those inspired by binary logic. The challenges of democratic governance suggest a consideration of tripolar and multipolar frames, as notably articulated in terms of a [tetralemma](#) by Kinhide Mushakoji (*Global Issues and Interparadigmatic Dialogue: essays on multipolar politics*, 1988; *Scientific Revolution and Interparadigmatic Dialogues*, 1979).

The latter notes the contrast with the holistic insight of non-western scientific traditions, as articulated by Keiji Yamada (*Patterns, Recognition, and Creation: the intellectual climate of Chinese science*, 1975). Through this an effort has been made to grasp the network of meaning of the totality of the objective world -- not through a theoretical system but through a classification of the types of transformation of a few basic patterns into their variants. (A C Graham, *Yin-Yang and the Nature of Correlative Thinking*, The Institute of East Asian Philosophies, 1986).

On this basis. Mushakoji contrasts: "*A*", "*not-A*", "*A and not-A*", with "*neither A nor not-A*". This device may be used to suggest the need for more subtle approaches to the dilemma -- and notably with respect to governance. If "*A*" is the proposal of the governors (or the conductor/composer), "*not-A*" is too readily framed as a threatening alternative -- again recalling the much-challenged slogan of Margaret Thatcher: *There Is No Alternative* (TINA).

Within such a framework the binary referendum question of Brexit could have distinguished four possibilities: *Remain, Leave, Remain-And-Leave, Neither-Remain-Nor-Leave*. In practice the UK has had a long history of engaging with the European Project through the last two modalities.

Insights for democratic global governance from 4-team ball-games: 2-way football?

Simplicity, feasibility and comprehensibility: Missing from the theoretical abstractions above is the possibility of new games of an equally attractive nature. The issue is what kind of game would be both comprehensible and engaging as a focus for attention? What is "attraction"?

Despite the importance of attention to the advertising industry, why is the process of investing attention not explored more meaningfully, as can be variously suggested (*Investing Attention Essential to Viable Growth: radical self-reflexive reappropriation of financial skills and insights*, 2015; Alan F. Blackwell and T. R. G. Green, *Investment of Attention as an Analytic Approach to Cognitive Dimensions*, 1999)?

How might the scope of research on what makes game-playing absorbing be extended (Craig Reynolds, *Game Research and Technology*, 2004; Elise Olding, *Gamification: the serious side of games can make work more interesting*, Gartner, 2012; *What Makes a Video Game Addictive?*)? Why such a high preference for a daily media diet of violence, whether fatal or otherwise?

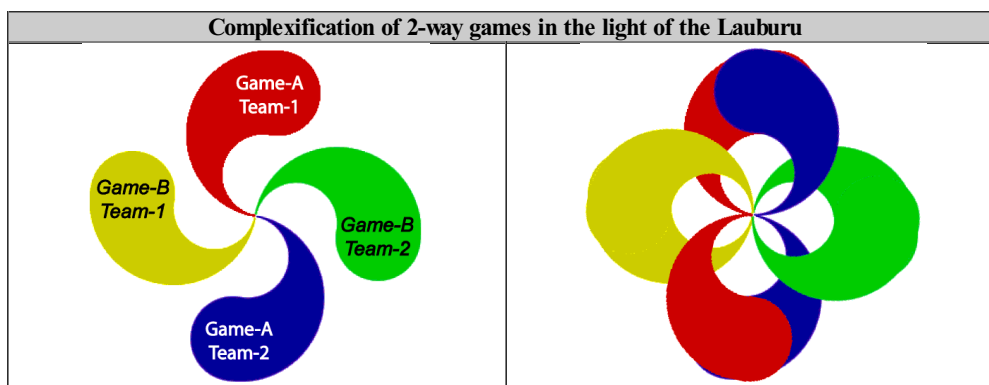
Could the current satisfaction of "victory" be understood as a strangely simplistic surrogate for the resolution of challengingly complex dynamics into unitary simplicity? Is this the emergence of an "eschatological" singularity, necessarily felt to be "right", even an exemplification of [manifest destiny](#)?

Is there any simple means of challenging the dependence on this mindset?

Four-sided football: As one example of a simple and "doable" initiative, possibilities for speculative consideration with respect to 4-team (2-way) ball games might include:

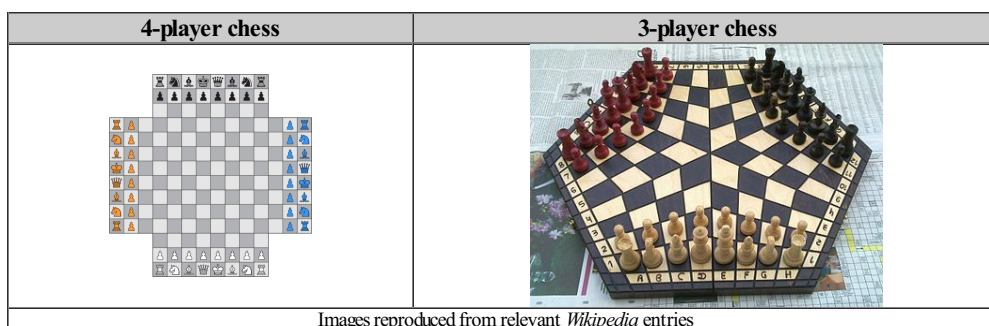
- rather than a single rectangular field defining two "sides" (defended by each team against the efforts of the other to score a goal), a second rectangular field is laid out at right angles to the first (over which a second 2-team plays in a similar manner). The two fields then form a cross, with the two 2-team sets playing "across" each other.
- to clarify the pattern of the game(s), the 4 teams need to wear distinctive colours, but with those in each 2-team game wearing colours enabling them to be distinguished
- two balls would then be used -- one for each game -- coloured distinctively. What might a 3-ball game be like?
- the question would then be what rules would govern how those playing in either of the 2-team games could engage with the ball of the other game, or should this be recognized as a fault?
- could the 2 games effectively "swap" balls under some conditions -- perhaps allowing goals scored with the "other" ball to be counted differently?
- should the ball of one game be allowed outside "its" field, or be declared [out of play](#)?
- could the rules allow the ball from one game to score a goal on the field of the other?
- are there modalities in which a team from one game can support or undermine the strategies of a team in the other game, or of that game as a whole?
- does the 2-way pattern allow for the possibility of contrasting games playing across each other? Perhaps, for example: a game of men across a game of women; a game of the highly skilled (adults?) across a game of the lesser skilled (adolescents? disabled?), or otherwise challenged (shorter? heavier?). This would help to address the *spirit of inequality* so systematically engendered and glorified through the victory of one team over another.

Curiously, and perhaps appropriately, the Basque [Lauburu](#) frames reflection on such possibilities, as well as on their complexification.



Chess as an example: Clearly the extensive development of online gaming (and virtual reality) would enable 2-way, 3-way and N-way games to be variously explored -- bypassing any resistance formulated in terms of physical layout and investment. The emergence of the [clan-guild system in online gaming](#) is already an indication of this -- potentially prefiguring transformation of global governance by younger generations.

A valuable indication of the viability of such a possibility is the existence of [four-player chess](#), and [three-player chess](#) (see [Chess variants: four-player chess](#)). Their rules could contribute to reflection on 4-team ball-games.



Images reproduced from relevant [Wikipedia](#) entries

Three-sided football: Although no effort has seemingly been made to experiment with four-team football, [three-sided football](#) (also known as 3SF or d3fc) has indeed been developed. This was done to articulate an understanding of [trialectics](#) (as a refinement of the concept of dialectics), and to disrupt everyday assumptions reinforced by conventional football (as argued above). The original initiative was associated with the philosophy of [Situationist Art](#).

The three teams play over a hexagonal pitch ([Geoff Andrews, *The Three Sided Football Revolution: football's new idea*, *Philosophy Football*, 9 June 2013](#); [Sachin Nakrani, *Three-sided football gives players something to think about*. *The Guardian*, 7 May 2013](#); [A game of three halves, *Philosophy Football*](#); see [video](#) and [video](#) and [d3fc blog](#)).

In an event called "Thinking Football", aiming to reflect on the role of football in modern society, the [Athletic de Bilbao Foundation](#) organized a three-sided football championship in 2011 with 37 participant teams. Other events are organized within the framework of the International Three Sided Football Federation (founded 2009), which hosted the first World Cup in 2014.

The degree of association with philosophy recalls the early enthusiasm for [Rithmomachy](#) -- a board game previously rivalling chess -- otherwise known as the Philosophers' Game.

Nature of the "ball" in game-playing and governance

The ball is clearly, and naturally, a primary focus of attention in ball games. Given the implication for intercourse of various kinds, there is obviously a need to identify some of the associations of "ball", as it may be understood metaphorically in common usage, especially as a much-valued symbol.

If the ball is understood as corresponding to the focal significance of democratic discourse -- **the point in play** -- its potentially complex nature merits the most careful attention with respect to its relevance to communication. Of even greater complexity is the situation when there are **several points in play** -- perhaps many, as indicated by the agendas of international gatherings. This is exemplified by the set of 17 UN [Sustainable Development Goals](#).

The ball as a whole, as with the point of a discourse, may then call for recognition as a potentially elusive configuration or nexus of points. The points identified on an agenda may then imply an elusive larger point -- with the ball as a whole then to be understood as a kind of "meta-point". European discussion of the Brexit option has been framed as "existential", for example, suggesting some faint recognition of a "European spirit" -- whose integrative nature could be associated with a ball.

Metaphor: Well-known examples are of relevance to discourse. However in discourse, considerable focus is placed on the "point" being made, whether singly or understood as "bullet points" in Powerpoint presentations. As metaphors, the two may be juxtaposed.

"Ball"	"Point"
<ul style="list-style-type: none"> • the "ball in the court" of the other • "catching the ball" • "running with the ball" • "dropping the ball" • "controlling the ball" • "ball in play" and "ball out of play" • getting the ball "into the goal" 	<ul style="list-style-type: none"> • "making a point" • "clarifying a point" • "sticking to the point" • "missing the point" • "understanding the point" • "scoring a point" • "taking my point"

As in juggling, ball passing patterns are indeed of great significance in games like football and basketball (Marcus DiBernardo, *Professional Soccer Passing Patterns* and *Cognitive Soccer Passing Patterns*, YouTube, 2014; Don Herlan, *Passing Patterns*). Skills in this respect are admired as exemplifying the much-valued aesthetics of the game.

It is strange how little attempt is made to detect and represent such patterns to enhance real-time debate, especially in legislative assemblies. The Brexit debate offered shameful examples of this inadequacy -- which suggest the value of reviewing the passing patterns during that democratic game.

Symbolism: Recognized as a sphere, the ball offers further associations of significance to:

- the sun, as a central focal symbol for many cultures. As noted by *Wikipedia*, [solar symbols](#) can have significance in psychoanalysis, semiotics, astrology, religion, mythology, mysticism, divination, heraldry, and vexillology, among other fields.
- the integrity implied by global, globalization and globality -- in contrast to a "flat earth" understanding -- and inviting provocative exploration (*Globallooning -- Strategic Inflation of Expectations and Inconsequential Drift: Global, Glo-Bull, Glow-Ball, Glow-Bawl*, 2009).
- mirroring psychological integrity (*Psychosocial Implication of Without Within: enjoying going solar for oneself*, 2013)

Mathematics: In mathematics, especially geometry and topology, the sphere is a focus of considerable study in relation to other forms into which it may be variously transformed -- must notably a torus (as indicated below).

Notably in the light of metaphorical use of "point" and "line" in dialogue, other implications are explored separately (*Metaphorical Geometry in Quest of Globality -- in response to global governance challenges*, 2009).

Biological reproduction and its metaphors: In biology, and the reproductive symbolism explored by psychoanalysis, the ball is ambiguously associated with both:

- the semen disseminated by the male from the testicles -- with their connotations of strength (*cojones*)
- the ovum born by the female, namely the target for delivery of the semen

It is of course the case that engagement with ball games draws to a surprising degree on sexual metaphors, most evidently with respect to "scoring" (Edwin Decker, *Football is the Standard for Vicarious Sexual Metaphors*, *City Beat*). Curiously foreplay and intercourse are commonly framed by metaphors from ball games (Magonya Lilian and Pamela Oloo, *What Gets Mapped onto What in the Sex is a Football Game Metaphor in Kenyan HIV/AIDS Campaign Posters? Linguistics and Literature Studies*, 2015; *Sports Metaphors to Explain Dating and Sex; Sex According to Football*).

Seldom acknowledged are the subtle mysteries of engagement with any "hole" or "orifice", as with a football goal or a basketball hoop (attached to a [backboard](#)). Exemplified by such holes, the case for recognizing what is missing, as being vital to transformation, is argued by neuroanthropologist Terrence Deacon (*Incomplete Nature: how mind emerged from matter*, 2011; *Symbolic Species*, 1997).

The very nature of the mysterious fascination of a "hole" (as in any argument) can be fruitfully challenged, as remarkably discussed by Roberto Casati and Achille C. Varzi (*Holes and Other Superficialities*, 1994). Their argument with respect to the borderlines of metaphysics, everyday geometry, and the theory of perception is summarized in the entry on [holes](#) in the *Stanford Encyclopedia of Philosophy*. Deacon explores the paradoxical incompleteness of semiotic and teleological phenomena in terms of information to demonstrate how specific absences (or constraints) play the critical causal role in the organization of physical processes that generates these properties.

In any discussion of the most fundamental values, it may then be provocatively asked what role "holes" might necessarily play in authoritative declarations (*Is the World View of a Holy Father Necessarily Full of Holes?* 2014).

Cognitive implications of colosseums, stadiums and amphitheatres: It is of course the case that widespread appreciation of ball games is associated with their being held in [stadiums](#) of every kind. The complex subtleties are evident in the controversy regarding a recent design (*Yes, Qatar's monster stadium looks a bit like a vagina*, *The Huffington Post*, 24 November 2013; *Qatar's accidental vagina stadium is most gratifying*, *The Guardian*, 27 November 2013; *Zaha Hadid dismisses "ridiculous" claims that Qatar stadium resembles a vagina*, *De Zeen*, 24 November 2013).

Those constructed today would be readily comprehensible to the citizens of the Roman Empire which built [amphitheatres](#) as a means of extending its influence. This raises the question as to whether the games therein are a simple reflection of that pattern -- which modern civilization would otherwise vigorously claim to have long superseded.

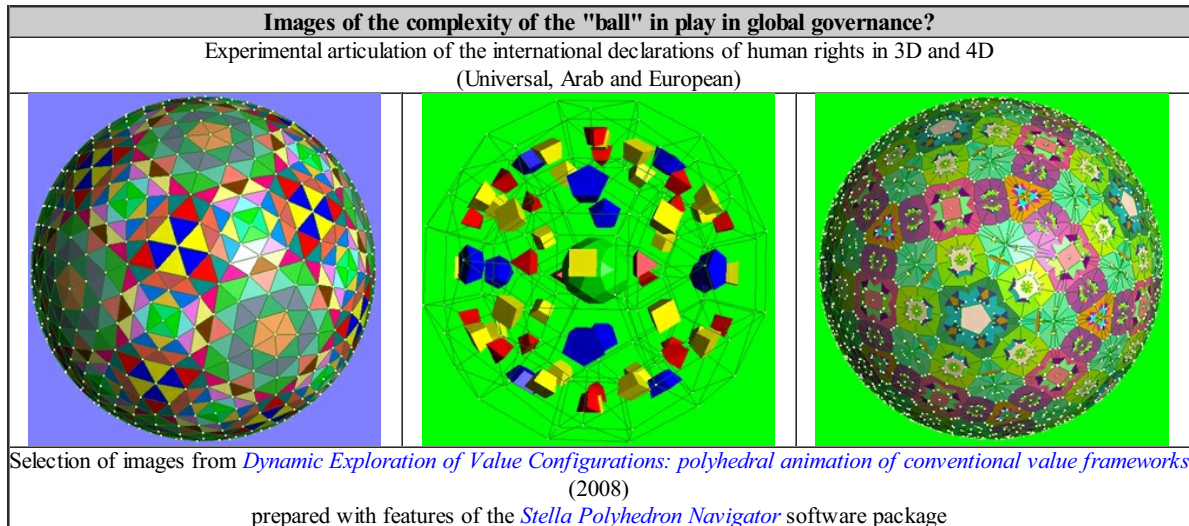
The cognitive role of theatres as mnemonic aids has been argued with respect to "memory theatres" by Frances Yates (*The Art of Memory*, 1966; *Theatre of the World*, 1969). It is appropriate to recognize that amphitheatres, and the games played in them, are a larger instance of that function. An understanding of the mnemonic function of theatres has been the focus of a recent exploration by Simon Critchley (*Memory Theater*, 2015). The function may be explored more generally -- and otherwise (*The-O ring: Theory, Theorem, Theology, Theosophy? a playful intercultural quest for fruitful complementarity*, 2014).

What cognitive functions are being reinforced by conventional ball games in amphitheatres -- repressing or conflating functions which might otherwise be of relevance to remedial global governance?

Competition and collaboration in memetic exchange

The question is how the contrasting connotations of "balls" and "points" relate to the exchange of [memes](#) in the more elegant and memorable forms of discourse. The conventional approach seemingly understands the ball so exchanged as undifferentiated and inherently precious -- if necessarily elusive.

Complex nexus of associations: Another approach is to imagine the ball as multifaceted, or composed of a multiplicity of balls held together by a web of integrative associations. This could be recognized as a memetic complex (by analogy with a complex of genes) -- perhaps to be understood as a gestalt in either case. Focus on any part of the complex then triggers resonant effects on the others -- as suggested by music and poetry, and in the case of a bell. The planet Earth has such characteristics.



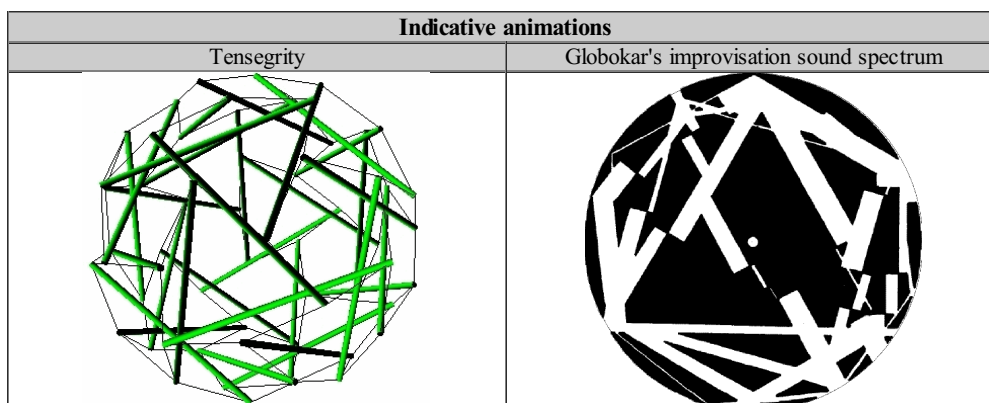
The conventionally deprecated role of poetry merits particular attention with respect to complexity, as articulated by [Gregory Bateson](#), in explaining why "we are our own metaphor" to a conference on the effects of conscious purpose on human adaptation:

One reason why poetry is important for finding out about the world is because in poetry a set of relationships get mapped onto a level of diversity in us that we don't ordinarily have access to. We bring it out in poetry. We can give to each other in poetry the access to a set of relationships in the other person and in the world that we're not usually conscious of in ourselves. So we need poetry as knowledge about the world and about ourselves, because of this mapping from complexity to complexity. ([Mary Catherine Bateson](#), *Our Own Metaphor*, 1972, pp. 288-289)

Bateson is thus pointing to the advantages of poetry in providing access to a level of complexity in people of which they are not normally aware.

Tensegrity: Given the example of juggling, of particular interest is how a multiplicity of points are juggled together in a dynamic process, rather than vainly striving to hold them in a static configuration. This has been extensively studied as "[problem jostling](#)" by management cybernetician [Stafford Beer](#), who mapped distinct problems onto an icosahedron (*Beyond Dispute: the invention of team synergy*, 1994). Beer related the pattern of tension and compression to that of a [tensegrity](#) structure, as shown below.

The ball is then to be understood as a dynamic complex reminiscent of the many atoms distinguished by the relative complexity of their orbiting electrons. A tensegrity offers a way of thinking about a cognitive complex of resonant associations. The dynamics are reminiscent of the spherical representation of an improvisation soundscape by [Vinko Globokar](#) (*Individuum-Collectivum*, 1986, p. 9c), adapted below as an indicative animation.



Why an icosahedral football? There is a curious contrast between any such complexity, eluding simplistic comprehension, and the ball which figures so unambiguously in ball games. Part of the irony (as noted in the *Wikipedia* entry) lies in the fact that the stitching pattern on the soccer football has long been that of the [truncated icosahedron](#) -- one of the 13 [Archimedean semi-regular polyhedra](#).

That so much attention should be focused worldwide on the movement of such a form amongst groups of people may well invite particular commentary in the future. As a close approximation to a sphere, the interweaving of its 12 pentagonal faces and 20 hexagonal faces merits particular attention as an integrative pattern of a multiplicity of perspectives, as may be variously discussed (***)

What is it that people are so fascinated to throw around -- and why? How is movement of the ball effectively mirroring movement along neural pathways of the individual and collective unconscious? Is the explicit nature of a ball game a surrogate for the poetry made by people "without being aware of it" -- adapting the much-cited insight of Moliere's *Bourgeois gentilhomme*?

Cognitive dimensions of governance: 2, 3, 4, 5, 6, 7, 8?

Locked as it is into binary decision-making, it is understandable that no authoritatively reasonable exploration can be made of the range of cognitive patterns that may be of relevance to global governance. They are simply held to be irrelevant -- despite the unexpected threats and surprises "emerging" from any such neglected dimensions, as addressed by [Nassim Nicholas Taleb](#) (*The Black Swan: the impact of the highly improbable*, 2007). As with natural disasters and popular demonstrations, Brexit is proving to be just such a surprise.

What function does "disappointment" play in the [resilience](#) required of an [adaptive cycle](#) of governance, in the light of the arguments of [Thomas Homer-Dixon](#) (*The Upside of Down: catastrophe, creativity, and the renewal of civilization*, 2006)? How does the European Project embody fruitfully the disappointment of Brexit -- rather than responding so chillsly?

Cognitive engines and gear boxes? Technology has been able to develop beyond the [2-stroke engine](#) -- without disregarding its role under particular circumstances. Is it possible to consider more complex "engines" for the democratic process? What insights might be inspired by development of [four-stroke engines](#), [six-stroke engines](#), or even an [eight-stroke engine](#) (cf *How does an 8-stroke IC engine work?* [Quora](#))?

What is the nature of the "gearbox" which would enable transition between 3-fold, 4-fold, and N-fold modalities? The complexities of the associated [transmission mechanics](#) can be contrasted with simplistic assumptions regarding the communication "transmission" between governors and governed.

The common constraint on team size could be understood as framing the viable number of gears as might be associated with 5- to 9-sided games ([George Miller](#), *The Magical Number Seven, Plus or Minus Two: some limits on our capacity for processing information*, *Psychological Review*, 1956). Of course, heavy duty trucks may use a much larger range of gears. Is that a relevant indication for governance dealing with weighty issues, rendered intractable by endeavouring to use a 2-stroke engine?

Gears and dimensions? The practice of 3-sided football, and the possibility of 4-sided ball games, suggest opportunities -- as with their equivalents in chess. But how to approach any understanding of "dimensions", since they give rise to "sides", opposing teams ("us and them"), and sets of stakeholders?

A danger lies in answering such a question too definitively, leading to forms of premature closure (reinforcing cognitive bias) which necessarily evokes a potentially disruptive corrective challenge. It is that dynamic which is presumably to be incorporated into the conception of a comprehensible "cognitive gearbox" -- one defying simplistic closure.

Conceptual surrogates? Portions of the above argument were developed for a presentation on [Improvisation in Multivocal Poetic Discourse](#) (2016). The "dimensions" of that articulation can be deconstructed experimentally -- "re-recognized" as surrogates for an understanding of the requisite dimensionality of governance eluding simplistic dimension, namely indicative of the "essence" of governance. The point is well argued by [Arthur Young](#) (*The Geometry of Meaning*, 1976).

Emphasis is then usefully to be placed on the neglected extremes of:

- "multivocal" as the challenge to univocal, and the quest for harmony that many voices necessary implies -- and the unusual forms this may require. This extreme is readily deprecated as populism when it can be recognized as understood as the diversity of voices in a plural society
- "improvisation" as the challenge to predetermined forms of order which are increasingly recognized as alienating and lacking the authenticity of spontaneous response in the moment
- "poetic" as the recognition of the coherence succinctly framed by aesthetic resonances between a variety of otherwise disparate issues, as argued separately (*Poetry-making and Policy-making: arranging a Marriage between Beauty and the Beast*, 1993)
- "discourse" as the challenge of higher orders of engagement in new forms of dialogue appropriate to requisite comprehension of governance understood in global terms

Terms disguising fundamental dimensions of governance			
		problematic	fruitful
"expression"	univocal (unidirectional, monologue)	alienating, boring, simplistic	clarity, "speaking with one voice"
	multilogue (multidirectional, " <i>multivocal</i> "?)	confusing, cacophony	diversity, "hundred flowers blooming"
"structured process"	prescribed (planned)	authoritative, directive	predictable certified
	spontaneous (popular, emergent, " <i>improvisation</i> "?)	disorderly	unpredictable uncertified

"integration"	unified order	arid, illusory incomplete	comprehensibility
	aesthetic (" <i>poetic</i> "?)	elusive	rich, succinct, memorable, harmony
"involvement"	disaffection, detachment	alienation, forgettability	indifference
	attraction, attachment (" <i>discourse</i> "?)	over-identification obsession	engagement, comprehensibility, memorability

There are of course many such inherently **static patterns** of categories (*Systems of Categories Distinguishing Cultural Biases*, 1993). These somehow contrast fundamentally with the attractive **experiential dynamics** of cognitive engagement in ball games and their embodiment (George Lakoff and Mark Johnson, *Philosophy in the Flesh: the embodied mind and its challenge to Western Thought*, 1999).

Through his detection of **7 axis of bias**, one such pattern is offered by W. T. Jones (*The Romantic Syndrome: toward a new method in cultural anthropology and the history of ideas*, 1961). The "dimension" of dynamic cognitive engagement merits consideration in the light of other recent arguments (Maxine Sheets-Johnstone, *The Primacy of Movement*, 2011; Mark Johnson, *The Meaning of the Body: aesthetics of human understanding*, 2007).

In contrast to the practice of juggling, it is unclear how readily the preoccupations of game theory extend meaningfully to 4-sided, 5-sided, 7-sided or 12-sided "games". Curiously the widely publicized process highlighted by Edward de Bono could be understood as indicative of the fundamental importance of a 6-sided game, for example (*Six Thinking Hats*, 1985; *Six Action Shoes*, 1991; *Six Frames For Thinking About Information*, 2008).

More intriguing is whether a 12-person jury, or the classical round table of the wise, could be understood as a 12-sided game of stakeholders, and how this might be relevant to richer understandings of governance (*Implication of the 12 Knights in any Strategic Round Table*, 2014). It is appropriate to note that these considerations are evident in some card games (*Card Games for Twelve Players*).

Use of artificial intelligence in game exploration: Given the increasing importance of online gaming and artificial intelligence, and their potential implications for governance, the exploration of N-sided games in a multipolar world merits careful attention. A valuable summary is offered by Miklos N. Szilagyi (*Investigation of N -Person Games by Agent-Based Modeling*, *Complex Systems*, 21, 2012).

Curiously echoing the analysis of Jones (1961), given the interpersonal dynamics in game-playing, Szilagyi notably offers an unusual summary of the possible personality characteristics of the players, understood as some combination of the following patterns (or styles of play):

adventurous (antisocial)	dramatic (histrionic)
self-confident (narcissistic)	vigilant (paranoid)
aggressive (sadistic)	idiosyncratic (schizotypal)
self-sacrificing (self-defeating)	exuberant (cyclothymiac)
conscientious (obsessive-compulsive)	leisurely (passive-aggressive)
sensitive (avoidant)	serious (depressive)
devoted (dependent)	mercurial (borderline)
solitary (schizoid)	inventive (compensatory narcissistic)

Clearly the **dynamics** represented by such polarizing dilemmas are not about to be magically resolved by articulation of any new **static** pattern. The many variants of such patterns of extremes can be expanded and collapsed in ways which recall the case for a conceptual gearbox through which gears can be changed.

The healthy possibility is the continuing exploration of more comprehensive mappings -- necessarily constrained by requisite succinctness, but precluding unfruitful premature closure. The progressive articulation of the challenge may prove to be more significant in practice than any particular outcome, as separately discussed (*Paradoxes of Engaging with the Ultimate in any Guise: living life penultimately*, 2012; *Engaging with Insight of a Higher Order: reconciling complexity and simplicity through memorable metaphor*, 2014). Such articulations necessarily reflect particular cognitive biases.

Succinct mapping of multidimensional psychosocial dynamics?

Beyond the plane: Binary logic implies that there are only two sides to any argument -- as with Brexit and as variously criticised by Edward de Bono (*I Am Right, You Are Wrong*, 1991; *Po: Beyond Yes and No*, 1973). The mindset is consistent with an obsolete "flat earth" mentality with its problematically mysterious underside (Thomas Friedman, *The World Is Flat*, 2005; *Hot, Flat, and Crowded: Why We Need a Green Revolution*, 2008). Arguably this is a case for exploring other geometries and topologies of which the cube is the simplest and most readily comprehensible.

As an example of the kind of exercise which is required with respect to any new comprehension of governance. it is possible to transform into 4 axes the 4 binary dilemmas (above): **univocal/multivocal, prescribed/improvised, unpoetic/poetic, alienation/involvement**.

These could be represented as the four diagonal axes of one of the simplest geometrical forms, namely the cube. In a period in which governance is traumatised by extremism, the polar extremes of each axis can then be associated with the 8 vertices of that cube. This representation is also useful in allowing two other patterns to be associated with it:

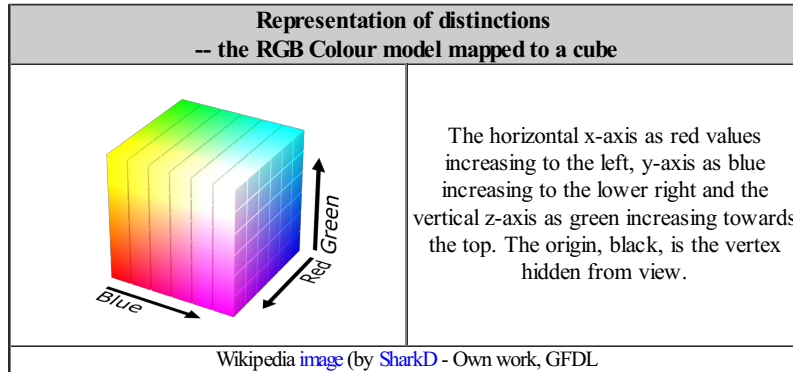
- the 6-fold articulation of Edward de Bono, most generally framed by his *Six Frames For Thinking About Information* (2008). Each frame can be associated with one of the 6 sides of the cube

- the 8-fold articulation fundamental to Chinese culture and philosophy in the form of the *BaGua*. Expressed in the form of 8 trigrams, each can be associated with one of the 8 vertices of the cube.

For western cultures, it is important to recognize that **the *BaGua* pattern has long been considered fundamental to encoding decision-making conditions of relevance to governance in any form**, as discussed separately through its function with respect to the dynamics implied by the *I Ching* (*Transformation Metaphors -- derived experimentally from the Chinese Book of Changes (I Ching) for sustainable dialogue, vision, conferencing, policy, network, community and lifestyle*, 1997).

The challenge with any such adaptation is that of **rendering meaningful (and engaging) a static pattern in which dynamics are only implied** -- however much the encoding may endeavour to suggest the existential challenge of decision-making. Hence the value of considering the polarizing axes and "sides" of the cube from the perspective of the dynamics of games -- **beyond those of simple binary form**, whilst necessarily encompassing them.

Colour coding differences: Of especial relevance is the manner in which the extremes are denoted, as with the colours so typically associated with opposing factions and teams. Use can therefore be made of the standard colour coding of the so-called **RGB colour model**. These can be mapped onto a cube.



Of relevance to this argument is the manner in which the 8 extremes are encoded, most notably in the **colours for virtual reality** presentations. The 3-element code can be used to relate the colours to the trigram encoding of the *BaGua* pattern -- using only the 8 colours denoted by 3-fold combinations of 1 and/or 0.

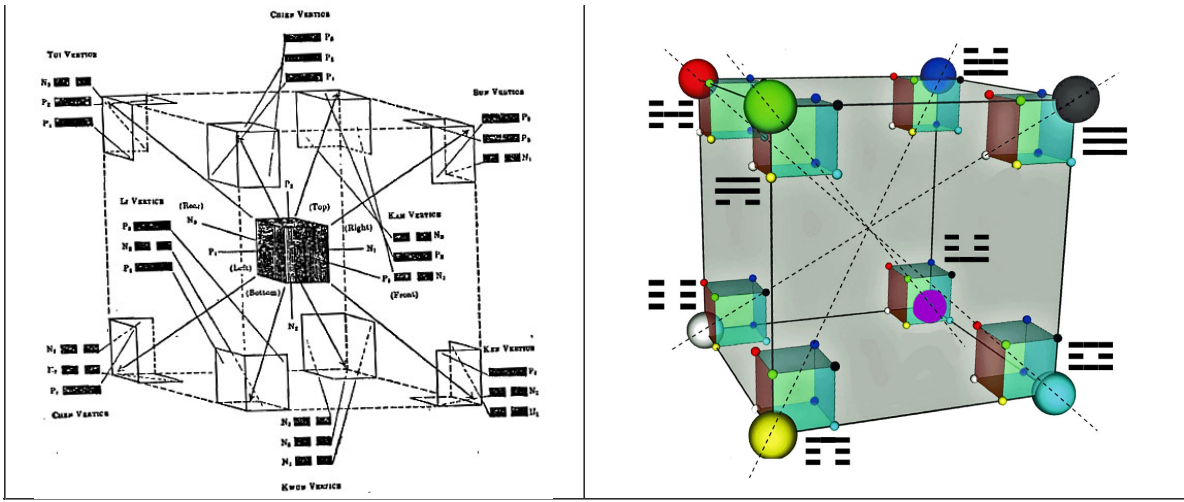
Inherent ambiguity: However, as indicated by the table below, the effort to do so highlights a fundamental ambiguity regarding the direction in which any encoding is "read" in translating from one encoding to another. Typically this difficulty is bypassed by making an assumption as to the required direction of reading. As in cultures favouring distinct approaches, the bias implied by any such assumption calls for particular attention (*Unquestioned Bias in Governance from Direction of Reading? Political implications of reading from left-to-right, right-to-left, or top-down*, 2016). Given the current challenge of populism, this included reference to the necessity of also reading situations from "bottom-up".

RGB codes (VRML convention; read left-to-right)		Read top-down		Read bottom-up	
		1=unbroken 0=broken	1=broken 0=unbroken	1=unbroken 0=broken	1=broken 0=unbroken
white	1-1-1				
black	0-0-0				
yellow	1-1-0				
red	1-0-0				
blue	0-0-1				
fuchsia (magenta)	1-0-1				
acqua (cyan)	0-1-1				
lime	0-1-0				

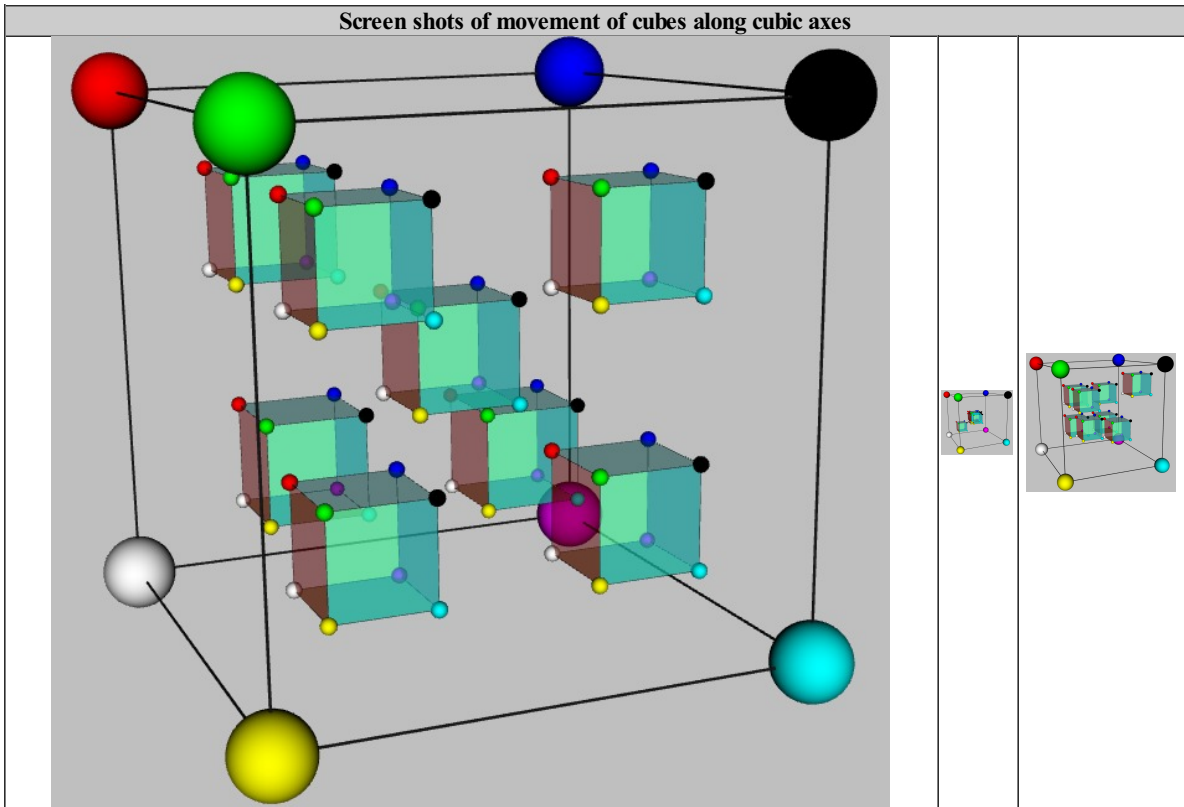
It could indeed be said that "ambiguity is the message" in the confusing cognitive response to complexity. This can then be fruitfully associated with the application of the Chinese encoding to the RGB pattern as suggested below (right). Note the complementarity of the trigram encodings at each axial extreme.

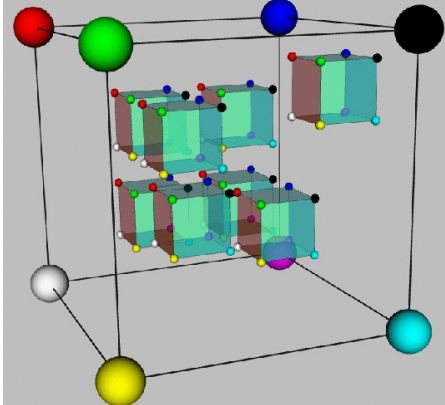
Cubic representation: Clearly further thought can be given to the combination of colour attribution and encoding -- however this may be related to Chinese tradition (or western reflection, as by LiSe Heyboer, *Color and the Trigrams*). Extensive commentary on the cubic configuration (left below) is provided in the study by Z. D. Sung (*Symbols of Yi King -- or symbols of the Chinese logic of changes*, 1934) as noted in that of Pieng-Lam Kho (*YiJing (I-Ching) Matrices*, 2004).

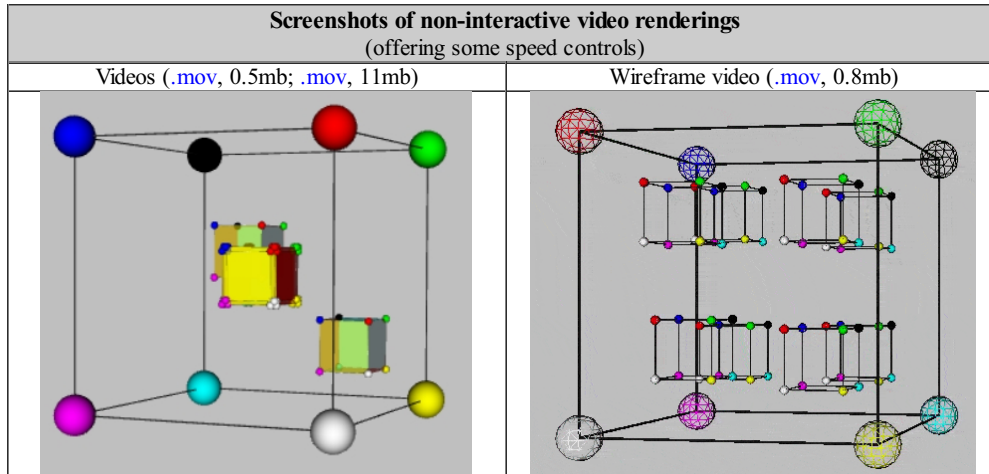
Cubical representation of <i>BaGua</i> pattern (reproduced from Z. D. Sung, 1934, p. 12)	Cubic configuration of 4 axes of 8 complementary extremes
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The smaller cubes at each corner of the larger pattern (on the right) echo the colour coding pattern of the larger. The **static representation** can be more meaningfully comprehended through rendering more explicit the **game dynamics** it implies. In effect the **cubes from each corner engage with each other along their common axis**. As a whole, this recalls the argument above for 4-sided (2-way) ball games. Here this is extended to an 8-sided (4-way) pattern as indicated in the screen shots below (from the animation which follows, and in which the axes have been hidden).



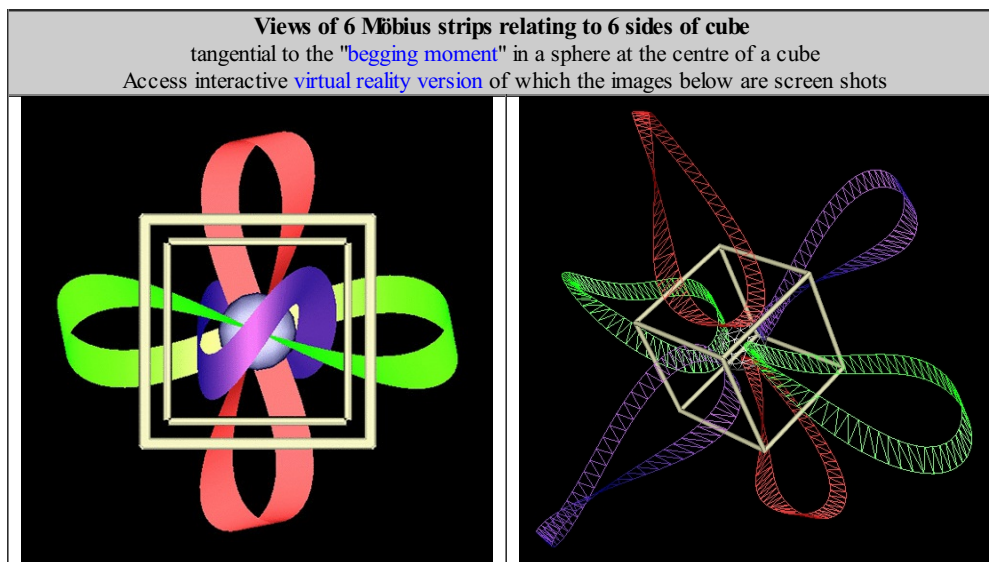
Indicative use of screen shots (in a "spastic" animation)	Interactive virtual reality variants in 3D
	<p>With the aid of appropriate browser plugins and viewers, greater insight can be gained from interactive representation of the ("non-spastic") dynamics in virtual reality (VRML/WRL variant; X3D variant). There is a variety of free 3D viewers, each with advantages and constraints (notably Cortona for VRML and H3DViewer for X3D). Options typically permit changing to/from wireframe presentation.</p> <p>The images above, and the animations, are a reflection of very modest capacity with the relevant software (X3D Edit). This necessitated avoidance of other features which could ensure a more meaningful and aesthetically attractive presentation of the dynamics. The source file can be downloaded for improvement.</p>
<p>Additional interactive design features which could be readily explored include: change of (relative) rates of movement, change of colours/transparency during movement, change of size according to location on axis,</p>	



Of particular interest, to the extent that each smaller cube "carries" one of the 8 distinctions of relevance to governance, is the implication of their conjunction at the centre of the larger cube as a phase in the cycle of movements. This is indicative of the elusive condition of reconciliation between *univocal/multivocal*, *prescribed/improvised*, *unpoetic/poetic*, and *alienation/involvement*. Fortuitously in the current design, the lighting in the variant on the left is enhanced during this confluence.

Embodying paradox using Möbius strips: Other experiments of relevance to the argument here are presented separately (*Psychosocial Implication in Polyhedral Animations in 3D: patterns of change suggested by nesting, packing, and transforming symmetrical polyhedra*, 2015; *Confusion in Exchanging "Something" for "Nothing": cognitive implication in the asymmetrical processes of begging and its surrogates*, 2015). The first highlights the implications of embedding a cube in a **drilled truncated cube** -- relatively unique, given its 64 edges. The second is of potential relevance to the above-mentioned complementary focus of Edward de Bono on 6 "frames" -- usefully represented as sides of a cube, as shown below.

There is clearly a sense in which the cognitive significance of each of the 8 vertices is defined by its 3 neighbouring sides, just as the significance of each side is defined by its 4 neighbouring vertices.



The elusive central condition, to which sustainable governance may be said to aspire, is indicated here by a sphere to which the Möbius strips are appropriately tangential. The processes associated with the "cognitive twist" in such loops can also be explored in terms of [enantiodromia](#), namely the dynamic through which any extreme transforms into its polar opposite.

Insights from the paradoxes of quantum mechanics: "quantum football"?

Information technologists are currently exploring the potential of [quantum computing](#). Quantum computers are different from conventional binary digital computers. Whereas such digital computing requires that the data are encoded into binary digits (**bits**), each of which is always in one of two definite states (0 or 1), quantum computation uses quantum bits (**qubits**), which can imply the superpositions of states.

Quantum decision-making: To the extent that conventional democratic decision-making can be usefully compared with the binary operation of conventional computers, there is a case for recognizing the possibility that the insights into quantum computing offer indications to a mode of decision-making potentially more fruitful for global governance. Although many national governments and

military agencies are already funding quantum computing research in an effort to develop quantum computers for civilian, business, trade, environmental and national security purposes, it remains unclear whether the relevance of such research for decision-making has as yet been recognized.

Given the important insights into "superposition of states", especially interesting is the possibility that some analogue could prove relevant to intractable territorial issues, most obviously with respect to Israel/Palestine, China/Taiwan, and the disputed islands of the China sea. At best discussions appear to be limited to 2-state solutions without consideration of the more subtle possibilities suggested by the thinking associated with quantum mechanics regarding [superposition](#) and [entanglement](#). Such thinking is of some relevance to the challenge of Brexit to the European Project, and to independence initiatives such as that of Scotland.

Quantum psychology: As noted by *The Economist*, it has long been recognized that human reasoning is not necessarily "rational" (*Quantum Psychology: equal and opposite*, 8 July 2014). Psychologists are now exploring the possibility that it follows the more convoluted laws of [quantum probability](#) rather than classical probability. An extensive literature has emerged (J. Busemeyer and P. Bruza, *Quantum Models of Cognition and Decision*, 2012; Diederick Aerts, *Quantum structure in cognition*, *Journal of Mathematical Psychology*, 53, 2009; Diederick Aerts, *Interpreting quantum particles as conceptual entities*, *International Journal of Theoretical Physics*, 49, 2010). Although the relevance to international relations remains to be highlighted, the implications for the social sciences in general are actively explored (Emmanuel Haven and Andrei Khrennikov, *Quantum Social Science*, 2013).

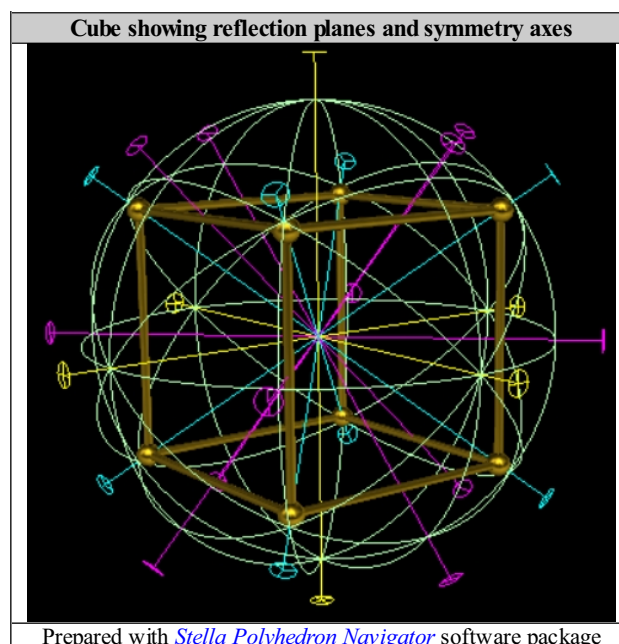
Experiments have now been conducted to collect evidence for "[quantum cognition](#)", as reported by Zheng Wang, et al. (*Context effects produced by question orders reveal quantum nature of human judgments*, 2014) :

Understanding human reasoning under uncertainty is fundamental for improving decisions about environmental policies, economic planning, public health, and many other important areas. Fifty years of behavioral decision-making research has established that humans do not always follow the "rational" rules of Bayesian probability theory. Recently, a group of psychologists and physicists have formulated new rules for human reasoning under uncertainty based on quantum probability theory

Although the focus of design of new computers, qubits are necessarily obscure from a binary perspective. This is even more the case with respect to [qutrits](#) -- a unit of quantum information that exists as a superposition of three orthogonal quantum states. Mnemonically there is some irony to the derivation of the qubit from cubit as an ancient unit of measure. The irony extends however to the possibility of exploring 3-state superposition in terms of a cube, as highlighted here.

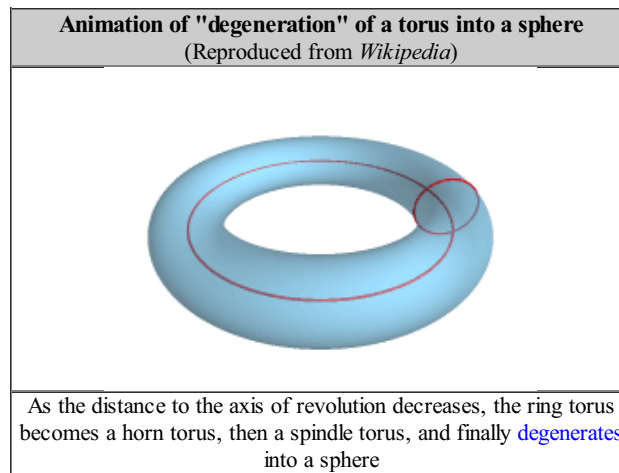
Quantum governance? The world is variously recognized to be confronted by chaos by which conventional governance is much challenged. Brexit has enhanced this recognition (Thomas I. Palley, *Brexit: The Day We Entered the Maelstrom*, *The Globalist*, 28 June 2016). Confronted by analogous complexity, physics has long had recourse to unusual modes of thinking, exemplified by the quantum worldview. Arguably the implications of superposition and entanglement should now be inspiring ways of transcending the constraints of binary modalities.

In the quest for the nature of global governance, it can indeed be indicated as the dynamically elusive centre of such a cube -- a Holy Grail (*In Quest of Sustainability as Holy Grail of Global Governance*, 2011). The "global" condition can however also be indicated by the circumsphere of a cube -- passing through the 8 extremes (as indicated below). Intriguingly, this can be related to that of the [Bloch sphere](#) as a geometrical representation of the pure state space of a two-level quantum mechanical system (qubit) or to a three-level system (K. Sandeep, et al. *Geometry of the generalized Bloch sphere for qutrit*, 2011)



Topological transformation of "globality": The sense of globality is readily assumed to be associated with a sphere. However the subtlety required for future "global" governance may call for recognition of its complex relationship to a torus, as indicated by the

following.



The current importance of the toroidal form is evident with respect to the prospects of generating energy at the *International Thermonuclear Experimental Reactor* (ITER) in France. This suggests the merit of attention to a potential psychosocial equivalent, as argued separately (*Enactivating a Cognitive Fusion Reactor: Imaginal Transformation of Energy Resourcing (ITER-8)*, 2006). How indeed is "cognitive fusion" be understood?

Quantum football? The cross-wise "superposition" of a second ball-game field, allowing an "alternative" game, would readily **enable many to experiment in practice with some implications of quantum superposition and entanglement -- with "quantum football" !?**

For those familiar with layers in Photoshop, overlaying one game on another (suitably rotated with choice of opacity) would suggest other perspectives of interest. The increasing accessibility of viewers enabling [immersion in virtual reality](#) would enable other such experiments, as indicated by [alternative reality games](#). The binary decision-making of conventional governance is as yet far from enabling the modes of thinking with which younger generations are either already familiar or find naturally engaging.

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