Comparable Dynamics of Point, Bullet, Ball and Globe

Cognitive significance of systemic similarities conventionally obscured

Introduction

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Introduction

The following speculative exploration is in the spirit of the framing of general systems research as originally articulated by Ludwig von Bertalanffy, Kenneth Boulding, W. Ross Ashby and Charles A. McClelland. Such research was notably intrigued by the potential comparability of systems at different scales of order.

In that light the question here is whether the cognitive engagements with a point, a bullet, a ball and the globe have unexplored similarities. These may indeed be limited in many respects, but each may well function as a surrogate for the others in some contexts -- which then merit clarification. Any parallels may well be a consequence of borrowing the language of one to frame the dynamics relating to another. This is evident in the interplay between ball-game metaphors and military discourse, or in strategic discourse with regard to the globe.

Each may offer an unexpected degree of vicarious experience of the other. Similarities may also follow from recognition of the nature of a holon, namely something that is simultaneously a whole in and of itself, as well as a part of a larger whole -- a greater unity.

Boulding himself later argued:

> Our consciousness of the unity of the self in the middle of a vast complexity of images or material structures is at least a suitable metaphor for the unity of a group, organization, department, discipline, or science. If personification is only a metaphor, let us not despise metaphors -- we might be one ourselves. (Ecodynamics; a new theory of societal evolution, 1978, p. 345)

Point: In the case of a point, for example, a point is typically made in discourse and text -- even as a series of points. Those made may be recognized as relatively strong or weak. A point can be elaborated or summarized. In that context one can "get" the point made by another -- as a process of understanding. One can agree with the point made by another; a point can however be disputed, denied or resisted -- or held to be incomprehensible. A point can be scored in a debate and notably in a game. In a related sense, a point can be said to be "on target" -- as with a "pointed remark". A point may well have a significant impact in debate and repartee -- touché. On the other hand discourse may be deemed pointless -- or the question may be asked as to "what is the point?". More challenging is the consideration of individuals as points -- as in sociometry and its controversial big data applications.

Bullet: In the case of a bullet, it can of course be made -- as a particular focus of the arms industry. Obviously it is designed to be shot, and as such will have an impact on the target at which it is pointed -- especially if it is rated of higher power rather than lower. Professional security personnel may be required to take a bullet in fulfillment of their functions -- possibly even when that may be fatal. Curiously the probability of an accident may be enhanced when a gun is pointed at someone. Such possibilities may emphasize a need for bullet-proof clothing. There is an equivalent sense in discourse in which an analogue is envisaged to ensure protection against the points made in the argument of another -- perhaps to be understood as "conceptual contraceptives". Preparation for debate may be framed by "collection of ammunition", possibly to be presented as "bullet points". Exposure to another engaged in "shooting their mouth off" is
characteristically avoided.

**Ball:** In the case of a ball, it is necessarily made -- typically to particular specifications (as with a bullet). As with a bullet, the focus may well be on shooting it to achieve a goal of some kind -- whereby a point is scored to the disadvantage of another, after penetrating their defences. The ball may well be skillfully thrown in the expectation that it should be caught by another. Failure to catch it may be deprecated as dropping the ball -- possibly requiring that it be fetched (if it can be found). Alternatively the ball may be strongly struck or kicked -- possibly outside the field of play. Emphasis may be placed on skillful passing the ball between team members to maintain control of it. Such processes are echoed in dialogue when reference may be made to "dropping the ball", namely mishandling a point -- even to the extent of being "off-point". The movement of the ball towards another may be blocked in order to gain control of it. In discourse the development of a point in the argument of another may be similarly blocked, ignored or set aside. On the other hand the ball may be said to have been skillfully placed in the court of another -- to their potential embarrassment.

**Globe:** In the case of any global perspective -- in contrast with a local focus -- it may well be asked "what is the point?! If recognized, the condition of the globe may be reduced to a secondary point in a dispute. Strategies with regard to the globe may be articulated as a set of points -- even of "bullet points". The globe may be treated like a ball in a "great game" between superpowers -- and readily kicked around. Curiously the development of that game may be framed in terms of one or more goals -- as with the UN's Sustainable Development Goals -- leaving it unclear how scoring is to be achieved, and against whom, and especially the nature of the rules of the game. Strangely the responsibility for the condition of the globe may be avoided by effectively passing responsibility from one to another -- as with a ball -- in a form of blame-game in which the challenge is skillfully to avoid possession in order to ensure that the ball is always in the court of another.

The development of the argument focuses on the extent to which these disparate preoccupations may constitute unconscious modes of enacting aspects of a subter meta-pattern by which they are connected. Their familiarity may well result from a form of cognitive encryption, as previously argued (Cognitive Encryption enabling Collapse of Civilization: drowned by the undertow of pseudophilia, 2021). Rather than having recourse to the complexity sciences, given their seeming inefficacy, the elusive nature of that pattern may perhaps be most usefully framed as a riddle requiring a distinctive form of cognitive engagement -- one that is recognized by many traditions (Global Governance as a Riddle: but is a solution the answer to the question? 2018).

**Complementary elements of cognitive significance in the systemic pattern?**

It could be asked whether the sequence from point to globe is preceded or followed by other elements of cognitive significance which can play the role of surrogates along that extended scale. Indeed are their missing elements within the scale as explored above?

**Sperm?** A case can be made for a sperm to be considered more fundamental than a point -- whilst requiring a female to accept it. Is making a point then to be recognized as a form of insemination -- even as a surrogate for that culmination of intercourse? Sexual intercourse may well be understood as making a point -- especially in the case of rape. The significance is only too evident in the extensive recognition of the role of sexual metaphors in sport -- and the manner in which the language of sport may be used to reframe intercourse itself. This could be understood as reinforced by a sense of scoring -- as a notable feature of male jargon, in which a female is expected to get the point.

**Project?** A case could be made for the inclusion of project in its various forms in the pattern (projection projectile). It clearly bears a relation to bullet and its development into a missile -- echoed otherwise in the use of missile and mission (and reference to a Papal Bull). More intriguing is how these are influenced by the case of semen -- and the role of the male organ in its dissemination, when appropriately extended. Again there is no lack of recognition of the relation between sperm and bullets -- especially in any form of shooting or celebration of the successful outcome of a project. Also intriguing is the considerable preoccupation with intercepting the missiles of another -- echoed by the preoccupation with intercepting missives in espionage and counter-espionage.

**Nation?** Prior to the globe, a case might be made for inclusion of the nation in the pattern. Like the globe its recognition as a unity can be reduced to a point -- and its governance framed as a series of points. Politics has also long been recognized as a game whose language borrows from sporting metaphors regarding control and scoring with a ball. Similarly there is no lack of use of military metaphors in engaging with an opposing party readily framed as a deadly threat to the life and well-being of the nation. The interplay of nation and project is evident in the language of national leadership and those who aspire to it. Popular use of urban jargon makes frequent reference to the manner in which leaders "f**k" the population -- and are turned on thereby in an effort to disseminate their vision and imprint their legacy.

**Universe?** Beyond the globe, it might be asked whether the universe can be fruitfully considered as part of the spectrum. Just as global leaders in quest of full-spectrum dominance may seek to implant their legacy on the world as a whole, there is no lack of mythological references to the relation of sperm with the creation of the universe. More provocative is the extent to which astronomic projects unconsciously derive their underlying logic and imaginative appeal from seeking to impregnate the universe with human genes -- starting with the planets (Being the Universe: a metaphoric frontier, 1999; People as Stargates: an alternative perspective on human relationships in space-time, 1996). This could be held to have been famously suggested by the opening narration for each episode of Star Trek: To Boldly Go Where No Man Has Gone Before...

Humanity could however presume to ask whether there is any point to the universe.

**Enacting engagement with the globe vicariously**

There is a degree of credibility to the recognition that the sperm's drive to the human ovum is echoed psychologically at some fundamental level by human aspiration to engagement with the globe -- whether as explorers, tourists or in the imagination. Can visiting the many wonderful places around the globe be seen as enacting that fundamental impulse in some manner?
The recognition could be reinforced by the manner in which people make a point of engaging in some such process -- almost as a rite of passage, as something that needs to be done. This is accompanied by intense use of photography to shoot whatever delights the eye as a means of gathering trophies for later display as proof of the achievement and to recall memories of it.

Potentially much more intriguing is the tremendous focus on ball games and development of skills in that regard -- whether as a player or an appreciative fan. Clearly a ball echoes the form of the globe to varying degrees -- and is an invitation to be thrown, kicked or struck, whether between friends or in competition with others. Is that reflex echoed unconsciously in some unexplored manner in individual engagement with the globe?

Why the degree of focus on control of the ball -- and on skilfully retaining it when challenged by others? What skills are developed in passing the ball within a team -- encouraged by peer group pressure -- in the hopes of outmanoeuvring others with similar intent? How does such behaviour influence collective engagement with the globe?

Given the focus on ball control, why do most ball sports use balls which require two hands to catch and hold the ball -- the exception being handball? There seemingly no such games for the one-handed. Although smaller balls may be thrown between friends and team members, it would seem that there are no competitive sports in which this is the case. Thrown or not, the focus in tennis, cricket and golf is on striking the smaller ball with an instrument. Exceptional use may be made of one hand in throwing or passing larger balls, as in rugby, basketball and bowling (B. Cesqui, et al, Grasping in One-Handed Catching in Relation to Performance, PLoS ONE, 11, 2016, 7; J. van der Kamp, et al, Timing a one-handed catch, Experimental Brain Research 129, 1999, 3)). Holding the ball may even be against the rules of the game.

Why the satisfaction of scoring a goal, or getting the ball into a net? How does the mysterious attraction of a hole frame and encourage that activity -- so evident in golf (Roberto Casati and Achille C. Varzi, Holes and Other Superficialities, 1994; Terrence W. Deacon, What's Missing from Theories of Information? Information and the Nature of Reality: from physics to metaphysics, 2010).

How might such entangled associations relate to the sense of pleasure framed as "having a ball"?

What skills are required to outmaneuver others in order to penetrate their defences and score a goal? ( Amanda Mathews, The Developmental Benefits of Practicing Ball Skills with your Child, North Shore Pediatric Therapy; Stephanie Brown, Why Your Child Should Be Playing With Balls, VeryWellFamily, 24 February 2021). The latter argues:

Playing with balls improves kids’ motor skills, hand-eye coordination, and timing, which are important parts of the developmental progression of toddlers. The skills children learn by playing with balls will also be important once they graduate to collaborative and competitive play.

Dorothy Mills Howard The Rhythms of Ball-Bouncing and Ball-Bouncing Rhymes The Journal of American Folklore, 62, 1949, 244),

Children’s rhyme chanting is no mere academic activity. The rhyme is expressed and the whole body participates in that expression. Tools for complete analysis and understanding of the rhythm patterns involved are not yet in existence, but the application of an available means of observation can and does reveal some facts hitherto unanalyzed and uncomprehended. . . .

Very young children learning to bounce the ball use simple actions and rhythms: the bounce, catch, bounce, catch. . . their bodies develop coordinating ability, they adopt more difficult movement such as the bounce, pat (with the hand); the leg-over actions; . . . toss to the sky; and the pantomimic gestures . . . take a dive. . . Sometimes the bounce on the ground or pavement is alternated with the toss to the sky or with a bounce against a wall.

What is the cognitive focus associated with aiming and transforming that capacity into appropriate muscular coordination? (Jocelyn Faubert, Perceptual-Cognitive Training of Athletes, Journal of Clinical Sports Psychology, 6, 2012, 1; Laura Depta, Cognitive Training: The Final Frontier for Athletes, SporTechie, 30 October 2013):

Cognition is essentially the mental function of gathering knowledge and processing it into usable data – thinking, knowing remembering, judging and problem solving. Cognitive abilities as applied to athletes and sports are used to track player and ball/puck movements, see the playing field with a wide range of vision, anticipate the movements of opponents, recognize patterns, develop strategic awareness and make fast and efficient decisions.

What does that imply potentially in relation to the globe: aiming where? coordinating what? What meaning might be associated with scoring globally through global projects? Should humanity aspire to impregnating the globe through dissemination projects?

It is curious how pleasure is considerably heightened by being able to play ball with another -- in competition with the other. The other is thereby framed as a form of enemy to be dominated, if not triumphantly defeated in celebration of one’s own identity and superiority. The manner in which such competitors are engendered for that purpose -- organized into competitions -- is strangely reminiscent of the manner in which global conflicts are engendered. Is the form of the globe somehow central to this process -- with the potential challenge of what is over the horizon and beyond immediate ken?

A contrasting perspective is offered by the rhythm of interaction through which a ball is moved between opponents, most obviously in tennis. Ironically this has been explored as fundamental to bonding -- across the boundary with an other (Henry W. Maier, Rhythmicity: a powerful force for experiencing unity and personal connections, International Child and Youth Care Network, April 2007). The latter indicates:
At these and other moments of joint rhythmic engagement, they discover an attraction for each other regardless whether there has been a previous sense of caring. In fact, it is almost impossible to dislike a person while being rhythmically in "sync". Rhythmic interactions forge people together. Rhythmicity provides a "glue" for establishing human connections. The value and power of these pulsating interactions may offer an eye opener for the practice of care interactions of young and old, for caregivers and care receivers alike.

To what extent does the formative role of sport in American culture explain the engagement in warfare throughout its history and its current engagement in many regional conflicts (List of wars involving the United States, Wikipedia; List of ongoing armed conflicts, Wikipedia). Is this process vital to affirmation of national identity in a global context?

Especially strange is the preferred criterion of a singular opponent in a ball game in order to give focus to the satisfaction of engaging in the process. he opponent is a singular "them" and therefore quite distinct from "us". The pattern is evident in most ball games, as in the case of football, basketball, and tennis.

There is little enthusiasm for 3-sided games, as with 3-sided football -- of whose existence few have heard -- let alone exploration of teams playing across one another in a 4-sided pattern. Given the traditional importance of chess in framing strategic thinking, this preference is evident in the lack of interest in 3-player chess or its analogues in Eastern cultures: Sannin shogi; Sanyou Qi (Game of the Three Friends); Sanguo Qi (Game of the Three Kingdoms).

| Examples of 3-player configurations in football, chess, and its equivalents |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 3-sided football pitch | 3-player chess | Sannin shogi | Sanyou Qi |
| ![Ed 2s, CC BY-SA 3.0, via Wikimedia Commons](https://commons.wikimedia.org/wiki/File:Ed_2s.png) | ![Dr Jacek Filek, Public domain, via Wikimedia Commons](https://commons.wikimedia.org/wiki/File:Dr_Jacek_Filek.png) | ![Tamago915, CC BY-SA 3.0, via Wikimedia Commons](https://commons.wikimedia.org/wiki/File:Tamago915.png) | ![Mlin92, CC BY-SA 4.0, via Wikimedia Commons](https://commons.wikimedia.org/wiki/File:Mlin92.png) |

The two-team focus is evident in preoccupation with the polarity of global dynamics and the primary concern with bipolar relations between superpowers -- and the anticipation of one emerging triumphant. There is almost no ball-game guidance to consideration of multipolar relations at the global level -- resulting in an emphasis on its reduction to bipolar familiarity (Destabilizing Multipolar Society through Binary Decision-making: alternatives to "2-stroke democracy" suggested by 4-sided ball games, 2016; Multi-polar homeostasis, sustainability and transcendence? 2021).

Given the recognized challenge of bipolarity and bipartisanship, it might be asked whether an increase in the number of balls in play -- from one to two, even to three -- would enhance the formative insights from ball games.

Why would such explorative experiments be resisted? Three is just too much? A 3-player game challenges the very nature of "winning", as conventionally understood in all its simplicity. Whilst one player may score more points than each of the others -- how is winning to be understood when no player scores more than both other players? Or when more points are scored with a "red ball" than with a "blue ball" when two balls are in play?

Can there really only be one "other" in practice?

**Fascinating attraction of a bouncing ball -- as primordial guarantee of global resilience?**

How naive or fundamental is the attraction of a bouncing ball? Why the universal appeal -- especially to the young? In many circumstances -- however it is thrown, hit or kicked -- it bounces, and may well bounce back.

**Physics**: The many studies of the physics of a bouncing ball focus on the physical behaviour of bouncing balls, particularly its motion before, during, and after impact against the surface of another body. The motion is generally described in terms of projectile motion -- and highlights the property of resilience. With its unexpectedly high resilience, the development of the widely distributed super ball has elicited particular attention (Philip J Aston and R Shail, *The Dynamics of a Bouncing Superball With Spin*. 2007). To ensure fair play, many sports governing bodies tend to set limits on the bounciness of their ball and forbid tampering with the ball's aerodynamic properties.

**Psychology?** Seemingly missing however is consideration of the psychology of ball bouncing -- and especially the potential implications of exceptional resilience. Why this lack of interest despite the acknowledged role of ball games and the obvious fascination with the dynamic? The focus would seem to be carefully circumvented, despite allusively approaching the matter (D. Sternaud, et al. *Bouncing a Ball: tuning into dynamic stability*, Journal of Experimental Psychology: Human Perception and Performance, 27, 2001, 5; Renaud Ronse, et al, *Optimal Control of a Hybrid Rhythmic-Discrete Task: the bouncing ball revisited*, Journal of Neurophysiology, 103, 2010, 5).

The potential cognitive implications of such movement recall the arguments of Mark Johnson (*The Meaning of the Body: aesthetics of human understanding*, 2008) and Maxine Sheets-Johnstone (*The Primacy of Movement*, 2011) -- especially with respect to the
... follows through with a thoroughgoing interdisciplinary inquiry into movement from three perspectives: mind, brain, and the conceptually reciprocal realities of receptivity and responsivity as set forth in phenomenology and evolutionary biology, respectively. It ends with a substantive afterward on kinesthesia, pointing up the incontrovertible significance of the faculty to cognition and affectivity.

**Symbolism?** Balls occupy a central role in the popular imagination, justifying their widespread recognition as a symbol -- exemplified by the orb (Victoria Howard, *Symbols of Monarchy: the orb and the sceptre*, The Crown Chronicles, 20 August 2016). It is therefore surprising to note that their fundamental significance to mathematics (underlying the related preoccupation of physics) can be recognized in the design of game balls -- readily visible to all. This is evident in the technical challenge of manufacturing a spherical ball and the necessity for a particular application of mathematical principles.

In the case of the association football, for example, the stitching pattern (or its emulation) is that of a spherical truncated icosahedron -- one of a set of regular polyhedra of symbolic significance in their own right. In the case of the tennis ball and the baseball, the stitching pattern (or its emulation) takes the form of what is known to mathematicians in terms of the tennis ball theorem, as variously discussed (*Game ball design as holding insight of relevance to global governance?* 2020; *Baseball Cap Implications in the Quest for Global Hegemony*, 2021).

There is therefore considerable irony to the manner in which, as active symbols, such balls are fundamental to games in which they are violently kicked or hit competitively between opposing parties.

**Bouncing ball metaphors?** Rather than seek insight from negligent psychosciences, the significance of bouncing balls in psychosocial terms might be better sought in the variety of their uses as metaphors, especially given understanding of the role of figurative language:

- Shu-Fen Huang: *Emotions: That’s the Way the Ball Bounces* (NTNU SCC Psychological Essay, No.72):
  - Emotion can be like a bouncing ball -- at times difficult to control and at times right on the spot
- J. D. Meier: *How Work is Like a Rubber Ball that Bounces Back* (*Sources of Insight*, 2010)
  - One of the most effective visualizations of the pandemic was created by applying the familiar metaphor of a bouncing ball to depict the impact of social distancing on the spread of the virus (Harry Stevens, *Why outbreaks like coronavirus spread exponentially, and how to “flatten the curve”*, *The Washington Post*, 14 March 2020)
- M. G. Thomas: *Metaphors for dealing with sufferings* (*Slideshare*):
  - Imagine yourself as a bouncing ball, who can bounce back from any calamities or challenges. The harder you are hit, the higher you will rise.
- Thomas Sowell: *Bouncing Ball Politics, Real Clear Politics*, 7 May 2013):
  - Many, if not most, of the children who go running out into the street in pursuit of their bouncing ball may have been warned against this by their parents. But neither small children nor politicians always heed warnings....Maybe democracy has prerequisites that do not exist in all places at all times. And maybe pursuing it in utter disregard of the repercussions -- which we have already begun to see in Libya and Egypt -- is one of the most dangerous pursuits of a bouncing ball.
- David Sibbet: *Building a Better Team Metaphor* (*The Grove, 13 June 2011*):
  - We decided to visualize the Drexler/Sibbet Team Performance Model® as a bouncing ball, with four stages to create the team and three to describe increasing levels of sustained performance. It starts with people “up in the air” imagining the purpose and bounces off the “ground” of current realities, regaining freedom of movement through mastery of the constraints.

**Resilience** Many such metaphors offer a clarification of appreciation of resilience, as the focus of various fields of research, including: ecological resilience, organizational resilience, psychological resilience, infrastructure resilience, control system resilience. For example, as reported by John Reh, a number of years ago Bryan Dyson discussed the difference between glass and rubber balls:

Imagine life as a game in which you are juggling some five balls in the air. You name them - work, family, health, friends and spirit - and you're keeping all of these in the air. You will soon understand that work is a rubber ball. If you drop it, it will bounce back. But the other four balls -- family, health, friends and spirit -- are made of glass. If you drop one of these, they will be irrevocably scuffed, marked, nicked, damaged or even shattered. They will never be the same. You must understand that and strive for balance in your life. (*In Pursuit of Work and Life Balance*, *The Balance Careers*, 25 September 2019)

Of particular relevance to this argument is Francis Bacon’s first use resilience in the English language in *Sylva Sylvarum* (1627). There he writes of the bouncing ball as a metaphor for the rebounding of echoes. As the instigator of the current focus on ecological resilience, as noted by Danilo Caputo with regard to C. S. Holling (Foundations of Ecological Resilience, 2010):

... ecological resilience is less interested in how long it takes for the ball to bounce back after hitting a wall, but how far the ball can bounce after the impact. Holling’s resilience, therefore, appears to be aligned with Bacon’s initial use of resilience, and the early modern scientist was more inclined to measure the strength of echoes at varying distances rather than measuring how long it takes echoes to return to a point of origin. (*C.S. Holling and Ecological Resilience*, UCI Regional Climate Resilience Project).
The dynamics of resilience are frequently illustrated by animations of bouncing balls, of which examples are offered below. There are many web references on how to design them realistically. The dynamics in those below could be significantly improved, notably in relation to timing -- on which many suggestions are available. As evident in both animations below, of some interest is the manner in which a spherical ball -- typical of many ball sports -- could be seen to take on the ellipsoidal form of a rugby ball at the point of impact.

### Ball-breast associations -- an unconscious expectation of global renewal?

**Subliminal ball-breast association?** In the absence of insights from psychology into the fundamental significance of bouncing balls, it is therefore appropriate to speculate that the fascination is of a similar nature to that which has reportedly governed choice of a widely recognized commercial symbol. With respect to the symbol of the McDonald's hamburger chain, as noted by Carly Ledbetter (*There's A Subliminal Message Behind McDonald's Golden Arches: can you see it?* The Huffington Post, 14 February 2017):

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

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

In this light, and despite the static nature of that commercial symbol, is the male fascination with breasts in some way due to their degree of bounciness and resilience -- echoed by that of balls? The attraction would clearly date from the earliest experience of breasts. This would constitute a formative imprinting in a developmental period of greatest sensitivity. There is no lack of references to the fundamental importance of the symbolism of the breasts. However, precisely because such symbolism is associated with necessarily static images and sculptures, the cognitive role that their dynamics might play has not been a focus of academic study.


Considering its almost total lack of muscle tissue, the female breast wields amazing power. Curvaceous women have leveraged this power to manipulate even the most accomplished, disciplined men for as long as anyone's been around to notice. Empires have fallen, wills have been revised, millions of magazines and calendars sold, Super Bowl audiences scandalized … all in response to the mysterious force emanating from what are, after all, small bags of fat.

### Size rather than movement?

Again however, the focus of such commentary is not on movement but on size. Ironically from a sociopolitical perspective, the limited academic studies of breast movement are seemingly focussed on how that movement is best to be restricted by the design of sports bras (Debbie Riasis, et al., *Bouncing Breasts: the science of the sports bra*, The Conversation, 9 August 2012). This notes the preoccupation with biomechanical, physiological and clinical perspectives. Surprisingly consistent with that preoccupation, despite the promise of the title, is the innovative technological possibility of an energy-generating bra (Adrienne So, *Harnessing the untapped power of breast motion*. Slate, 23 June 2008).

Why is interest in the phenomenon primarily non-academic (Tanith Carey, *Why your breasts bounce and how the pattern of the jiggle reveals your age!* Daily Mail, 14 January 2016). Preoccupation with breast movement as a visual attractor would only appear to be well-recognized in the deprecated (but widely appreciated) offerings of erotic dancing and pornography (*Amazing ass and breast movement belly dance with melody*, YouTube, 10 June 2019; *Boobs in Motion GIFs*, Giphy). Potentially so recognized is the movement termed the "shimmy" -- which may well be framed by taboos. A tattooed model became an internet sensation after posting a video of herself jiggling her breasts to Mozart (Zahra Barnes, *Watch This Woman Move Her Breasts Perfectly in Time to Classical Music*, Women's Health, 14 October 2014).

Is it naive to assume that breast movement is not an attraction in other informal -- "more respectable" -- modes of dancing? How curious to note that consideration of the topic is primarily associated with recovery from breast cancer. The culture of prudery is of course associated with the controversy surrounding so-called toplessness -- ironically characteristic of many indigenous cultures -- and

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**Table:** Indicative animations of bouncing balls

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<tr>
<th>Indicative animations of bouncing balls</th>
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<td><img src="image2.png" alt="Bouncing Balls Animation" /></td>
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currently a characteristic of some forms of political protest, most notably by feminists. Despite the legalization of what is otherwise framed as indecent exposure, little is said about the breast movement associated with such liberation (Dillon Thompson, 'Free the Nipple' movement: women can now legally go topless in 6 states, AOL, 21 September 2019; Patricz Kozicka, Why more women are freeing their breasts by going braless, Global News, 21 July 2016).

**Balls and cojones?** Presented in this way, it might be asked why any such dynamics would be of relevance to adult females -- especially since they share the earlier exposure to breasts. Continuing the speculation, the question could be seen as evoking the role of evolutionary instincts. Are women especially fascinised with male testicles -- as fully exposed, and decoratively coloured, in the primate ancestors of humans (Dan Gareau, Why Are Monkey Butts So Colorful? Popular Science, 10 April 2013). The size and movement of testicles may well constitute an attractor for female primates (Larissa Swedell, Strategies of Sex and Survival in Female Hamadryas Baboons through a Female Lens, 2017).

Although such an argument may be too provocative and unsubstantiated for the prudish, there is no lack of recognition of the appreciation by women of the symbolism of "balls" and "cojones". Again there is the question of whether that fascination is associated with both size and movement -- or some symbolic conflation of the two. Clearly calling for clarification is whether the experience as infants (for both males and females) is transformed into a related fascination with size and movement of which ball-like genitalia offer the most fundamentally obvious focus for such projection.

**Attractor dynamics?** As argued the quest could be for greater understanding of what might be termed attractor dynamics -- potentially on the assumption that the fascination with ball movement is consistent with its recognition as a strange attractor. As defined by PsychologyDictionary.org, attractor dynamics offers an approach to analysing the interaction of goals, feedback, and the environment -- especially in the evolution of a movement trajectory, as in repetitive movements, for example. Another clarification is offered in relation to neural learning and the challenges of its simulation (Yan Wu, et al., Learning Attractor Dynamics for Generative Memory, 32nd Conference on Neural Information Processing Systems, 2018).

Unfortunately in relation to the breast, research on attraction dynamics is again framed in terms of the relevance to breast cancer. Aside from efforts in relation to sports bras, there is seemingly no effort to clarify by simulation what it is that is attractive about breast movement -- although this will presumably be a necessary preoccupation with regard to the design of humanoid robots, given the major niche market they are expected to serve (Global Governance via a Double-breasted Strange Attractor: cognitive implication in a dynamic sexual metaphor, 2009).

**Primordial source of comfort?** Arguably breasts are the part of the body unconsciously (and deeply) associated with comfort, security and sexual attractiveness. As with the experience of infants, breasts are then seen as a source of temporary comfort and sanctuary in periods of anxiety -- notably for males -- and so depicted in dramatic moments of reconciliation in movies.

It might then be asked whether -- however naively -- humans collectively assume the possibility of a similar reconciliation with Mother Nature in times of considerable stress. Is Mother Nature still available for such psychotherapeutic renewal -- symbolic of a new Renaissance?

**Dysfunctional global strategies reinforced by unconscious human associations?**

**Enacting and enactments?** The question framed by this argument is whether the dynamics of engagement with the more obvious -- most notably balls -- is a problematic unconscious enactment of engagement with the globe. As argued, this pattern is also echoed in the engagement with points, with bullets, and with projects. Use of "enacting" is however to be contrasted with the more fundamental cognitive implications of "enactivism" (S. Torrance, In Search of the Enactive: introduction to special issue on enactive experience, Phenomenology and the Cognitive Sciences, 4, 2005).

Enacting can indeed be understood -- most notably from the legislative perspective of governance -- as giving legislative form and meaning to principles through enactment (Michael Saward, Enacting Democracy, Political Studies, 51, 2003, 1). This completely loses the sense in which enacting may be an exercise in tokenism, especially when designed to give the impression that principles and meaning are well expressed by that process. Politics could indeed be said to be a process of giving meaningless form to principles through forms that are then upheld as meaningful.

Of greater relevance to this argument is the sense in which efforts are made to express principles only dimly appreciated if at all -- and possibly only unconsciously. In relational psychoanalysis, enactment is then used to describe the non-reflecting playing out of a mental scenario, rather than verbally describing the associated thoughts and feelings. Enacting may then be understood as "acting out" whatever meaning can be sensed. However, as a defence mechanism, acting out is typically understood as the performance of an action considered bad or anti-social, namely destructive to self or to others.

For Douglas H. Frayn:

The term "acting out" has had a variety of meanings over the years, with the common denominator being that the action, in the enactment, has unconscious determinants and replaces remembering or reflecting on the impulse (Enactments: An Evolving Dyadic Concept of Acting Out, American Journal of Psychotherapy, 50, 1996, 2).

With the population understood as a patient in the process, the argument of Jeannette Pols merits reflection in this light:

Analyzing practical situations and activities, I argue that patients enact appreciations, making known what they like or dislike by verbal or non-verbal means in a given material environment, in situations that are co-produced by others. Thus, subjectivity is
Global civilization can indeed be considered unconscious, as argued by John Ralston Saul (The Unconscious Civilization, 1995). Point-making, bullet-shooting, ball-games and project-designing then merit consideration as enacting -- as "acting out" dynamics only dimly comprehended.

Reframing of Mother Nature -- and the globe? Evoking the unexplored relationship to the visual attraction of breasts (and testicles) consequently suggests a peculiar association between the globe and Mother Nature -- and even the appeal of the political slogan "being great again". Why the extensive use of "motherfucker" in popular discourse and movies? Does this have a connotation of "balling" nature -- given the sexual sense of that jargon term? Are corporations to be recognized as "motherfuckers par excellence" through their development projects? What then of "globalization"?

The classical feminine archetypes through which Mother Nature might then be framed to include: virgin, mother, witch, and crone (paralleling the four seasons of the year and their relative fertility). Any balling of nature could be then be variously understood in terms of: nature as virgin (as with pioneering colonists), nature as mother (as with the appreciation of subsistence farmers), nature as witch (evoking the cunning circunvention of developers), and nature as crone or hag (evoking the negligence of waste disposal). Arguably the transition in globalization, beyond any appreciation of Mother Nature, has long adopted the exploitative framings of witch and hag.

The difficulty in this progression is the obvious consequence of ageing in relation to the diminishing attraction of progressively sagging breasts and shrinking breasts. Is the globe then to be understood in this light? Is global civilization now figuratively to be described as having passed through the various stages of breast sagging and shrinking characteristic of ageing -- and the diminishing attraction offered for those engaged in balling nature?

Have the excesses of the globalization process effectively ensured the ageing of nature -- at least in human eyes, and in comparison with the appreciation of indigenous cultures? Is this curiously paralleled by the current preoccupations of feminists in evoking those archetypes to clarify their own identity at different ages -- and especially in relation to men?

Consumerism? As the primary behavioural consequence of globalization, there is a case for exploring the much criticized role of consumerism in relation to the breast associations of this argument. Consumerism is a social and economic order that encourages the acquisition of goods and services in ever-increasing amounts. It necessarily involves "balling nature" to an ever increasing degree.

It is therefore appropriate to note the earliest manifestations of the consumption impulse. For Eugene Curtis Goldfield, for example:

The tongue, then, is an articulator that is transformed into a variety of task specific devices: a basic orienting device during search for the nipple, a pumper used for sucking and swallowing, and a transporter of food within the mouth during mastication. How are these devices used during the development of eating? ... four components of early breast feeding: (1) orientation of the head to bring the mouth into contact with the breast, (2) opening of the mouth and grasping with the lips once there has been contact with the breast, (3) sucking once the mouth areas are stimulated, and (4) swallowing movements.... the basic orienting system provides the foundation for appetite, since it directs the oral articulators to the resource (milk) which affords eating. We may typically think of the orienting response as a reflex directed searching for the breast. (Emergent Forms: Origins and Early Development of Human Action and Perception, 1995, p. 213)

In addition to the focus on tangible resources, other than food, consumerism now extends to the intangible. Curiously discourse could now be understood as engendering an unrestrained consumption of points of information. The continuing expansion of military budgets is suggestive of an addiction to consumption of bullets. The addiction to ball games calls for no comment -- what else is offers comparable fascination? Are institutions to be usefully understood as consumers of the projects to which they are addicted?

The pattern could be seen as extending to the globe -- in the light of the various estimates of the number of Earths now required to sustain the global population (Alasdair Wilkins, Humanity will need two Earths to sustain itself in just twenty years, Gizmodo, 14 October 2010). Global Footprint Network data shows that humanity uses the equivalent of 1.68 planet Earths to provide the renewable resources we use and absorb our waste (Current Population is Three Times the Sustainable Level, World Population Balance).

Emergent infertility of psychosocial global dynamics

Biological infertility: There is a new awareness of the challenge of infertility -- especially male infertility -- as noted in the review of a study Shanna Swan (Count Down: how our modern world is threatening sperm counts, altering male and female reproductive development and imperiling the future of the human race, 2021):

Scientists are witnessing an alarming trend: Men’s sperm counts are down, testosterone levels have plunged and erectile dysfunction is increasing. Male infertility is on the rise -- and exposure to synthetic chemicals known as phthalates could be to blame, according to fertility scientist (Megan Redshaw, Male Infertility Threatening 'Future of Human Race', Liberty Beacon, 26 February 2021)

Citing Swan’s book, it is reported that the global rate has dropped 50% between 1960 and 2016, with the U.S. birth rate 16% below where it needs to be to sustain the population (Susannah Cahalan, Why more men are suffering from infertility than ever before, New York Post, 20 February 2021; Erin Elizabeth, Chemicals Largely to Blame for Skyrocketing Male Infertility, Health Nut News, 1 March
Psychosocial infertility? The argument above has evoked the interplay between engagement with sperm, point, ball and globe -- in association with bullet, project and nation. Given the evidence in the case of sperm, it is appropriate to ask whether analogous declines in fertility are evident in the other cases -- understood in psychosocial terms:

- **Points?** It could readily be argued that the capacity to make points with fruitful consequences has diminished dramatically, however authoritative the presentation. There is clearly no lack of the capacity to make points -- as is evident in cafe discourse, the daily media diet and the proliferation of expert reports. However the issue is whether they have significant consequences -- most notably with respect to any requirement for sustaining the population. Using a metaphor from sexual intercourse, is there an ever increasing rise in the tendency to "shoot blanks"?

- **Bullets?** The world has been witness over long decades to the widespread use of bullets. The question to be asked is "to what effect?" The cumulative effect of mass shootings in the USA is arguably negligible. The various interventions in Libya, the Middle East and Afghanistan are readily understood as dubiously successful in destructive terms, but total failures in nation-building. Afghanistan offers the most striking example of the fruitless use of bullets -- despite lack of any constraint on expense (Transforming the Unsustainable Cost of General Education: strategic insights from Afghanistan, 2009). Most curious is the ineffectual nature of bullets in response to what is now portrayed as as the greatest threat to global civilization.

- **Balls?** Given the symbolic importance associated with ball games, especially at the global level, especially tragic has been the emergence of evidence of widespread corruption in the organization of games and among the players. This has contributed significantly to undermining experience of the much vaunted "spirit of the game". Rather than having the fruitful function to which so many have been attached, arguably such games have become exercises in cynicism, most notably valued by media and by gamblers (and the various industries which service them). Understood metaphorically, can it be said that leaders no longer have the "balls" to enable fruitful change -- rather than the repressive initiatives to which they are inclined? Rather than engage in "joined-up" thinking is there a widespread tendency to "drop the ball" in any undertaking or pattern of discourse. Curiously the reference to any argument as "balls" is now tantamount to its depreciation as meaningless.

- **Projects?** There is no lack of projects, proposals and programs of every kind -- even of an ever increasing number, as exemplified by the patents to which they may give rise. Again it may be asked how fruitful these have proven to be in the short term, and what meaningful trace of them is evident in the longer term. This is especially the case with respect to global projects, notably those framed as wars (Review of the Range of Virtual Wars: strategic comparison with the global war against terrorism, 2005). It is evident that those framed by the United Nations, and by its Sustainable Development Goals, have been less than enthusiastically envisaged and claimed. History will comment on the Global Reset planned by the World Economic Forum -- most probably in relation to the precedent of Mein Kampf; and other strategies for full-spectrum dominance. The feasibility of the current project to inoculate the world for the health security of the global population merits reflection in this light.

- **Nation?** As is evident from the political crises in nations around the world, it is appropriate to ask whether fruitful nation-building is now less than feasible. Have national cultures become increasingly infertile in comparison with nation-building (and empire-building) initiatives of the past? Claims are of course vigorously made to the contrary with each culture celebrating the extent of its creativity. How are the specific claims rated decades later: How will such fertility be rated by history? Curiously few nations venture to rate their creativity other than in terms of patent applications. What of the creativity that is not susceptible to intellectual copyright?

- **Globe?** How many fruitful "new ideas" do international institutions indicate they have engendered during the past year? Is the Global Reset the world's "best shot"? So framed, does global civilization face a fundamental crisis of psychosocial infertility, as argued more extensively (Infertility as a Metaphor Heralding Global Collapse: essential impotence disguised by performance and "being great again", 2018). Given the sense of requisite population replacement level to ensure sustainability, is there a sense in which psychosocial infertility may be such that global civilization is unsustainable anyway -- with creativity below a requisite "creativity replacement level"?

Relevant to any answer is the date of the most obvious summary of models of global order (John H. Gibbons, Global Models, World Futures, and Public Policy: A Critique, Princeton University, 1982). This reviewed the following models: World 3 (The Limits to Growth), World Integrated Model (Mankind at the Turning Point), Latin American World Model (Catastrophe or New Society?), UN Input-output World Model (The Future of the World Economy), and Global 2000 (Entering the 21st Century). Innovation in that regard would appear to have stagnated -- with the exception of projects focused on specialized sub-systemic models, as indicated by Akira Onishi (Integrated Global Models of Sustainable Development, UNESCO-EOLSS, 2009). Seen as players in a global game, to what extent is the globe "dropped" in being passed between them?

Whereas there is continuing debate on the shape of the universe, the "shape of global civilization" is seemingly not in question -- other than through the eyes of big data profiling. There is however the concern that some consider it as most appropriately understood as flat (Thomas L. Friedman, The World Is Flat 1, 2005). This can of course be variously disputed (Irresponsible Dependence on a Flat Earth Mentality -- in response to global governance challenges, 2008; Imagining Toroidal Life as a Sustainable Alternative : from globalization to toroidization or back to flatland? 2019).

It is curious (given this argument) that the millions of other worlds observable from the globe -- which humanity aspires to know...
Universe? Most curiously, in contrast with the seemingly unsustainable creativity with regard to global civilization, the universe is witness to human creativity of a high order, as summarized by John D. Barrow (The Book of Universes: exploring the limits of the cosmos, 2011) with regard to a single unusual and unappreciated fact, namely that Einstein's famous theory of relativity describes universes -- entire universes:

Not many solutions of Einstein's tantalizing universe equations have ever been found, but those that have are all very remarkable. Some of them describe universes that expand in size, while others contract, some rotate like a top and others are chaotic. Some are perfectly smooth, while others are lumpy, or shaken in different directions by tides of energy; some oscillate forever, some become lifeless and cold, while others head towards a runaway future of ever-increasing expansion. Some permit time travel into the past, and others allow infinitely many things to happen in a finite amount of time. Only a few allow life to evolve within them; the rest remain unknowable to conscious minds. Some end with a bang, some with a whimper. Some don't end at all. Our story will encounter universes where the laws of physics can change from time to time and from one region to another, universes that have extra hidden dimensions of space and time, universes that are eternal, universes that live inside black holes, universes that end without warning, colliding universes, inflationary universes, and universes that come into being from something else -- or from nothing at all. Gradually, we will find ourselves introducing the latest and the best descriptions of the Universe we see around us today, together with the concept of the 'Multiverse' -- the universe of all possible universes -- that modern theories of physics lead us to contemplate. These are the most fantastic and far-reaching speculations in the whole of science.

The earlier discussion of infertility developed the argument in the following sections:

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**Riddle for global civilization of the pattern that connects**

**Meta-pattern:** Between the inherently meaningless argument that "everything is connected to everything" and the elusive possibility of a "pattern that connects", there is the probability of a deep commitment to enacting variously the dynamics of some kind of meta-pattern, as vaguely intuited or dimly apprehended (Walking Elven Pathways: enactivating the pattern that connects, 2006). The possibility is clarified through recognition of the significance of mythology, as by Joseph Campbell (The Power of Myth, 1988)

In framing that connectivity insight, Gregory Bateson made the point that:

The pattern which connects is a meta-pattern. It is a pattern of patterns. It is that meta-pattern which defines the vast generalization that, indeed, it is patterns which connect. (Mind and Nature: a necessary unity, 1979)

And it is from this perspective that he warned in a much-cited phrase: Break the pattern which connects the items of learning and you necessarily destroy all quality.

**Surfaces vs Essences:** The argument here suggests that the seemingly disparate preoccupations highlighted merit recognition as only too "obvious" manifestations of such a subtle meta-pattern -- effectively as misplaced concreteness.

Such concrete manifestations can be usefully compared to the "surfaces" in the argument of Douglas Hofstadter and Emmanuel Sander (Surfaces and Essences: analogy as the fuel and fire of thinking, 2013) -- as a further development of Hofstadter's earlier work (Fluid Concepts and Creative Analogies, 1995).

However any argument for pattern recognition with regard to disparate manifestations can be only too readily held to be a case of apophenia (or paternicity), namely the tendency to perceive meaningful connections between unrelated things accompanied by a specific feeling of abnormal meaningfulness (Michael Shermer, Patternicity: finding meaningful patterns in meaningless noise, Scientific American, 1 December 2008). It has come to imply a human propensity to seek patterns in random information.

It is far from clear how any epiphany, as implied by the creative insights to which Hofstadter refers, is to be distinguished from an apophany (as an instance of apophenia). The latter does not provide insight into the nature of reality nor its interconnectedness. It is a process of repetitively and monotonously experiencing abnormal meanings in the entire surrounding experiential field. It is also held to be typical of conspiracy theory, where coincidences may be woven together into an apparent plot. This frames the question of how inspiration is indeed to be distinguished from conspiracy (Recognition of conspiracy or conspiracy theory, 2020). When indeed are claims to pattern recognition to be held to be pathological rather than creative?

**Riddle:** As argued by Hofstadter, any such creative thinking may well be enabled by analogy, thereby framing the question as to the nature of the paradoxical "meta-perspective" from which meta-connectivity is supposedly apparent. This could well be explored as a riddle in its traditional enigmatic sense.

As noted by Eli Kõngis-Maranda, riddles make a point of playing with conceptual boundaries and crossing them for the intellectual pleasure of showing that things are not quite as stable as they seem (Riddles and Riddling: an introduction, The Journal of American Folklore, 89, 1976). However such playfulness with conceptual boundaries may well ultimately offer insight into how they may be appropriately affirmed (Enacting Transformative Integral Thinking through Playful Elegance, 2010; Humour and Play-Fullness: -- should only be perceptible as points of light.
It is curious that in the face of widely acknowledged global complexity, undue reliance has been placed by authority on the "complexity sciences", despite their questionable efficacy in a time of crisis. Such sciences would seem to take little account of the possibility of a meta-pattern calling for a distinctive mode of cognitive engagement -- to which the riddle offers an indication. This is perhaps exemplified by continuing strategic reference to the puzzle of the Gordian knot (Engaging globally with knots and riddles -- Gordian and otherwise, 2018).

**Singular cognitive engagement:** Arguably there is therefore a case for a complementary mode of engagement with global crisis through reframing it as a riddle (Global Governance as a Riddle: but is a solution the answer to the question? 2018). This has the merit of offering a paradoxical form of coherence which can be widely communicated as a cognitive challenge -- by contrast with the complex articulations variously presented by uncoordinated authorities and readily held to be meaningless to most. Mathematics even offers a pointer in this regard through highlighting unsolved problems (List of unsolved problems in mathematics). A selection of them, deemed fundamental, are highlighted as **Millennium Prize Problems** for whose solution an award is offered.

In this light the "hard problem of global governance" could be highlighted as a riddle -- comparable with the so-called "hard problem of consciousness", namely the problem of explaining why and how we have phenomenal experiences. This could be usefully contrasted with experience of the mish-mash of 16 poorly coordinated **Sustainable Development Goals** promoted by the United Nations as a successor to the 8 **Millennium Development Goals** for which no solution was found.

Could people be more fruitfully challenged to frame as a riddle the global problematic -- or that of engaging with potential global collapse (John Gerard Ruggie, On the Problem of 'the Global Problematique': what roles for international organizations? Alternatives: Global, Local, Political, 5, 1980, 4; Richard Slaughter and Chris Riedy, Understanding and Resolving the Global Problematique: assessing the balance between progressive and socially conservative foresight, Foresight, 11, 2009, 5).

**Poetry:** It is in this sense that the role of poetry merits particular mention. For example, in explaining the paradox of why "we are our own metaphor", Gregory Bateson pointed out to a conference on the effects of conscious purpose on human adaptation that:

> 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 are 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. (Cited by Mary Catherine Bateson, Our Own Metaphor, pp. 288-9)

The argument can be reinforced by reference to **kenning** in some poetic forms, namely a figure of speech in a form of circumlocution, a compound that employs figurative language rather than a single noun. As noted by Wikipedia, the corresponding modern verb to ken survives in Scots and English dialects and in general English through the derivative existing in the standard language in the set expression beyond one's ken, "beyond the scope of one's knowledge" and in the phonologically altered forms uncanny, "surreal" or "supernatural", and canny, "shrewd", "prudent". Many would accept the sense in which the chaotic efforts at governance in current times are best recognized as surreal (Surreal nature of current global governance as experienced, 2016).

The relationship of kenning to riddle has been clarified by John Lindow (Riddles, Kennings, and the Complexity of Skaldic Poetry, Scandinavian Studies, 47, 1975, 3):

In pointing out the similarity between the kenning, a specialized form of metaphor, and the riddle, these authors themselves have hardly broken new ground. Such passagae are anticipated as early as by Aristotle and have found their way into sophisticated modern treatises of literary criticism....The kenning is a metaphor consisting of two or more parts where one part (the so-called "baseword") is modified by another part or parts (the so-called "modifier(s)") so as to provide the meaning (or "referent") of the entire expression

**Cognitive juggling?** Much has been made of the notorious 4-fold articulation by Donald Rumsfeld as US Secretary for Defense with regard to knowledge of the "unknowns", as discussed separately (Relevance of the framework articulated by a US Secretary of Defense?: Challenging cognitive nature of a fourfold strategic framework, 2020). As indicated there, that pattern has acquired new relevance in relation to (mis)information regarding COVID-19.

The following schematic suggests a degree of connectivity between distinct clusters of relevance to this argument. Those in the lower position are indicative of forms of certainty, with that on the left associated with various forms of belief (held with confidence) and that on the right with confident assertions regarding any such certainty. The experiential "riddle" cluster endeavours to encompass the sense of potential connectivity which eludes the cognitive grasp, as discussed separately (Engaging with Elusive Connectivity and Coherence, 2018; Living as an Imaginal Bridge between Worlds: global implications of "betwixt and between" and liminality, 2011).

The "juggling" cluster endeavours to encompass aspects of the cognitive dynamic between the various forms of "ball" evoked above. In contrast with the sense in which comprehension is understood as "grasping" a concept, the dynamics of juggling indicate the sense that any such grasping may only be transitory, with the concept being effectively passed on, to be temporarily grasped later (and otherwise) as part of that dynamic. The literature on "transitional objects" is somewhat suggestive in that respect (Carole J. Litt, Theories of Transitional Object Attachment: an overview, International Journal of Behavioral Development, 9, 1986, 3). Ball-passing in a game is indicative in this respect; the handling of concepts between colleagues, disciplines and specialized institutions may reflect such a pattern.

Especially suggestive is the skill with which conceptual ball-passing is achieved -- whether intentionally deceptive or otherwise. The
relevance of the juggling dynamic can be discussed from the perspective of governance (Governance as "juggling" -- Juggling as "governance": dynamics of braiding incommensurable insights for sustainable governance, 2018). The engagement of the United Nations with its 16 Sustainable Development Goals might be explored in this light -- with the 17th coordinating goal implying the process of juggling itself.

![Diagram of Indicative configuration of potential connectivity?](image)

**Fruitful doubt**: The cognitive engagement with the "uncanny" in the Western tradition could also be explored through the koan as cultivated in the Eastern Zen tradition in order to evoke "the great doubt" (The Great Doubt, Kyoto School of Philosophy; How does the 'Great Doubt' compare to doubt? Buddhism Stack Exchange). Although commonly understood in the West as referring to an unanswerable question or a meaningless statement, in Zen practice, this is not the case, nor is it framed as a riddle or a puzzle as conventionally understood. As an expression of Zen Buddhism, the koan bears an appropriately elusive relation to haiku poetry and its strategic significance (Ensuring Strategic Resilience through Haiku Patterns, 2006).

As emphasized in Zen evocation of the great doubt, any poetic formulation must necessarily guard against a tendency to mystification offering a comfortable indulgence in the illusion of adequate comprehension. This is indicated to some degree by the "negative capability" to which the poet John Keats refers: that is, when a man is capable of being in uncertainties, mysteries, doubts, without any irritable reaching after fact and reason (1817).

This contrasts with presumptuous knowing as a defensive strategy -- so evident in the decades of professional military response to Afghanistan (Poetic Engagement with Afghanistan, Caucasus and Iran: an unexplored strategic opportunity? 2009). Any knowing is then of a kind to which the poet T. S. Eliot famously refers in Little Gidding (1942): We shall not cease from exploration and the end of all our exploring will be to arrive where we began and to know the place for the first time.

**Fluid cognitive boundaries?** If that "place" is indeed the meta-perspective of this argument, as it might be associated with that from a general systems perspective, a paradoxical question might then be what perspective enables the four seasons of Mother Nature to coexist -- as echoed by the feminine archetypes cited above?

An indication is offered by the form of the globe -- with its "other side", and the role of time. Given the implication of dimensionality of a higher order, another is suggested by the Klein bottle (Intercourse with Globality through Enacting a Klein bottle, 2009). Apophatic discourse offers an indication of a mode of withholding presumption and acknowledging the role of unknowing (Being What You Want: problematic kataphatic identity vs. potential of apophatic identity? 2008; Christopher James Galloway, Deliver us from Definitions: a fresh way of looking at public relations, Public Relations Inquiry, 2, 2013, 2).

Complementing Hofstedter's above-mentioned argument, regarding fluid concepts in relation to surfaces and essences, is that of Sally Wilcox and Allan Combs with respect to the manner in which the boundaries of consciousness are spontaneously reordered during transcendent experiences (A Fractal Topology of Transcendent Experience, California Institute of Integral Studies, 2020). This could be explored as "cognitive osmosis" (Cognitive Osmosis in a Knowledge-based Civilization: interface challenge of inside-outside, insight-outsight, information-outformation, 2017).

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