9 August 2021 | Draft

Interrelating Multiple Ways of Looking at a Crisis

Beyond the pandemic discipline of the one right way

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Introduction

It is extraordinary to note that the current period is witness to a singular way of looking at a crisis. In this case the challenge is the pandemic. The one way of looking that has emerged as an absolute global necessity is universal vaccination. Informed by "science", every effort is now made to ensure that all authorities reinforce this modality and that any other way is depicted as ridiculous, if not dangerous -- to be eradicated by any means possible.

The attitude is well exemplified by the TINA declaration of UK Prime Minister Margaret Thatcher: *There Is No Alternative*, or that of the President of the USA (*Bush: 'You Are Either With Us, Or With the Terrorists'*, *Voice of America*, 21 September 2011). Unfortunately there is no evidence whatsoever that "being right" offers a viable remedy to the challenges of global governance.

The pattern is the subject of a study by Edward de Bono (*I Am Right, You Are Wrong: from this to the New Renaissance*, 1968). Its alternative title is especially relevant to the quality of thinking only too evident with respect to the pandemic (*From Rock Logic to Water Logic*, 1968). The relegation of any alternative perspective to "wrong" could then be understood as a form of fundamental commitment to binary thinking in which the primary objective is to eradicate the other perspective. This is of course fundamental to the separation of "good" and "evil" cultivated by religions. It is echoed in the promotion of the "positive" at all costs -- with a desperate effort to eliminate the "negative", as argued by Barbara Ehrenreich (*Bright-sided: how the relentless promotion of positive thinking has undermined America*, 2009).

The distinction is of course fundamental to engagement in warfare and is curiously echoed in many ball games with the objective of crushing the opponent triumphantly. There is little interest in 3-way or 4-way ball-games, for example (*Destabilizing Multipolar Society through Binary Decision-making: alternatives to "2-stroke democracy" suggested by 4-sided ball games*, 2016). The pattern is evident in the lack of interest in the strategic implications of 3-player chess.

This lack of competence plays out in the very limited capacity to deal with the messy dynamics of multiparty and multipolar power structures. There is seemingly always a fundamental commitment to reverting to the hegemony of the singular way -- the "right" way -- exemplified by the foreign policy commitment of the USA to full-spectrum dominance.

It is of course the case that there is a degree of recognition of the merits of diversity, as evident in biodiversity -- but with extremely limited cognitive capacity to handle it. Perhaps, other than in gardening and the culinary arts? Tragically this plays out in the challenge of multiple ethnicities, races, languages, and faiths. The skills in that regard are limited and underappreciated. Is there really only one viable modality -- especially from the perspective of any one such modality? How boring has humanity become?

The following is an exploration of some clues to appreciating and interrelating multiple ways of looking. It follows from previous explorations regarding "disparate" ways of thinking (*Dynamics of N-fold Integration of Disparate Cognitive Modalities*, 2021; *Global*

Coherence by Interrelating Disparate Strategic Patterns Dynamically, 2019).

A specific inspiration is the much-cited poem of Wallace Stevens (*Thirteen Ways of Looking at a Blackbird*, 1917) as is evident from its use by other poets, and discussed separately (*Thirteen ways of apprehending blackbird song*, 2014). As an enigma, any engagement with it (or with comment about it) is itself problematic. It effectively calls for a creative way of looking at "ways of looking" and the imaginative responses it might evoke -- as is arguably the case with respect to the crises implied by the UN's 17 Sustainable Development Goals.

Ways of looking -- and ways of thinking?

6-fold ways? Edward de Bono has developed his argument for multiple perspectives in a series of books, starting with *Six Thinking Hats: an essential approach to business management* (1985). He subsequently summarized his thinking on the matter (*Six Frames for Thinking about Information*, 2003). Can it be said that those insights have been applied to thinking with regard to the pandemic and perceptions of the major challenge of misinformation -- the new "evil"?

8-fold ways? There is of course recognition of the inspiration offered by the Buddhist Noble Eightfold Way. This pattern could be understood to have been applied to fundamental physics in its eightfold organization of subatomic particles. It could be seen as having been similarly borrowed for the eightfold path of policy analysis. Missing in the latter respect is any sense of an Eightfold Path of Crisis Response. Could that have been used as a means of unlocking the constrained perspectives of strategic development in relation to the pandemic? If not, why not?

12-fold ways? Curiously there is an unexplained collective enthusiasm for what might be held to imply an appreciation of a 12-fold approach (*Checklist of 12-fold Principles, Plans, Symbols and Concepts: web resources*, 2011). However, despite the degree to which 12-foldness is appreciated in the articulation of strategic initiatives, it is unclear how this might have been deployed as a generic response with respect to the pandemic (*Eliciting a 12-fold Pattern of Generic Operational Insights: recognition of memory constraints on collective strategic comprehension*, 2011).

Ironically any relevance of such 12-foldness to the pandemic may have been explored to a greater degree by the people of the world through the distinctions of astrology -- deprecated though it may be in the realm of governance (Omri Elisha, *Placing the Pandemic in Time: astrology and Covid-19*, *The Immanent Frame*, 13 August 2020; Hilary George-Parkin, *The anxieties and apps fuelling the astrology boom*, BBC, 9 February 2021; Jayashree Narayanan, *When will the pandemic end? Here's what astrologers have to say*, *The Indian Express*, 14 June 2021). How are those of different star signs coping with the pandemic and its one-strategy-fits-all commitment?

As argued separately, there is however a case for using other mnemonic aids with a view to *Increasing the dimensionality of the archetypal Round Table?* (2018).

7-fold ways? There is widespread recognition of the challenge of cognitive bias. It is however unclear whether due consideration has been given to the variety of forms of cognitive bias and fallacious arguments which may be in play in the elaboration and uptake of the strategic response to the pandemic. Nor is it apparent how these are informing the singular pandemic narrative which media have been urged to deploy (*List of cognitive biases*; *List of fallacies*; *List of popular misconceptions*).

With respect to pandemic response, it could be suspected that the long-standing rule-of-thumb for the viability of 7-fold working groups has engendered committees of health experts of 7 as some kind of unconscious recognition of the need to transcend singular and binary perspectives (George Miller, *The Magical Number Seven, Plus or Minus Two: some limits on our capacity for processing information*, *Psychological Review*, 1956).

It is therefore of value to note the approach to the matter by the author of a *History of Western Philosophy* dismayed at the unfruitful discourse between academics with regard to the "romantic period". In his study, generalizing from that example, W. T. Jones identifies a set of seven "axes of bias" (indicated below) which essentially determine the intractable positions taken in any controversy (*The Romantic Syndrome; toward a new methodology in cultural anthropology and the history of ideas*, 1961).

In an effort to transcend the binary mindset into which pandemic discourse is locked, there is a case for using such a framework of contrasts to clarify the positions in any discourse relating to pandemic (mis)information.

Systematic approaches to contrasting ways of thinking

The little-known framework offered by the axes of bias of Jones merits comparison with other variously recognized frameworks suggestive of other contrasting ways of thinking -- potentially with regard to the pandemic. Most of these tend simply to offer what amount to checklists of such modalities, without any effort to clarify how the modalities are interrelated. Why a preference for one, rather than for another -- and under what circumstances?

In addition to that of Jones, the following disparate examples are summarized separately (*Systems of Categories Distinguishing Cultural Biases*, 1993):

- System of W T Jones: Seven axes of methodological bias (*The Romantic Syndrome: toward a new method in cultural anthropology and the history of ideas*, 1961) summarized separately in terms of the following preferences (*Axes of Bias in Inter-Cultural Dialogue*, 1993):

Order versus Disorder	External versus Identification	
Static versus Dynamic	Sharply versus Implicitly defined	
Discrete versus Continuous	Comprehensible versus Incomprehensible	Due versus Spontaneous process

- **System of Magoroh Maruyama**: Four epistemological mindscapes (*Mindscapes, social patterns and future development of scientific theory types. Cybernetica*, 1980, 23, 1, pp. 5-25)

  H-mindscape (homogenistic, hierarchical, classificational)   *S-mindscape* (heterogenistic, interactive, homeostatic)
  I-mindscape (heterogenistic, individualistic, random)   *G-mindscape* (heterogenistic, interactive, morphogenetic)

- **System of Geert Hofstede**: Four indices of work-related values (*Culture's Consequences: international diffrences in work-related values*, 1984)

  Power distance: Attitude to human inequality   *Individualism:* Relationship between individual and collectivity
  Uncertainty avoidance: Tolerance for uncertainty   *Masculinity:* Role of biological differences between the sexes

- **System of Kinhide Mushakoji**: Four modalities through which the human mind grasps reality (*Scientific revolution and interparadigmatic dialogue*. Tokyo, United Nations University, GPID project, 1978)

  Affirmation: Leading to affirmative action   *Affirmation and negation:* Ambiguous action, non-violent resistance
  Negation: Leading to negative action in the form of sanction,   *Non-affirmation and Non-negation:* Action in the form of indifference, indecision, non-action

- **System of Will McWhinney**: Four modes of reality construction, resolution and change (*Paths of Change: strategic choices for organizations and society*, 1991)

  Analytic mode: Based on empirical thinking   *Axiotic mode:* Based on value exploration
  Dialectic mode: Composed of a variety of distinct methods   *Mythic mode:* Based on methods of symbolic creation

- **System of Stephen Pepper**: Four world hypotheses (*World Hypotheses: a study in evidence*, 1942)

  Formism: Grounded on the common sense experience   *Organicism:* Based on a coherence theory of truth,
  Mechanism: Based on a causal adjustment theory of truth   *Contextualism:* Based on an operational theory of truth

- **System of Mary Douglas**: Four systems of natural symbols in which the image of the body is used in different ways to reflect and enhance each persons experience of society (*Natural Symbols: explorations in cosmology*, 1973)

  Body conceived as an organ of communication   *Practical concern with possible uses of bodily rejects*
  Body seen as a vehicle of life   *Life seen as spiritual, and the body as irrelevant matter*

- **System of Howard Gardner**: Six forms of intelligence (*Frames of Mind: the theory of multiple intelligences*, 1984)

  Linguistic intelligence   *Spatial intelligence*
  Musical intelligence   *Bodily-kinaesthetic intelligence*
  Logical/mathematical intelligence   *Personal intelligence*

- **System of Emmanuel Todd**: Eight family types associated with different socio-political systems (*La Troisième Planète: structures familiales et systèmes idéologiques*. Paris, 1983)

  Exogamic communal family   *Exogamic nuclear family*   *Endogamic communal family*   *Anomic family*
  Exogamic authoritarian family *Exogamic absolute nuclear family*   *Endogamic asymmetric communal family*   *Dynamically unstable domestic family*

Given their seemingly disparate nature, it might well be asked whether they imply an underlying pattern of distinctive orientations which are difficult to name in a meaningful manner. Potentially problematic are the distinctions made in English within that mode of academic discourse. Other sets of distinctions could well be held to be more meaningful in other languages -- a point of relevance with respect to any crisis for which a global response is sought..

Clues from personality typing to ways of thinking in a crisis?

Personality types: The "systems" above might in turn be compared and contrasted with those associated with personality typing -- thereby framing the question of how the various types frame their engagement (or lack of it) with the pandemic. More to the point,

which types have not been called into play withj respect to pandemic strategies, and which have achieved unwarranted dominance -- and why?

- System of Carl Jung: Eight personality types (*Psychological Types*, 1921):

  - Extraverted sensation
  - Introverted sensation
  - Extraverted intuition
  - Introverted intuition
  - Extraverted thinking
  - Introverted thinking
  - Extraverted feeling
  - Introverted feeling

- System of Myers-Briggs: Sixteen personality types as a developemtn of the system of Jiung (*Myers–Briggs Type Indicator*)

- System of Ichazo/Naranajo: Nine personality types (*Enneagram of personality*), with an indication of their problematic manifestation (in itallics):

  - Reformer/Perfectionist (*Resentment*)
  - Helper/Giver (*Flattery*)
  - Achiever/Performer (*Vanity*)
  - Individualist/Romantic (*Melancholy*)
  - Investigator/Observer (*Stinginess*)
  - Loyalist/Loyal Skeptic (*Cowardice*)
  - Enthusiast/Epicure (*Planning*)
  - Challenger/Protector (*Vengeance*)
  - Peacemaker/Mediator (*Indolence*)

- System of Big Five personality traits:

  - extraversion (outgoing/energetic vs. solitary/reserved)
  - agreeableness (friendly/compassionate vs. critical/rational)
  - openness to experience (inventive/curious vs. consistent/cautious)
  - conscientiousness (efficient/organized vs. extravagant/careless)
  - neuroticism (sensitive/nervous vs. resilient/confident)

- Belbin Team Inventory: Nine team roles:

  - Plant
  - Resource Investigator
  - Specialist.
  - Monitor Evaluator
  - Teamworker
  - Co-ordinator
  - Shaper,
  - Implementer
  - Completer Finisher

All the above suggest ways in which any commitment to marketing the current mainstream pandemic narrative could depend on profiling the target audience in order to refine the message for particular personality types. It is far from clear that account has been taken of such diversity. Potewntially more problematic is the possibility that the leadership in governance has self-selected to include particular personality types and to exclude others. HJow did that come about?

It is however possible that the profiling for marketing piurposes may have been done more crudely. One study distinguishes: those with safety concerns, those unconvinced by science, and those motivated by animal welfare and environmental concerns (Annamaria Carusi, *The three types of vaccine hesitancy authorities need to combat*, *MedicalXpress*, 2 October 2020). A second study identifies four types (Sema K. Sgaier, *Survey finds 4 main types of COVID-19 vaccine hesitancy*, *CBS News*, 24 May 2021). A third study isolated seven types (A. Recio-Román, et al. *Global Vaccine Hesitancy Segmentation: A Cross-European Approach*, *Vaccines,* 9, 2021, 6):

> Based on the Global Marketing Strategy paradigm, this paper shows that seven different cross-European segments exist based on the beliefs, attitudes, and behaviors collected in 28 European countries. These pan-European segments are differentiable (people in those segments have similar characteristics that are visibly dissimilar from the ones in other segments) and actionable (organizations would be able to propose interventions to the hesitant segments based on their profiles).
>
> Pro-Vaccinators (55.7% of sample)
> Self-hesitants (14.2% of sample).
> Social-hesitants (9.6% of sample)
>
> Anti-vaccinators (11.7% of sample).
> Alternative-hesitants (2.5% of sample).
> Illiterate-hesitants (4% of sample).
>
> Uninformed Anti-Vaccinators (2.3% of sample)

Ways of thinking: In developing the argument, these figures are presented in pie-chart form in a section below. Clearly the correlation of such profiling with personality types calls for much more research. Missing is any reconciliation with frameworks such as that offered by Janey Davies (*7 Types of Thinking and How to Find out What Kind of Thinker You Are*, *Learning Mind*, 8 November 2018):

- Abstract thinker
- Analytical thinker
- Creative thinker
- Concrete thinking
- Critical thinking
- Convergent thinking
- Divergent thinking

Even more challenging is the implication that there are even more types of thinking that may be of relevance (John Spacey, *36 Ways of Thinking*, *Simplicable*, 30 October 2020). The point is stressed by Barry Boyce (*Why We Need New Ways of Thinking*, *Mindful*, 26 August 2010) in summarizing the initiatives of:
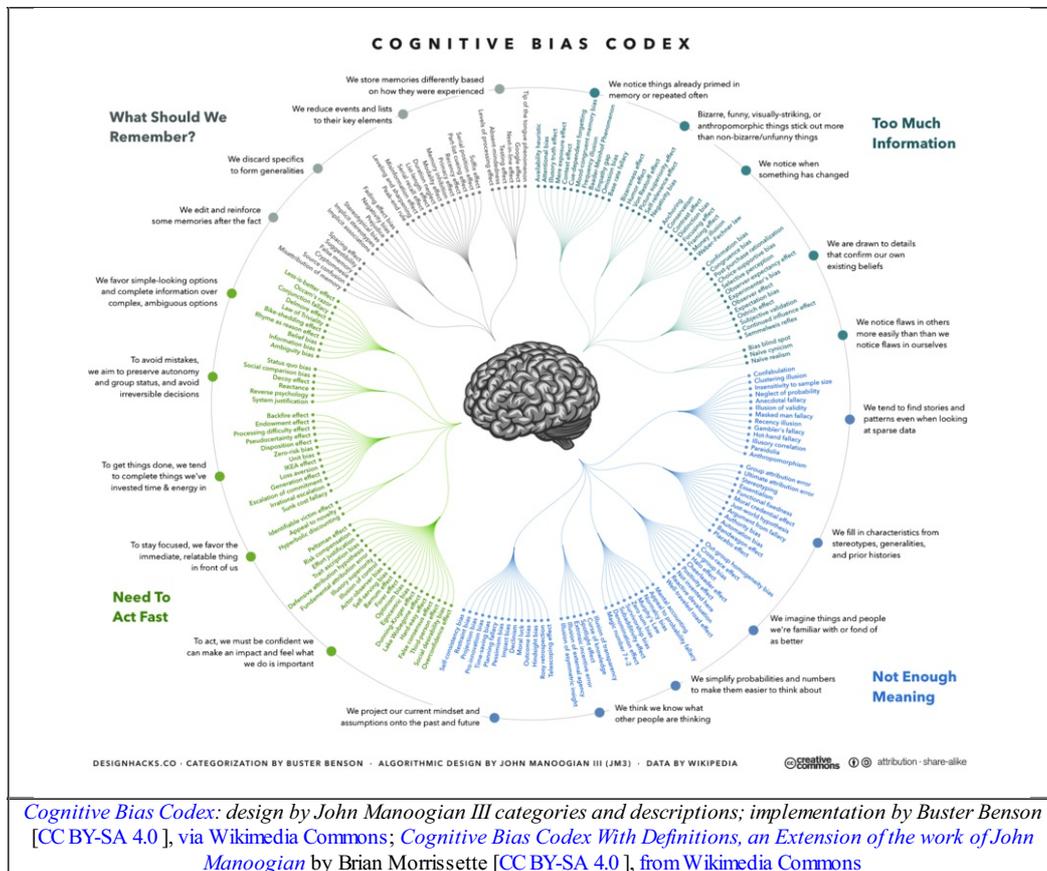
- Adam Kahane: *Collaborating with the Enemy: how to work with people you don't agree with or like or trust* (2017)
- Thomas Homer-Dixon: *The Upside of Down: catastrophe, creativity, and the renewal of civilization* (2006).
- Paul Hawken: *Blessed Unrest: how the largest social movement in history is restoring grace, justice, and beauty to the world* (2008)
- Meg Wheatley: *Finding Our Way: leadership for an uncertain time* (2007)

The quest for the variety of thinking styles can be usefully implied by those which are unhelpful, as with the following identified by the Centre for Clinical Interventions (*Unhelpful Thinking Styles*), suggestive of some which are readily evident in the elaboration of the pandemic strategy. Variants are presented from the perspective of cognitive beviour therapy as "cognitive distortions".

Black and White thinking	Personalisation	Overgeneralisation
Catastrophising	Mental filtering	Labelling
Magnification and Minimisation	Shoulding and Musting	Emotional reasoning
Jumping to conclusions		

Cognitive bias: To the extent that particular personality types tend to be understood as associated with particular cognitive biases -- or vulnerable to them -- much more challenging is the representation of a comprehensive set of such biases, as ways of (distorted) thinking, as indicated in the schema below. This configuration of 180-plus biases is reproduced from the checklist in the relevant *Wikipedia* entry.

Centered on the depiction of a human brain, the configuration raises the question as to how this pattern might be understood in terms of the "global brain" and the responsibility of global governance of the pandemic. Of particular interest, in the light of the extensive role envisaged for artificial intelligence, is the extent to which such biases may be inadvertently embodied in algorithms with implications for the current strategic response.

Cognitive Bias Codex: design by John Manoogian III categories and descriptions; implementation by Buster Benson [CC BY-SA 4.0], via Wikimedia Commons; Cognitive Bias Codex With Definitions, an Extension of the work of John Manoogian by Brian Morrissette [CC BY-SA 4.0], from Wikimedia Commons

The above schema was previously discussed in relation to the Group of Seven (*Group of 7 Dwarfs: Future-blind and Warning-deaf: self-righteous immoral imperative enabling future human sacrifice*, 2018). There a specific concern was whether it might be rendered more comprehensible through representsation in 3D, with indications of how this might be achieved (*Global configuration of cognitive biases: towards mapping G7 susceptibility*).

Possibility of interrelating ways of looking at a crisis

The inspiration offered by the above-mentioned poem by Wallace Stevens (*Thirteen Ways of Looking at a Blackbird*, 1917) has evoked a range of reflections on the pandemic by bloggers:

- Robert Steven Chance: *Thirteen Ways of Looking at a Pandemic* (*Journal of Progressive Human Services*, 31, 2020, 3)
- George Singleton: *Thirteen Ways of Looking at a Pandemic* (8 April 2020)
- Shawn Crawford: *Thirteen Ways of Looking at a Pandemic* (22 March 2020).
- Jenny Fortin: *13 Ways of Looking at the Pandemic as a Clinical Fellow in an SNF* (*Academy of Neurological Communication Disorders and Sciences*, 13 July 2020

Applications are evident in other domains, as discussed separately (*Ways of looking at ways of looking -- in a period of invasive surveillance*, 2014). Many now recognize the emergence of authoritarian, fascist and totalitarian tendencies, as argued by Naomi Wolf (*Fascist America, in 10 easy steps*, *The Guardian*, 24 April 2007).

Blackness? The approach of Umberto Eco can be understood as offering clues to a response (*Eternal Fascism: Fourteen Ways of Looking at a Blackshirt*, *New York Review of Books*, 22 June 1995). Another e helpful approach, especially relevant to current framing of global strategy, is the commentary of Nüzhet Akin (*From '0', the Logic of Imagination, to 'Ground Zero', the Imagination of Logic: the enigmas of Wallace Stevens' 'Blackbird' and current US action*. *Journal of Arts and Sciences*, Sayi, 12 Aralik, 2009). For Akin the difficulty of interpreting the poem arises at the point where the reader seeks to find a logical answer to the nature of the "blackbird", as clarified separately (*Post-modern challenge to simplistic binary framing of the other*, 2011).

In particular there is the argument of Emily Raboteau (*Thirteen Ways of Looking At Post-Blackness (after Wallace Stevens)*, *The Trouble with Post-Blackness*, 2015). In Stevens's poem, a blackbird appears from thirteen different angles. Each of the thirteen stanzas produces a different mood, or sensation: mystery, doom, calm, beauty, fear, freedom, etc. As discussed further below, it is appropriate to ask of what the "angle" metaphor is indicative in cognitive terms.

According to the author, post-blackness, like blackness itself, is a slippery concept, open to interpretation. The argument attempts to interpret post-blackness from different associative angles without making any overt pronouncements about race. Could such considerations be applied to the pandemic and the strategic response?

With respect to "blackness", of some relevance at this time is the challenge of critical race theory, especially in the USA -- where it is proving to be an existential challenge to academia. As argued by Kerry Cosby, this raises the more general issue that **the problems of today call for less binary and more systems thinking** (*Is Critical Race Theory Too Complex for U.S. Politics? The Globalist*, 20 July 2021). It notes the relevance of the question to the pandemic, climate change, and other issues. Does politics have the ability to confront issues for which academia has (in some cases) begun using more complex methods to examine? Cosby argues:

> Today, the U.S. political system largely relies upon establishing a binary choice for voters. Meanwhile, for many of today's problems, researchers use models that consider multiple causes, feedback loops and systemic structural influences.

Ways of arguing? In seeking means of interrelating ways of looking, one approach could be to reframe this in terms of ways of arguing, as variously understood:

- *Types of argument*: Three basic structures or types of argument distinguished are the Toulmin argument, the Rogerian argument, and the Classical or Aristotelian argument. Less evident is how these are interrelated and how one might move from one to another

- *Multimodal argument*: The question of modes of arguing is currently a matter of debate, as clarified by Leo Groarke (*Going Multimodal: what is a mode of arguing and why does it matter? Argumentation*, 29, 2015) in extending the four modes of argument of distinguished by Michael Gilbert: (1) the logical, (2) the emotional, which relates to the realm of feelings, (3) the visceral, which stems from the arena of the physical, and (4) the kisceral (from the Japanese term ki meaning energy), which covers the intuitive and nonsensory areas (Michael A. Gilbert, *Coalescent Argumentation*, Lawrence Erlbaum Associates, 1997).

- *Modes of disagreement*: As distinguished by Paul Graham (*How to Disagree,* March 2008). This has been used by Anna Vital to distinguish levels of disagreement, from name-calling to refuting the central point of the dispute (*How To Argue: the hierarchy of disagreement*, *Adioma*, December 2019).

Of particular relevance is the cultural constraint implied by the proportion of studies cited above in English by authors for which English is the primary language. It is therefore of interest to note the comparison offered by Mariko Kotani (*Ways of Arguing in Two Cultures: A Case Analysis of a Negotiation Between Japanese and American Business Professionals*, *Intercultural Communication Studies,* IV:, 1994, 1). This notes two main differences in the characteristics of Japanese and American argument styles:

> First, the American negotiator states his main point at the beginning of his argument while his Japanese counterpart explains the background information at the beginning. Second, the American negotiator solves the issues one by one by making a different argument for each issue, while his Japanese counterpart tends to attack the negotiation issues as a whole and repeats the same argument. From these observations, the article indicates that there are culturally distinctive ways of arguing and suggests that cultural differences in argument styles are fruitful areas for future intercultural negotiation study.

Given the current challenge for the mainstream narrative of asserting its case against vaccine hesitants -- however these may be stigmatised -- of some interest is the recently reproduced clarification from 1935 of G. K. Chesterton (*Three Ways of Arguing with a Communist: how not to do it*, *Berfrois*, 30 March 2015):

> There are two recognised ways of arguing with a Communist; and they are both wrong. There is also a third way which is right but which is not recognised.... Curiously enough, the two commonest ways of contradicting Communism also contradict each other. The first consists of convicting the Bolshevist of all vices. The second, curiously enough, consists of convicting him of all the virtues. It actually consists of pitting all our vices against his virtues; or his supposed virtues.

Tone-of-voice? Strategic discourse, the public presentation of a strategy, and any process of arguing about it, are all characterized by

choice of tone-of-voice, as discussed separately (*Varieties of Tone of Voice and Engagement with Global Strategy*, 2021), Considerable attention is now given to the tone-of-voice appropriate to engaging with a chosen audience when marketing a product or service. Understandings of tone-of-voice are variously considered important in other domains where persuasive engagement is sought. These may include, politics, religion, drama, the military, or the arts in general.

Although the matter is subject to continuing review regarding nonverbal communication, it has been estimated that only 7 percent of meaning is communicated through the spoken word, 38 percent through tone-of-voice, and 55 percent through body language according to the 7-38-55 rule.

With respect to a crisis like the pandemic, it is then appropriate to ask about the range of tones-of-voice used and how that engages people, most notably the vaccine hesitants. Is there a need to alternate between a requisite variety of voices to engender coherence? Is it possible that the choice made by current leaders (and for their propaganda) is experienced as monotonous and alienating, especially to many they seek to persuade of the merits of vaccination?

Argument by reference to myth: It is somewhat extraordinary to note the manner in which authorities have dismissed the concerns of the vaccine hesistants as "myths", as documented and discussed separately (*Checklist of pandemic concerns, whether framed as myths or lies*, 2021). In terms of the types of disagreement distinguished above, this is relatively simplistic in comparison with any attempt to refute the central point.

It is perhaps even more extraordinary the manner in which universal vaccination is implicitly framed as a form of "silver bullet" -- reminiscent of many myths of the past. The potential association has been recognized but has been explicitly set aside (*Vaccines offer hope but are no silver bullet*, WHO, 23 March 2021; Zhaohui Su, et al, *Vaccines are not yet a silver bullet: the imperative of continued communication about the importance of COVID-19 safety measures*, *Science Direct*, 12, March 2021; Andrew West, *Vaccines -- not a silver bullet to solve COVID-19 dilemmas*, *ABC*, 14 July 2021).

Meriting some attention is the extent to which universal vaccination towards herd immunity is implicitly framed through the myth of the "holy grail". The implication with respect to any "return to normality: and the "light at the end of the tunnel" is evident through cultivation of that myth with respect to business profit-making opportunities, as discussed separately (*In Quest of Sustainability as Holy Grail of Global Governance*, 2011).

Strategic games: arguing "Red Team" versus "Blue Team" in practice: It is characteristic of more mature strategic assessments to benefit from the simulation in practice between two opposing strategies, especially in evaluating military options -- typically a so-called "Red Team" and a "Blue Team":

- *Cybersecurity Red Team versus Blue Team: main differences explained* (*Security Trails*, 7 December 2018)
- *Red Team versus Blue Team* (*European Council blog*, 15 June 2019)
- *Red team versus Blue team: how to run an effective simulation* (*CSO Online*, 26 July 2017)

It would appear that the lockdown strategy is the outcome of one-team thinking in elaborating the "One Plan" -- on the assumption that there can be no viable alternative from which insight might be derived. It could be argued that those elaborating it are terrified of the outcome of any two-team simulation and the perspective of any alternative.

There is some irony to the manner in which the Red-versus-Blue metaphor has become widely familiar through the coloured pill options in the science fiction film *The Matrix* (1999): red to reveal the "truth" about the Matrix, and blue to return to "normality". Inspired by the film, the possibility of such a choice has been variously explored, as discussed separately (*Psychosocial Transformation by "Pill Pushing"? Model-making, strategic advocacy and the myth of the "red pill"*, 2017). In the context of the pandemic, universal vaccination would appear to correspond to a particular choice of "pill".

"One-Pill thinking" would be entirely unacceptsble in conventional military situations where each team is understood as offering a meaningful challenge to the other. Seemingly current framings of the pandemic in terms of a war have not benefitted from this source of insight. Given the recent "withdrawal" of coalitions tropps from Afghanistan, it is however questionable the extent to such a source of insight was explored in that context (*Transforming the Unsustainable Cost of General Education: strategic insights from Afghanistan*, 2009).

In some cases the two-team framework may be further enhanced by a "Purple Team" perspective designed to integrate the learnings from Red and Blue team operations, as clarified by Daniel Miessler (*The Definition of a Purple Team*, 28 June 2019; *The Difference Between Red, Blue, and Purple Teams*, 4 April 2020). Could the authorities responsible for lockdown be recognized as strategically colour-blind?

Such considerations merit reflection in the light of any assumption that in a democratic two-party system the two teams are a reflection of appropriately counteracting "Red" and "Blue" perspectives. However there is now an expressed concern with any situation in which they are in uncritical agreement -- as with the lockdown situation (*When The Left And Right Join Forces It's Not Always Good! Australian Independent Media*, 15 April 2020).

Rather than binary "red vs blue" games, of potentially far greater significance is the Foldit initiative developed by the University of Washington, Center for Game Science, in collaboration with the Department of Biochemistry. This is an online puzzle video game about protein folding which hss involved some 57,000 players in folding the structures of selected proteins as perfectly as possible, using tools provided in the game in order to determine whether these are of relevance to those in nature. The game has been adapted to study of the coronavirus. More intriguing is the possibility that such a game could be adapted to determining more creative strategic responses to the pandemic -- as might be the case with adaptations of multiplayer online games with multiple players, possibly structured into guilds.

Spreading risk through diversification? Strategic investment has clarified the value of spreading an investment portfolio among different asset categories, such as stocks, bonds and cash. This is a basic method to guard against the risk of loss, which is inherent in investing. For socially responsible investors, this could also include a distribution of assets between stocks and community investing as a form of asset allocation (William Donovan, *Spreading Your Risk Through Asset Allocation*, *The Balance*, 28 May 2021; Thomas Brock, *5 Tips for Diversifying Your Portfolio*, *Investopedia*, 3 June 2021). Similar thinking may be evident in gambling, by betting on more than one horse in a race, for example.

It would appear that with respect to the pandemic, no such thinking is apparent. Switching metaphor, all the eggs have been placed in one basket -- universal vaccination.

Interdisciplinarity? Considerable emphasis is typically placed on the interdisciplinarity of any team of decision-makers considering strategic option -- but without indicating the disciplines represented, given the preference for limited transparency as in the case of the pandemic. The ineffectual nature of "interdisciplinarity" in many domains has long raised questions about how the relations between the disciplines is ensured. There is indeed little trace of interdisciplinarity in relation to pandemic strategies.

There is no conventional "discipline" of interdisciplinarity, although there are many ways of addressing the possible cognitive integration it might imply, as separately profiled (*Integrative Knowledge and Transdisciplinarity Project*, 1976). That early initiative profiled 633.

There is a natural suspicion that the processes termed "interdisciplinary" in a strategic context are primarily exercises in public relations. There is the further suspicion that a form of disciplinary hegemony prevails -- "full-spectrum dominance" by one discipline or another. It could be further argued that the methodology of a discipline is necessarily an exercise in a singular cognitive modality -- one-discipline thinking. An early exercise noted 1845 disciplines (*Intellectual Disciplines and Sciences: cross-referenced to world problems*, 1976). It could be assumed that many of these would dispute any recognition of many others as "disciplines", rather than as "pseudodisciplines". Which disciplines are irrelevant in response to a crisis, how is this determined, and by whom?

Distinguishing ways of looking at features of the pandemic response

As argued separately, the response to the coronavirus, COVID-19 and the pandemic is variously framed in terms of threat, fear, surprise, panic, evil, pestilence, and the like. There is a case for exploring the set of such images as a source of insight in its own right (*Alternating between Complementary Images of Coronavirus: requisite variety to enable viable strategic engagement*, 2020).

The inspiration in that case followed from the much-cited study by Gareth Morgan (*Images of Organization*, 1986). This offers the following frameworks through which organizations can be perceived: machines, organisms, brains, cultures, political systems, psychic prisons, flux and transformation, and instruments of domination.

The study has been fruitfully reviewed by Matthew J. Lambert III (*A review of Images of Organization*, *Complicity: An International Journal of Complexity and Education*, 6, 2009, 2). It has since been the focus of other works (Anders Örtenblad, et al, *Exploring Morgan's Metaphors: theory, research, and practice in organizational studies*, 2016; Gareth Morgan, *Reflections on Images of Organization and Its Implications for Organization and Environment*. *Organization and Environment*, 24, 2012, 4).

The discussion of 2020 with respect to the pandemic explored through how many distinct frameworks the **coronavirus** can be fruitfully perceived and what does such an exercise suggest in terms of strategic governance. This evoked the following themes:

Alternative images of coronavirus / COVID-19?	Requisite strategic attitudes in anticipation of change?
Interrelating disparate frameworks fruitfully	Interweaving disparate voices in the moment
Higher dimensionality of coherence?	Indicative representation of resonance between
Paradox of identity-confidence associated with inversion?	complementary frameworks
Requisite complementarity for innovative strategic nimbleness	

There is a case for reframing the question to explore through how many distinct frameworks can the **strategic responses to the pandemic** be fruitfully perceived and what does such an exercise suggest in terms of strategic governance. However many of the points and illustrations in the earlier argument remain of relevance.

Three of the strategies deployed in response to the pandemic have raised issues with the different ways in which people experience and handle a dramatically higher degree of psychosocial isolation, namely masking, social distancing, and lockdown. Different attitudes and modalities are evoked by the sanitising requirement. Vaccination evokes yet another array of attitudes.

Given Gareth Morgan's distinctions with regard to organization, these could be tentatively adapted to the organization of the response to a crisis like the pandemic. Missing is consideration below of the vast investment in contact tracing and health passports.

Possible implications of pandemic strategies in the light of Morgan's *Images of Organization*					
Images of organization (Morgan)	Masking as?	Social distancing as?	Lockdown as?	Sanitising as?	Vaccination as?
machines	human automats	mechanical distancing (1.5 meters?)	societal shutdown	cleaning a mechanism	"silver bullet"
organisms	insect-like humans; hive-like	isolation; remoteness	deanimation; life suspension	debugging human biome	genetic modification
brains	hive mind; "no-brainer"	psychosis; alienation	vegetative coma; inhibiting criticism	healthy body for healthy mind	dumbing down
cultures	mask-wearing culture; dumbing down	cultivation of separateness	frozen culture; immobilisation	culture of hygienic ritual	indoctrination; assimilation

political systems	political constraint	separate and rule; divide and conquer	totalitarian constraint	imposition of ritual cleanliness	collective responsibility
psychic prisons	imprisonment of identity	loneliness; solitude; incarceration	loneliness; solitude; incarceration	expunging impure thoughts	institutionalisation of uncertainty
flux and transformation	ever changing rules; uncertainty; tagging	up to me, not them	ever changing rules; uncertainty	questionable degree of hygiene	ever changing implications
instruments of domination	instrumentalisation of health care	separate and rule; divide and conquer	separate and rule; divide and conquer	imposition of arbitrary cleanliness	authoritarian obligation

Masking? The he current global requirement for masking has evoked a range of comments on how this experienced. Curiously it suggests for some the emergence of a singular way of looking rather than multiple ways -- effectively the adoption of a uniform, with its cognitive implications:

- Travis Schultz: *The Symbolism of a Mask -- will a pandemic transition it from evil to good?* (30 January 2021)
- Adam Bloodworth: *How Face Masks became a Powerful Symbol of Expression in Dark Times* (*HuffPost*, 26 August 2020)
- Jasmine Chia: *Meaning behind the Mask: why the face mask is promoted in Asia but shunned in the West* (*Thai Enquirer*, 13 February 2020)
- Luca Tateo: *Face masks as layers of meaning in times of COVID-19* (*Culture and Psychology*, 9 September 2020)
- Donald Pollock: *Masks and the Semiotics of Identity* (*Journal of the Royal Anthropological Institute*, 1, 1995, 3),
- Katie Canales: *How Masks Became Political Symbols in COVID-19 and 1918* (*Business Insider*, 30 May 2020)
- David Abrams: *The Hidden Meanings of Wearing a Mask* (*NYU School of Global Public Health*, 8 May 2020)
- Naomi Xu Elegant: *As coronavirus spreads, facemasks become a 'symbol of protection' -- and a lighting rod for fear* (*Fortune*, 31 January 2020)
- Chloe Mulderig: *Behind the Mask: she Symbolism and meanings of Venice's Carnivale faces* (11 March 2019)
- Trevisan Marco: *Masks and faces in historical symbolism and in the modern Venetian Carnival* (*Venipedia*, 13 September 2019)

The implications of masking can indeed be considered from a variety of perspectives (*Masks as symbols from popular perspectives*, 2021; *Implications of masking: sexual and otherwise*, 2021). It is therefore interesting to note the compilation from a wide range of perspectives prepared by the MIT School of Humanities, Arts, and Social Sciences (*The Meanings of Masks: new ways to think about and practice protective masking*, *MIT News*, 24 September 2020).

Social distancing? What are the contrasting ways of experiencing social distancing -- and of viewing it as a requirement imposed by authorities?

One approach to the question focused on the implications in terms of overcrowding -- as an unmentionable exacerbating factor (*Social Distancing under Conditions of Overcrowding? Weaponising mass distraction from overpopulation denial?* 2020). This explored the following dimensions:

Systemic avoidance
Misrepresentation of social distancing in an overcrowded context
Modelling crisis development ignoring relative population density?
Ironies and contradictions of social distancing
Potential challenges of social distancing

Ensuring global strategic coherence in time of crisis
Unexplored strategic implications of social distancing
Requisite sacrifice in time of war?
Self-reflexive implication of social distancing?

The historically unprecedent adoption of a particular measurement of the "healthy" separation of humans can be provocatively explored as an example of a "magic number" -- a term notably favoured by physicists (*Humanity's Magic Number as 1.5? Dimensionless constant governing civilization and its potential collapse*, 2020). Ironically, with respect to the relegated challenge of climate change, limiting global warming to 1.5 degrees is framed as the strategic challenge to which all nations should commit.

Lockdown? Acceptance of lockdown restrictions can indeed be presented as a duty of citizens consistent with the use of curfew in wartime. The requirement can of course be otherwise explored and more problematically (*Cowering for One's Country in the War against Coronavirus*, 2020). This considered the following aspects:

Risk aversion, courage and sacrifice during the "war" against coronavirus
Courage, cowardice and cowering?
Honouring the risk takers?

Misrepresentation of the scope of the crisis?
Collateral damage and tolerable fatalities in warfare -- from the perspective of authorities

Sanitising? In a civilization already preoccupied by hygiene, and by the products and processes through which it may be achieved, the new focus on sanitising meritis careful reflection on its possible implications (*Symbolism of obsessive sanitising as a preventive measure*, 2021).

This is especially the case in that a large proportion of the world's population does not have the resources for basic sanitation. Other than its obvious connotations as a form of secular "holy water", it suggests a degree of strategic implication of a need to "clean up" global action -- or individual action -- whatever either might be held to mean. Given the prevailing levels of corruption in society, is the focus on "sanitising" a form of strategic displacement from a challenge carefully avoided?

Vaccination? The process of vaccination can clearly be viewed in a variety of distinctive ways -- especially, given the contrasting perspectives of the vaccine hesitant and the challenge they have evoked to "one-plan" global governance (*Strategic panic in response to*

vaccine hesitancy, 2021; *Unconscious strategic reliance on the "injection metaphor"?* 2020; *Jabberfear: indoctrination, fear-of-the-jab, and vaccination passports?* 2020).

Curiously the needle by which a "shot" is administered can be considered indicative of the linearity which contrasts so radically with any diversity of perspectives, as can be variously explored (*Missiles, Needles, Missions, Rifles, Projects, Bullets*, 2020).

Are the hesitant indeed to be honoured rather than condemned -- following the pattern of deprecation and treatment of conscientious objectors and pacifists in wartime. Should they be shot or interned? This question is notably framed by imposition of experimental vacccines (*Controls and Guinea Pigs in the Pandemic Experiment: honouring the sacrifice of vaccine refuseniks for the wider community*, 2021). That argument noted the value of *Learning from policy playbooks of the past*.

The widespread emergence of "health passports" (mistakenly termed initially as "immunity passports") has reframed freedom of movement in a manner which is now considered unquestionable by authorities, as discussed separately (*Licensed to Live? Licensed to Lie? Unlicensed to Die? Implications of universal vaccination -- voluntary or otherwise*, 2021). This evoked the consideration of human rights, now effectively set aside:

Mandatory vaccination in the light of human rights
Parallel between "disinformation" and "*diabolus in musica*"?

Reframing living, lying and dying as contractual responsibilities?
Universal Declaration of Human Rights as a licensing template

Ways of looking distinguished in terms of "compass" orientation

Any singular focus on the "right" way suggests a sense of direction -- framed to some degree by a linear metaphor. The "wrong" way is then very clearly assumed to be associated with movement in the opposite direction. The former is readily understood as "positive" and the latter as "negative". There is considerable ease to any such frame. Complications only arise when those moving in what they understand to be the "right" direction are held to be moving in the "wrong" direction -- as in the mutual assessment of opposing political parties.

There are however underlying assumptions associated with directionality. These are most evident in associations of "right' with "up", "upper' or "positive" in contrast with "down", "lower" or "negative" -- notably characteristic of writing and reading conventions, as discussed separately (*Unquestioned Bias in Governance from Direction of Reading? Political implications of reading from left-to-right, right-to-left, or top-down*, 2016).

Traffic metaphor: Such reversal of direction recalls the challenge of bi-directional road traffic -- with traffic in one direction looking one way and traffic in the other direction looking in the the opposite direction. Given its familiar complexity, the traffic metaphor suggests the possibility of richer configuration of ways of looking, as separately discussed (*Being in the Flow on Strategic Highways and Byways: enabling sustainable self-governance through traffic signage*, 2011).

Arguably there is a far higher order of familiarity with interrelating contrasting senses of direction in traffic than it has been possible to elicit with respect to "ways of looking" and their strategic implications. There is however the irony that experience in traffic calls for vigilance with regard to those moving in other directions -- rather than their condemnation as "stupid" or "selfish" as with the cultivated descriptors of the vaccine hesitants from the perspective of the mainstream narrative. A distinction can of course be made between driving in countries where there are relatively few rules of the road and in those with a comprehensive set of rules relatively strictly obeyed.

Water logic? One contrast to conventional logic in dealing with complex problems is the proposal of Edward de Bono (*Water Logic: the alternative to I Am Right You are Wrong*, 1993). This contends that traditional logic is static, based on the solid foundation of "is" and identity. Pursuant to the traditional "Rock Logic" of his earlier argument (*From Rock Logic to Water Logic*, 1968), "Water Logic" is based on "to" and the flow of the mind: *What does this lead to?* as opposed to *What is this?* This new logic results in a visual "flowscape", which allows people to layout and then look at their thinking.

Flowscapes are maps of perception showing the flow of r thinking. By understanding which connections and loops dominate thinking, perceptions can be challenged to enable the quest for alternatives. They can be understood as following from the engagement with traffic experienced as a process of flow.

The approach is extensively summarized and illustrated by Dale S. Deardorff (*Welcome to Edward de Bono's Water Logic Overview*, 30 March 2006). This is framed in the following terms:

- Traditional thinking of Western thinking is inadequate and that belief in it's adequacy is both *limiting* and *dangerous*.
- We need a thinking which takes into account the huge importance of *Perception*.
- We need a thinking that allows the constructive energies of creativity, design and *Self Organizing Information Systems*.

Encoding an Eightfold Way? Within the traffic metaphor, it is intriguing to note that the complexity of intersections between roads in different directions is relatively limited. There is therefore a case for looking at ways of "encoding" the famous Eightfold Way -- understood as a complexification of a single way, whether bidirectional or not.

Eastern traditions make extensive use of the 8-fold *BaGua* representation as a means of distinguishing orientations (below left). The difficulty from a Western perspective is that whilst that encoding offers some clarity in making the most fundamental distinction (using trigrams with either complete or broken lines), less evident is how to map two additional distinctions ("both right and wrong" and "neither right nor wrong") noted above. Even less evident is how the remaining four distinctions could be positioned and encoded.

The central image below indicates a shift from logical distinctions to their reflection in the environment as a form of qualitative encoding

with metaphorical connotations. That can be enriched by associating the pattern with the qnantitative curiousity of a magic square, a pattern of sigificance to governance according to Benjamin Franklin -- one of the Founding Fathers of the USA (*Salvation Enabled by Systemic Comprehension -- via aesthetics of magic squares?* 2015).

<table>
<tr><td colspan="3" align="center">Comparison of contrasting understandings of orientation</td></tr>
<tr><td align="center">Adaptation of <i>BaGua</i> encoding to logical distinctions (tentative)</td><td align="center">Magic square configuration of <i>BaGua</i> a cognitive gearbox?</td><td align="center">32-point compass rose basic to navigation</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td align="center">Adaptation of depiction by Shu Shengyu (2015)</td><td align="center">Brosen_windrose.svg: Brosenderivative work: Auanika, CC BY 2.5, via Wikimedia Commons</td></tr>
</table>

Compass metaphor: It is therefore of interest to note the Western use of the metaphor of a "moral compass" of which there are many accessible images on the web (Kenan Malik, *Quest for a Moral Compass: a global history of ethics*, 2015; William J. Bennett, *The Moral Compass: stories for a life's journey*, 1995). Of particular current relevance is whether moral compasses of different groups are comparable (Laura Geggel, *Atheists and believers have different moral compasses*, *Live Science*, 25 February 2021)

The available images of such compasses are however typically very simplistic in making distinctions and are primarily focused, perhaps necessarily, on the sense of good versus bad. It is for this reason that it is appropriate to note the distinctions long made with respect to the compass points vital for navigational purposes around the globe. Beyond North, South, East and West, distinctions are made between sets of 8, 16, 32 and 128 compass points -- each set known as a "compass rose". The image on the right (above) shows the set of 32 compass points.

As a provocative exercise, the distinctions potentially requisite in enriching any overly simplistic "moral compass" can be explored in the table below. The navigational compass points are adapted there to the distinctions true-false, right-wrong, good-bad, and positive-negative. Obviously the only ones normally recognized are those equivalent to the binary North-South distinction. Missing is the manner in which East and West might be appropriately named, beyond the indication of "neither-right-nor-wrong" and "both-right-and-wrong", for example. Even less evident in any moral compass is the nature of subtler distinctions so clearly evident in any compass for navigational purposes.

In practice the subtler distinctions are indeed evident in many situations in daily life where reduction to "true-false" or "good-bad" is deemed too absolute. The distinctions do not appear to have been named in English, although this may not be the case for some in other languages. Recognition of such distinctions is evident in the many references to "shades of gray". Curiously *Wikipedia* also offers an image of 9 "shades of gray" in a 3x3 pattern, resembling the magic square above, with an indication of their "common connotations" as being: pessimism, depression, boredom, neutrality, undefinedness, old age, contentment and elegance.

Strangely many of the images used in discussion of a moral compass are indeed marked with degrees around the circumference -- but which little indication as to what these might distinguish. Potentially more suggestive is the language of statistics which uses percentages and probabilities to distinguish degrees of true and false. Thus results indicating 95% probability may be considered "true", in contrast to a case with only 25% probability. This suggests a mapping around the circumference of any compass which would reflect the subtler distinctions -- although again without offering any name, other than in terms of percentiles.

Suggestive use of 32 standard compass points as a framework for "moral compass" points				
Compass points	True-False	Right-Wrong	Good-Bad	Positive-Negative
North	Truth	Right	Good	Positive
North-by-East	Truth-by-E	Right-by-E	Good-by-E	Positive-by-E
North-North-East	Truth-Truth-E	Right-Right-E	Good-Good-E	Positive-Positive-E
North-East-by-North	Truth-E-by-Truth	Right-E-by-Right	Good-E-by-Good	Positive-E-by-Positive
North-East	Truth-E	Right-E	Good-E	Positive-E
North-East-by-East	Truth-E-by-E	Right-E-by-E	Good-E-by-E	Positive-E-by-E
East-by-North	E-by-Truth	E-by-Right	E-by-Good	E-by-Positive
East	E	E	E	E
East-by-South	E-by-False	E-by-Wrong	E-by-Bad	E-by-Negative
East-South-East	E-False-E	E-Wrong-E	E-Bad-E	E-Negative-E
South-East-by-East	False-E-by-E	Wrong-E-by-E	Bad-E-by-E	Negative-E-by-E
South-East	False-E	Wrong-E	Bad-E	Negative-E
South-East-by-South	False-E-by-False	Wrong-E-by-Wrong	Bad-E-by-Bad	Negative-E-by-Negative
South-South-East	False-False-E	Wrong-Wrong-E	Bad-Bad-E	Negative-Negative-E
South-by-East	False-by-E	Wrong-by-E	Bad-by-E	Negative-by-E
South	False	Wrong	Bad	Negative

South-by-West	False-by-W	Wrong-by-W	Bad-by-W	Negative-by-W
South-South-West	False-False-W	Wrong-Wrong-W	Bad-Bad-W	Negative-Negative-W
South-West-by-South	False-W-by-False	Wrong-W-by-Wrong	Bad-W-by-Bad	Negative-W-by-Negative
South-West	False-W	Wrong-W	Bad-W	Negative-W
South-West-by-West	False-W-by-W	Wrong-W-by-W	Bad-W-by-W	Negative-W-by-W
West-South-West	W-False-W	W-Wrong-W	W-Bad-W	W-Negative-W
West-by-South	W-by-False	W-by-Wrong	W-by-Bad	W-by-Negative
West	W	W	W	W
West-by-North	W-by-True	W-by-Right	W-by-Good	W-by-Positive
West-North-West	W-True-W	W-Right-W	W-Good-W	W-Positive-W
North-West-by-West	True-W-by-W	Right-W-by-W	Good-W-by-W	Positive-W-by-W
North-West	True-W	Right-W	Good-W	Positive-W
North-West-by-North	True-W-by-True	Right-W-by-Right	Good-W-by-Good	Positive-W-by-Positive
North-North-West	True-True-W	Right-Right-W	Good-Good-W	Positive-Positive-W
North-by-West	True-by-W	Right-by-W	Good-by-W	Positive-by-W

An approach to reinterpreting more meaningfully the inherently artificial tabular articulation above is suggested by the explicit circular articulation of 180-plus distinctive cognitive biases (reproduced above) -- a curious form of cognitive compass in its own right. Exploiting a play on words, does the challenge to the adequacy of a "moral compass" lie in its as yet unexplored ability to "encompass"?

Fuzzy sets? Of particular relevance is the argument of Toby Ord (*Degrees of Truth, Degrees of Falsity*). This provides a sketch of a new system of logic that combines degrees of truth and degrees of falsity to provide a very flexible and elegant conception of truth value. Such a possibility could be potentially related to a "post-truth" enrichment of any "truth table" (*Towards articulation of a "post-truth table"?* 2016).

Ord notes the potential value of the research on fuzzy sets by Krassimir Atanassov (*Intuitionistic Fuzzy Sets: theories and applications*, 1999). Many references of potential relevance are a feature of the annual International Conference on Intuitionistic Fuzzy Sets and are published in the *Notes on Intuitionistic Fuzzy Sets*.

It is therefore of interest to note the application of this approach to the pandemic:

- Fazal Mehmood Khan, et al: *Epidemiology of coronaviruses, genetics, vaccines, and scenario of current pandemic of coronavirus diseases 2019 (COVID-19): a fuzzy set approach* (*Human Vaccines and Immunotherapeutics*, 17, 2021, 5)
- Toly Chen, et al: *Analyzing the Impact of Vaccine Availability on Alternative Supplier Selection Amid the COVID-19 Pandemic* (*Healthcare*, 9, 2021, 1). As an exercise in fuzzy collaborative intelligence, this calibrates a fuzzy geometric mean (cFGM)-fuzzy technique for order preference by similarity to ideal solution (FTOPSIS)-fuzzy weighted intersection (FWI) approach.
- Anjan Mukherjee, et al: *Interval Valued Fuzzy Soft Sets Similarity Measure for Determining COVID-19 Patients* (*International Journal of Scientific and Engineering Research*, 11, 2020, 9)
- Sayem Ahmed, et al: *Evaluation of Flexible Strategies to Manage the COVID-19 Pandemic in the Education Sector* (*Global Journal of Flexible Systems Management,* 2021, April). This reviews efforts to implement fuzzy logic to deal with vagueness and subjectivity, noting the need for more prior information
- Tin-Chih Toly Chen, et al: *A Pre-aggregation Fuzzy Collaborative Intelligence-based Fuzzy Analytic Hierarchy Process Approach for Selecting Alternative Suppliers amid the COVID-19 Pandemic* (Preprints, 2020)

Modes of representation? Although there is an extensive literature on the topic of fuzzy sets, with a number of practical applications, even those addressing the pandemic are extremely obscure -- and perhaps necessarily so, given the challenges posed by the data. It is therefore interesting to note the efforts to render that subtlety comprehensible through visualization techniques. One of which is potentially suggestive of the challenge of reconciling the contrasting "compass" directions of distinctive ways of looking..

Towards visual representation of fuzzy sets	
Vassia Atanassova and Lyubka Doukovska: - *Compass-and-straightedge constructions in the intuitionistic fuzzy interpretational triangle: Two new intuitionistic fuzzy modal operators*. (*Notes on Intuitionistic Fuzzy Sets*, 23, 2017) - *Representation of fuzzy and intuitionistic fuzzy data by radar charts*: (*Notes on Intuitionistic Fuzzy Sets*, 16, 2010 1)	

As noted above, a cross-European survey has been made to clarify resistance to universal vaccination (A. Recio-Román, et al. *Global Vaccine Hesitancy Segmentation: A Cross-European Approach*, *Vaccines*, 9, 2021, 6). The attitudes to vaccination are reflected in a pie-chart representation (below left) of the data (as presented in tabular form above).
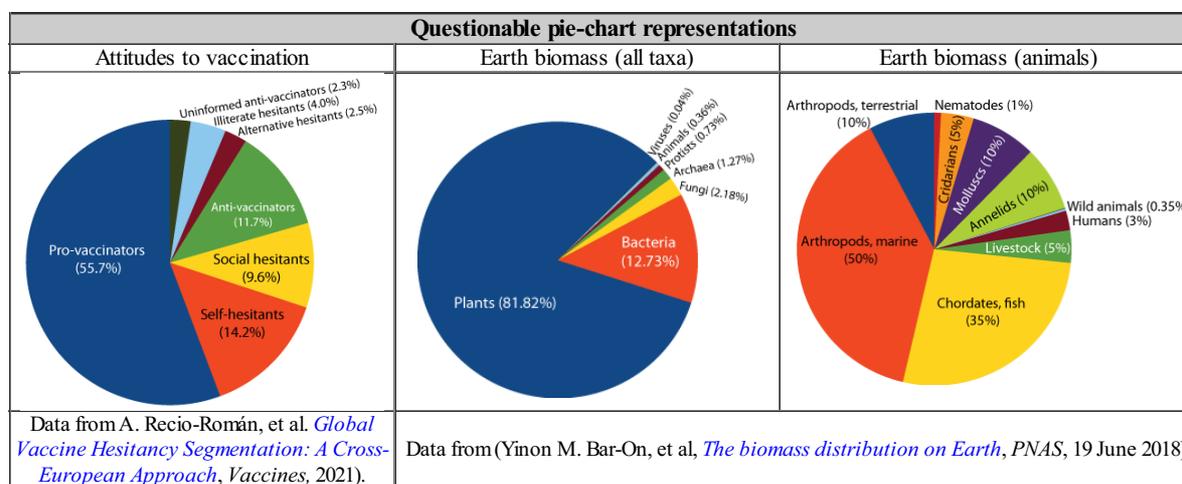
In contrast with representation of the subtlety of fuzzy sets (above right), the pie-chart representation of attitudes to vaccination merits critical commentary. Clearly the survey sought effectively to "weigh opinions", presented here as percentages of the total sample. As framed, the strategic challenge is to achieve universal acceptance of vaccination (coloured blue) -- eliminating the multi-coloured hesitants to the extent possible. The "light at the end of the tunnel" is framed as herd immunity with 70-80% vaccination.

In a period when there is increasing concern with biodiversity loss as a consequence of climate change and the collapse of ecological systems, it is useful to contrast the depiction on the right with pie-charts of the taxa composing the planetary biomass. Understood as the "weight of living species", the composition is summarized in the central image below. Details of the segment representing animals (0.36%) are presented separately in the image on the right -- indicating the "weight" of humans in biomass terms, namely 3% (of the animal total).

Arguably all these representations are misleading and a form of misinformation. That on the left is misleading in failing to distinguish the motivation of those holding particular views, notably in the case of the conformity exhibited by pro-vaccinators. Nor does it indicate the degree of understanding of the "science" (if any) of those in all segments. The focus on biomass in the central image, clearly does not include either the number of **distinct species** in each segment, nor the numbers of **living entities** in each segment.

An alternative pie-chart might distinguish the number of species, for example (A.D.Chapman, *Numbers of Living Species in Australia and the World*, Australian Biodiversity Information Services, 2009). Another might distinguish the number of individual entities in each segment. Given the recognized importance of bacteria to the planetary ecosystem, despite constituting only 12.73% of biomass, it is appropriate to note that over 30,000-40,000 distinct species have been recognized. Humans and most animals carry millions of bacteria.

The third pie-chart is especially misleading given that primary importance is conventionally accorded to the number of humans on the planet, namely 3% of the animals -- whose relative opinions are the focus of the simple pie-chart on the left. Missing in these representations is any sense of the role and value of what is distinguished -- however weighty or numerous -- to the viability of the ecosystem. It is blithely assumed that ensuring the homogeneity of human herd immununity, as the goal of universal vaccination, will in no way undermine the requisite variety of the human ecosystem -- whether in genetic terms or in psychosocial terms. Universal masking might well be seen as symbolic anticipation of such homogeneity.

Questionable pie-chart representations		
Attitudes to vaccination	Earth biomass (all taxa)	Earth biomass (animals)
Data from A. Recio-Román, et al. *Global Vaccine Hesitancy Segmentation: A Cross-European Approach*, *Vaccines,* 2021).	Data from (Yinon M. Bar-On, et al, *The biomass distribution on Earth*, *PNAS*, 19 June 2018)	

Ways of looking in terms of angles and orientations

Any reference to "way" offers a degree of emphasis to the linearity of the pathway. The minimizes emphasis on whatever is not straight, namely curves, corners and angles. These are however relevant to ways of looking, as apparent from the following.

Of some relevance is the reference to "out of left field" as meaning "unexpected", "odd" or "strange" -- framing the question of how this might apply to any alternative understanding of the pandemic. Is the Delta variant to be understood as having emerged "from that direction"? Could it be recognized as a "curveball"? Will this prove to be the case with other variants (Lambda, etc) and with new strategic perspectives on the challenges posed?

Angle of perspective metaphor? Compilation of an official press release, and the requirements of journalism, strongly emphasize the need for a "news angle" to engage the attention of the audience. Use is otherwise commonly made of exploring, debating or discovering a "new angle", as indicated by the following:

- H. Finnbogadóttir, et al: *Looking at Lfe from Different Angles: observer perspective during remembering and imagining distinct emotional events*(*Psychology of Consciousness: Theory, Research, and Practice,* 1, 2014, 4)
- Cathleen Lewis. *Historiographic Clues: History and American Studies*: Analyze the primary sources which the author uses; they should give you some idea of his/her angle of study.
- Tamara Relis: *It's Not About the Money!: a theory on misconceptions of plaintiffs' litigation aims* (*Law Review*, 68, 2007, 2): This examines from a new angle a long-standing debate on a central question of the legal system
- M.A.C Hinton, et al: *The Phylogeny of Man from a New Angle* (Transactions of the Royal Society of Canada, 15, 1938)

For Aaron Crosman: *Looking at a project from different angles* (*Spinning Code*, August 2016):

- Too often all kinds of experts get into a rut and lose track of the perspective non-experts, and other experts with whom they disagree.
- Sometimes when we look at a problem twice it looks different because we changed something small, and we think we've seen all the valid angles. But we've just reinforced our sense of superiority not actually explored anything interesting yet.
- But when you take the time to look at things from different angles, perspectives, and positions sometimes you get to discover something you didn't know to ask about.

Emphasis was placed on "new angle" by Emma Granqvist in arguing for a platform for negative, unexpected or controversial results in a field (*Looking at research from a new angle* (*Elsevier Connect*, 11 May 2015). The author argued that scientists should move away from positive bias to ensure all research results are shared through peer review. This was associated with the launch of an open access journal *New Negatives in Plant Science: a platform for negative, unexpected or controversial results* (launched 2014-discontinued 2016). The experiment was understood as a pilot for similar journals in other fields (*New Negatives in...*). Clearly such a journal would have been beneficial with respect to the science of masking, social distancing, lockdowns, and vaccines.

In using "new angle" and "angle of perspective" as metaphors, it is however entirely unclear the nature of the cognitive or communication space in which the sense of angle is as meaningful as it is when reference is made to it. Cognitive appreciation of this is evident in the plea of the poet John Keats for *Negative Capability* (1817) -- so obviously lacking in the strategic response to the pandemic.

Cognitive orientation: As a field of study this necessarily implies a particular understanding of orientation (*Cognitive Orientation: an overview* ScienceDirect). The latter notes the early study of Hans Kreitler regarding conceptualized defense mechanisms as cognitive strategies for the resolution of internal conflicts (*Cognitive Orientation: A Model of Human Behavior, British Journal of Psychology*, 63, 1972, 1). This differentiated defense mechanisms from strategies for the resolution of purely cognitive inconsistencies and from distress management (coping) strategies.

There is related recognition of cognitive factors as referring to characteristics of a person that affect performance and learning (Eric Roy, *Cognitive Factors, Encyclopedia of Behavioral Medicine*, 2013). These factors serve to modulate performance such that it may improve or decline. These factors involve cognitive functions like attention, memory, and reasoning.

Again however it is is unclear with respect to what there is "orientation". or why that term is held to be meaningful.

Geometrical orientation? With its geometrical implications, especially in 3D, it is to be expected that "orientation" would be clarified to a far greater degree. This was an aspect of a related discussion (*Encoding Coherent Topic Transformation in Global Dialogue: memorability of cognitive implication in symmetry-preserving operations on polyhedra*, 2021). In 2D, some of the issues were clarified there with regard to any sense of *"Cognitive tiling" or "conceptual tiling"?*

Consideration was given there to metaphorical implications from tiling "operations" as indicated in the table below. The geometrical terms by which the tiling patterns are distinguished are far from unrelated to those descriptive of discourse and debate -- if only metaphorically and/or via synonyms. Potentially more relevant, however, is the manner in which metaphorical uses of the geometrical terms are employed far more loosely in discourse than they are with respect to the transformations associated with those operations. This may indeed have implications for distinctive formulation of strategies.

Exploration of cognitive implications of operations engendering distinctive "tiles"		
operation	synonym of cognitive significance	metaphors
translation	movement; shift framework; change language; change of perspective	Jessie Chaffee, *36 Metaphors for Translation*, *Words without Borders*
rotation	reorientation; change of **orientation**; rotation of office	*Rotation and Other Metaphors*; *Multidimensional Word and Sentence Rotation*; *Rotation as Metaphor*; *Crop Rotation as a Metaphor for Interdisciplinary Software Work*; *What Is an Orientational Metaphor?*; *Orientational Metaphors*
reflection	reversal, opposite perspective; mirroring	*Reflecting on the Metaphor and Practice of Reflection in Education*; *A critical and functional analysis of the mirror metaphor with reference to the media's responsibility towards society*; *Mirror as a metaphor*; *Human Mirrors: metaphors of intersubjectivity*
glide reflection	segue; nimble?; "revolving door"? "fast footwork"?	*The Revolving Door Metaphor*

Given the common interpretations of the terms describing the operations in the Euclidean plane, it is to be expected that the metaphors would be suggestive of dynamics that are well recognized in discourse, group dynamics, negotiation and politics. It is however possible that their generic significance would be even more familiar as articulated in dance -- notably through the manner in which dialogue and group dynamics are frequently framed in musical terms or as a "dance".

That discussion noted in particular the focus of dialogical analysis, or more precisely dialogical interaction analysis. This refers to a way of analyzing human communication which is based on the theory of dialogism. This makes several assumptions. It assumes that human communication entails the interaction of diverse **perspectives** and is embedded in a socio-historical context, that the meaning of a communication can be different to the various participants, that it is important to examine the consequences of a communication, and that **each participant in a communication is, to some degree, orienting to the orientation of the other**. How are contrasting "orientations" then experienced?

Orientation and embodied cognition: The generation of a tiling pattern could potentially be understood in terms of morphogenesis as notably articulated by the topologist René Thom (*Structural Stability and Morphogenesis*, 1972), especially given his interest in dance, as noted separately (*Coherence of hyperreality through aesthetic intuition and embodied cognition?* 2021). There it was argued that the fundamental cognitive operations in dialogue were variously implied in aesthetic practice and performance, most obviously dance and music. The suggestion was made that the operations on polyhedra invited metaphorical interpretation to elicit their significance for dialogue -- without aspiring to closure on the matter.

The earlier discussion of polyhedra included consideration of the following:

Given the existence of axes of bias, and the right-wrong axis, it is curious that academic preoccupation with logic has given rise to a field of study of "oppositional" geometry (*Oppositional Geometry: mathematics and philosophy of opposition* -- with a specific focus on "oppositional logic". This has implications for discourse between opposing perspectives in international relations (Fabien Schang, *A Formal Epistemology of International Relations*; *Logic in Opposition*, 2013; *Oppositions and Opposites: Around and Beyond the Square of Opposition*, 2012).

Such studies have potential implications with regard to the pandemic -- given the manner in which "anti-vaxxers" have been positioned in opposition to mainstream discourse. As discussed and illustrated separately however, the geometry in question requires representation in 3D rather than 2D (*Neglected recognition of logical patterns -- especially of opposition*, 2017). This geometry suggests a cognitive implication for "orientation", although this is implicit rather than explicit in the logical framing and visualizations.

Humour as a way of evoking distinctive perspectives

The future may find it remarkable that the mainstream narrative with regard to the pandemic is seemingly characterized by a total lack of humour. The matter is deemed far too grave, given the number of cases, the number of deaths and any predictable development of the crisis. It could however be hypothesized that the widespread use of lockdown has implications for any humour -- as with those of masking and any discouragement of social interaction.

The point has been implicitly argued by Eileen F. Toplansky (*Comedy Is a Dictatorship's First Victim*, *American Thinker*, 23 April 2021). Explicitly the author argues the point otherwise: *Humor has always been one of the first targets of a dictatorship. It is no surprise that in America, comedians can no longer function because of rampant political correctness.* Responses to the pandemic are indeed framed in terms of political correctness, as defined by the mainstream narrative. It is deemed bad taste to mock those choosing to wear masks -- by wearing tin hats or antenna for example.

This perspective contrasts with that evoked with respect to the dictatorships of the past:

- Iain Lauchlan: *Laughter in the Dark: Humour under Stalin* (*Le rire européen/European Laughter*, Perpignan University Press, 2009), with numerous references
- Ben Lewis: *Hammer and Tickle: the Communist joke book*, *BBC4 Storyville*, May 2006)
- J. C. H. Davies: *Humour and Protest: Jokes Under Communism* (*International Review of Social History*, 9, 2007, December)
- Ibrahim El Houdaiby: *Laughing at dictatorship* (*The Guardian*, 12 January 2008)
- Rudolf Herzog: *Laughing All the Way to Autocracy* (*Foreign Policy*, 8 February 2017)
- Robert Fisk: *Dark humour in a time of dictatorship* (*Independent*, 19 February 2011)
- Steve Lipman: *Laughter in Hell: The Use of Humor during the Holocaust* (Jason Aronson, 1993)

Any search for pandemic humour will however reveal numerous collections of jokes on the web. Clarification is required as to how that humour contrasts with that noted in such references. A key question is whether it constitutes what might be termed **humour of accommodation with the mainstream narrative** in contrast with forms of humour which critically reframe appreciation of that narrative -- effectively **humour calling into question the maninstream narrative**.

Expressed otherwise, how is a distinction made between the humour of those subscribing to dictatorship to be contrasted with that of those critical of it? Given current preoccupation with censoring "misinformation", what forms of humour would be recognized as calling for censorship according to emerging criteria?

How do the various forms of humour elicit a more creative integrative approach to any crisis, as separately explored (*Humour and Play-Fullness: essential integrative processes in governance, religion and transdisciplinarity*, 2005)?

The singularity of the mainstream narrative, together with the uncritical deployment of a simplistic set of strategic devices, is suggestive of policy-making skills characteristic of the autism spectrum. It is well-recognized that the development of pandemic strategies has been largely informed by computer modelling. It is known that those on the autism spectrum tend to excel at technology usage and the requisite computer coding -- specifically logic, predictability and visual learning ability (Wellcome Trust, *People with autism possess greater ability to process information, study suggests*, *ScienceDaily*, 22 March 2012; Zoe Dayan, *3 Reasons Autistic Children Excel at Computer Coding*, *CodeMonkey*, 8 October 2017).

It is however also recognized that those on the autism spectrum are constrained in their social skills -- a dimension only tardily acknowledged as the strategic response has developed. Particular focus has been given to the constrained ability of the autistic to appreciate humour (Ching-LinWu, et al, *Do individuals with autism lack a sense of humor? Research in Autism Spectrum Disorder*s, 8, 2014, 10; Kai Nagase, *The traits of autism spectrum disorder in the general population influence humor appreciation*, *Cogent Psychology*, 6, 2019 1; Jason McCormick, *Asperger's Syndrome and Humor*, *Asperger/Autism Network*).

Arguably the world is witness to a particularly narrow pattern of strategic elaboration in response to the pandemic. This is one which is especially constrained in its ability to take account of alternative possibilities and modes of understanding -- as exemplified by humour.

This narrow pattern may well also be evident in the scientific approach to climate change, informed as it is by complex computer modelling of greater sophistication. The challenge with respect to both the pandemic and climate change is engagement with those unpersuaded by the science-inspired style of mainstream discourse -- whatever its claims to be evidence-based.

Recent publication of the new IPCC report on the predicted climate change catastrophe has been framed as a "Code Red" warning for global civilization (*Sixth Assessment Report, Climate Change 2021: The Physical Science Basis*, August 2021). It follows decades of earlier warnings on the matter whose neglect the new report is naively unable to address with the perspectives of other disciplines. The current uncritical complicity of "science" with government and the pharmaceutical industry severely reduces the credibility of any such warning, as can be variously highlighted (*64 Questions for the Environmental Conservationists of the World: raising the question as to why they are not effectively addressed*, 2017)..

In an earlier effort to appreciate that engagement otherwise, a tale much-appreciated by children of all ages was explored through a different lens (*Enrolling Winnie-the-Pooh's Companions in Climate Change Discourse: Key roles in the environmental psychodrama of Hundred Acre Wood*, 2019). The approach was partially inspired by a somewhat tongue-in-cheek article (following "exhaustive" research) by Sarah E. Shea, Kevin Gordon, Ann Hawkins, Janet Kawchuk, and Donna Smith (*Pathology in the Hundred Acre Wood: a neurodevelopmental perspective on A. A. Milne*, *Canadian Medical Association Journal*, 163, 2000, 12).

The strategic chaos is exacerbated by a confusion of contradictory messages -- authoritative misinformation in its own right. It is in this surreal context that there is a case for seeking inspiration from the poem which has long intrigued children of all ages -- given its integration into the sequel of the highly imaginative classic by Lewis Carroll (*Alice's Adventures in Wonderland*, 1865; *Through the Looking-Glass, and What Alice Found There*, 1871). This is the so-called nonsense poem titled *Jabberwocky* -- well-featured in literary studies, with experimental translations into many languages as a consequence.

It has been argued that the poem relies on a distortion of sense rather than "non-sense", allowing the reader to infer meaning and therefore engage with narrative while lexical allusions swim under the surface of the poem. Hence the value of adapting the poem to the pandemic response (*Jabbercovid from the Jabberplex: in celebration of the jabber strategy ensuring a jab-for-all as a global panacea*, 2020).

Effective strategic commitment to oversimplification and unsubtlety

Science? The above argument endeavours to clarify how the mainstream narrative regarding the pandemic is currently dependent on an excessively narrow perspective -- effectively a uni-disciplinary perspective in strategic terms, whatever the claims to interdisciplinarity for public relations purposes. The strategic "eggs have all been placed in one basket" (as noted above). As a consequence of this dependency, all alternative perspectives must necessarily be ridiculed and dismissed -- even suppressed as dangerous misinformation. This is fundamentally at variance with what is upheld as the scientific method (*Challenges of Science Upheld as an Exclusive Mode of Inquiry: pseudorelevance of science to global crises?*. 2021).

Science is now positioning itself like the extraterrestrial Daleks of science fiction -- famed for their primary interaction with those with whom they disagree through their call: *Exterminate*. Science is now as complicit in the dubious priorities of governance as has been religion in the past -- a pattern from which science claimed vigorously to have distinguished itself. This bodes ill for the opinions of science with respect to the anticipated challenges of climate change and environmental collapse.

Notably missing with regard to the pandemic is clarity with regard to the insights by which strategies are claimed to be informed. **Where indeed is the evidence-based "science" to be found which justifies use of this strategy and its recommendation by the World Health Organization?** Has the experimental research been credibly replicated and critically reviewed? Have conflicts of interest been highlighted and addressed? Are there dissenting views among scientists which merit due consideration? The lack of transparency is such that every suspicion is justified -- especially since the strategic recommendations, supposedly informed by "science", are modified with inexplicable frequency.

"Essential" people? Emergency provisions in response to the pandemic have resulted in a form of triage through which a class of essential people and functions have been defined as exceptions to the restrictions imposed upon others. (Centers for Disease Control and Prevention, *Interim List of Categories of Essential Workers Mapped to Standardized Industry Codes and Titles*). This CDC list notes:

> This interim list identifies "essential workers" as those who conduct a range of operations and services in industries that are essential to ensure the continuity of critical functions in the United States (U.S.). Essential workers were originally described by the U.S. Department of Homeland Security's Cybersecurity and Infrastructure Security Agency's (CISA): *Guidance on the Essential Critical Infrastructure Workforce: Ensuring Community and National Resilience in COVID-19 Response*, (18 August 2020).

Termed "essential", this recalls fictional exploration of those who would have access to bunkers in times of natural disasters and nuclear war -- or even of space on vessels to other planets. There is some irony to use of the term in that it borrows from the significance of essential and essence is relation to insight and wisdom -- which in no way figure in current emergency provisions, in contrast with those recognized as agents.

Risk-taking? The strategic challenge of the pandemic has been widely framed in terms of war, as noted above It is therefore curious that the primary response has effectively been to encourage the population to "cower", as noted above. Arguably this is a collective demonstration of risk-aversion precluding any consideration of the risk-taking which is otherwise upheld as a necessary response in war time -- and duly honoured for the courage that individuals and communities demonstrate.

The purported focus of leadership in the pandemic has been on saving lives at all costs -- a strategy with disastrous economic implications in the present and in the time to come. For some the consequences are indeed comparable with war. Leadership in wartime is however renowned for its questionable tolerance of death -- whether among its own forces or among those of the enemy. The examples of World War I trench warfare and Hiroshima need little commentary, These can be understood as risk-taking, however

questionable. The pattern has been evident in arenas in the Middle East.

Cultivation of risk-aversion has precluded any systematic assessment of how tolerance of risk of death might be assessed in relation to the pandemic. Despite this posture, people are indeed dying in numbers which may exceed those in some recent arenas of military conflict. There is therefore an undeclared tolerance of death -- dubiously extended to the numbers dying from COVID-related infections in developing countries, and predictably expected to die there in the immediate future. These numbers follow the "calculated" (?) risk of not allowing them access to the stocks of vaccines hoarded by developed countries.

Potentially more relevant is the manner in which risk-taking by individuals and groups has come to be penalized in the response by authorities to the pandemic. The short-term political benefits of risk-aversion have engendered an avoidance of any assessment of the consequences of acceptance of a higher level of risk -- a level characteristic of wartime. The skills of the insurance industry in that regard have seemingly not been brought into play -- despite the obvious economic impacts.

With the strategic emphasis on "cowering" appropriately, individuals and groups have been deprived of the possibility of taking levels of risks they deem appropriate -- as in wartime. Significant in those periods are distinctions between forced conscription, voluntary conscription, and the use of a lottery system to select those to be "sent to the front". There is no consideration of such options in relation to the pandemic.

With little analysis, it is assumed that those taking life-threatening risks are in all probability a threat to the wider community -- when whole countries are locked down as a result of a threat in one suburb. How might this threat be limited without the current levels of institutionalisation of risk-aversion -- with its potential implications for the psychology and culture of populations in the future? What consideration is given to enabling people to move beyond the fears reinforced by cowering (Bruce Schneier, *Beyond Fear: thinking sensibly about security in an uncertain world*, 2003; Dorothy Rowe, *Beyond Fear*, 2011).

Triage? It can therefore be argued that there is indeed an undeclared system of triage in place. Triage is indeed an unfortunate characteristic of wartime and the challenge to allocation of scarce resources. Conventionally a 5-fold classification is used to indicate the level of threat to the life of the person concerned, irrespective of whether resources can be deployed in response. As a form of rationing, restriction of vaccination to particular age groups can be seen in this light. The effective response of developed countries to developing countries could however be understood as a cynical application of such a classification to justify degrees of negligence.

Whatever claims are made to the contrary, **developing countries are being subject to triage**. Framed as the misinformation typical of conspiracy theorists, there is no lack of commentary on the probability of a hidden depopulation agenda -- for which universal vaccination may have been developed or exploited as a key device.

Especially sobering is the considered reflection of Lawrence Cohen (*The Culling: Pandemic, Gerocide, Generational Affect*, *Medical Anthropology Quarterly*, 34, 2020, 4):

> Old age has been central to public health rationalities and contestations of the 2019–2020 coronavirus pandemic. This article thinks through what age is and does in pandemic times by juxtaposing four domains of ethical publicity in which age comes to matter: (1) mass fatality of old persons under conditions of variable unpreparedness; (2) circulation of social-Darwinist argument for herd immunity through culling of the weak; (3) everyday challenges of late life care as these are amplified under quarantine; and (4) long-term conditions of economic and political impasse and environmental collapse, experienced as failure of older generations and abandonment of younger ones, a situation here termed generational affect. It asks to what extent the figure of the cullable old renders racialized disparities natural and makes sense through a generational affect in which the world feels as if the survival of the young is in question.

Given the criticism of overly simplistic linear thinking is the argument above, the discussion by Cohen of the distinction between unsubtle and subtle thinking merits careful consideration. He deplores the subtlety with which mass death has been implicitly orchestrated.

> Triage, as it circulates across a range of media, offers itself as metonym for a broader implication: For the majority to evade or escape from the society of total quarantine, the old and more generally the vulnerable must be abandoned and let die. I frame this abandonment through the aggressive figure of *gerocide*—the willed mass death of persons deemed old.... Adriana Servello and Ettorre Evaristo framed the indirect agency at stake in such targeting as "subtle"...
>
> Pandemic preparedness for Servello and Evaristo demands an institutional capacity to enact and enforce *distinctions*: between old-age frailty and pandemic infection, or between general medicine's expertise in maintaining chronically ill older persons continually readmitted to intensive care settings... and geriatric medicine's ability to discriminate between that which can be managed and that which must be medicalized and treated. Such a failure to distinguish the differential eventfulness of disability and emergent pathology is the original accusation levied against general medicine in the early 20th-century founding of geriatrics

Rather than focusing on the elderly, **Cohen's argument could be applied to the many who are variously "disabled", including those disabled by lack of resources, most obviously those in developing countries**. As Cohen notes:

> A meme that has been making the rounds within and beyond the populist right in the United States and United Kingdom decries shelter-in-place mandates as unlikely to achieve "herd immunity", and suggests that the mass death -- of the elderly, the homeless, and the chronically ill (most vulnerable if these mandates were abandoned) -- might be not only a necessary but a beneficial outcome.

Whilst such possibilities are readily upheld to be unthinkable in conventional discourse, it is not as though there is any lack of capacity to enable such an outcome, whether deliberately, through indifference, or through calculated negligence. Potentially more to be regretted is the suppression of open debate on all conceivable options, including those that might result from human error on the part of those in power -- as caricatured in the black comedy film *Dr Strangelove* (1964).

With respect to Cohen's focus on the elderly, it is indeed appropriate to ask whether those developing computer models of strategic options in response to the pandemic attached any weight whatsoever to the effects on the vulnerable. The anonymous modellers have clearly been shown to be lacking in even a modest level of human sensitivity, although this has not been called into question. As conceived, given the level of pain the strategic response has engendered, the outcome for humanity may come to be described by the surgical adage: *the operation was a complete success, although the patient died*. Might the pain have been distributed otherwise through more sensitive modelling of what merits recognition as "triage" -- given the constraints on resources and their distribution?

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