



laetus in praesens

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18 June 2011 | Draft

Mind Map of Global Civilizational Collapse

Why Nothing is Happening in Response to Global Challenges

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Context?

Two-D projection: Exemplifying the nature of cognitive flatland

Three-D projection: Global configuration of incompatible uprightiness

Three-D projection: Embodying disintegrative dynamics as fundamental to integrative design

Enabling comprehensible global configuration of concept maps

Global configuration of insights from "flat-pack" conventional system mapping

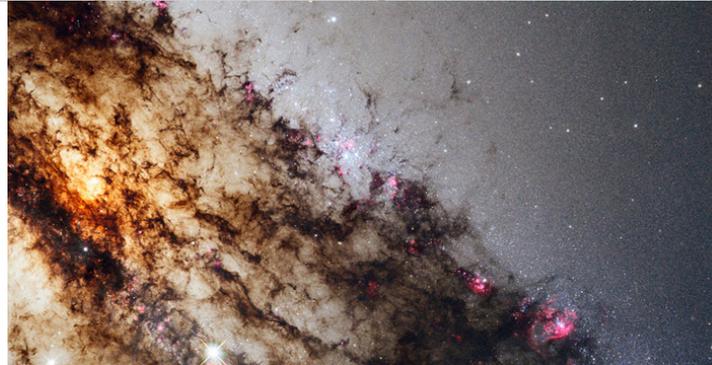
Conclusion

References

Produced on the occasion of the release of a map of a massive cosmic galactic collision 11 million light years from Earth -- and ungovernable massive uprisings in the Mediterranean region on Earth, endangering the European and global economies

Context?

Is this the map of global civilizational collapse ? No it is not ! Although it might be.



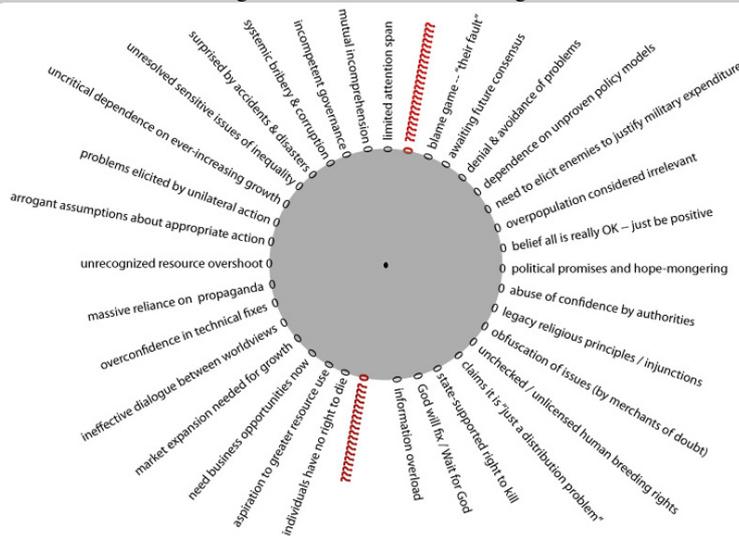
This is the latest image of the light elliptical galaxy Centaurus A. It is 11 million light years from Earth, and is visible to amateur astronomers. The unprecedented detail comes via the [Wide Field Camera 3](#) of the [Hubble Space Telescope](#) -- combining images from multiple wavelengths ([see enlargement](#); courtesy R. O'Connell of the University of Virginia and the WFC3 Scientific Oversight Committee, within the framework of NAASA, ESA, and the Hubble Heritage -- STScI/AURA -- ESA/Hubble Collaboration). It was released on 16 June 2011). At the centre of the galaxy is a massive black hole -- weighing 55 million times that of the Earth's Sun. The ejected particles release intense bursts of radio waves and x-ray radiation. Centaurus A is going through a galaxy collision by devouring a spiral galaxy.

Curiously, whilst science can produce awe-inspiring images of conditions 11 million light years away, it seems to be totally incapable of applying resources such as to generate sophisticated images of the condition on Earth. There is no "Hubble Earth Telescope" -- with a "Wide Field Camera 3" -- capable of mapping the conditions undermining global governance capacity. Many satellites of course orbit the Earth, but they are only capable of focusing on tangibles -- such as the contents of the backyards of the homes of people -- not their degree of despair nor whether they rely on narcotic substances.

Science seemingly cannot detect and map intangible psychosocial factors which are inherent in the processes of global civilizational collapse. There is no single image to portray this collapse.

Two-D projection: Exemplifying the nature of cognitive flatland

This is a map of global civilizational collapse !
Indicative configuration of factors undermining fruitful action



The above image follows from previous experiments in offering a single image, notably as presented in:

- [Mapping the Global Underground: articulating Insightful Population Constraint Consideration \(IPCC\)](#) (2010)
- [Recognizing the Psychosocial Boundaries of Remedial Action: constraints on ensuring a safe operating space for humanity](#) (2009)

Missing from the image are dependency relationships between the points to show how one condition aggravates another. However inclusion of such relationships is a simple educational exercise in which many would be happy to indulge -- especially to reflect their biases. A more complex variant of this exercise resulted in the massive online databases of the [Encyclopedia of World Problems and Human Potential](#) (commentary). These take better account of the variety of perspectives but raise the question of how to cluster such a variety of contrary perspectives in a single map -- of which the above is but an indicative example (and necessarily provocative). Also missing from the above image is any attempt to cluster related points within it in order to offer further insight.

Some more complex possibilities have been explored with respect to that *Encyclopedia* initiative:

- [Experimental SVG Representations of Entity Interrelationships](#) (2007)
- [Preliminary NetMap Studies of Databases on Questions, World Problems, Global Strategies, and Values](#) (2006)
- [Simulating a Global Brain using networks of international organizations, world problems, strategies, and values](#) (2001)

Will the projected "Living Earth Simulator", of the [FuturICT](#) EU research initiative -- a 10 year 1 billion EUR program "to explore social life on earth and everything it relates to" -- offer more comprehensible maps of relevance to governance than those of the [Limits to Growth](#) project in 1972 (*Social Supercomputing Is Now*, *Science News Online*, 26 May 2010)? If not, **will the simulation be able to show why not** -- in the light of issues discussed separately (*Considering All the Strategic Options: whilst ignoring alternatives and disclaiming cognitive protectionism?* 2009)?

Will that simulation be able "explain" the deprecation of the relevance of that initiative to governance, as reviewed by Graham Turner (*A Comparison of the Limits to Growth with Thirty Years of Reality*, 2007)? Will it be able to take account of the sociopathological issues raised from a cybernetic perspective by Maurice Yolles, *et al.* (*Toward a formal theory of socioculture: a yin-yang information-based theory of social change*. *Kybernetes*, 2008)? What are the implications of despair for global governance (*Implication of Personal Despair in Planetary Despair*, 2010)?

Three-D projection: Global configuration of incompatible uprightness

The above challenges can be usefully configured in three dimensions. This has the potential advantage of suggesting how some of them may be effectively "invisible" from the perspective of those associated with, or recognizing, others positioned elsewhere around the surface. Such a configuration is curiously appropriate to the principled "uprightness" with which individual challenges may be associated -- by the constituencies which "uphold" their inherent value.

The polyhedron used is the [icosidodecahedron](#) which has 30 vertices. The challenges above were each associated with a vertex. The images below result from various standard geometrical manipulations of that form -- designed to trigger imaginative reframing of the relationship between the challenges. Many other such manipulations are possible to highlight other relationships.

The images are each screen shots of what can be viewed (and enlarged) much more clearly in rotation -- using a standard software package: *Stella*. This is developed by [Robert Webb](#) (*Stella: Polyhedron Navigator*). It is with this application that the images were generated and by which they were modified interactively. The clarity of the text, corresponding to the challenges presented above on the two-dimensional map, is however secondary to the projections by which they might be configured.

The approach has been extensively discussed separately:

- [Polyhedral Pattern Language: Software facilitation of emergence, representation and transformation of psycho-social](#)

Global configuration of insights from "flat-pack" conventional system mapping

There is widespread exploration of various forms of graphical representation of networks -- whether of people, groups, topics or other entities. [Topic mapping](#) refers to the graph structure that goes beyond [concept maps](#) (nodes with labeled arcs for relations). Topic maps make the labeled arcs into topics. Everything is then understood to be a topic -- an object that stands as a container for representations (key/value pairs). [Topic modeling](#) is then a type of statistical model for discovering the abstract "topics" that occur in a collection of documents. [Latent Dirichlet allocation](#) (LDA) is currently one of the most common, with various extensions.

Statistical text analysis techniques such as [Latent Semantic Analysis](#) (LSA), [Hyperspace Analogue to Language](#) (HAL), and Latent Dirichlet Allocation (LDA) have demonstrated that highly useful and reliable information can be extracted from word [co-occurrence](#) information in text. One application, [Leximancer](#) extends and reworks this approach with two stages of non-linear machine learning to provide a statistical means of extracting clear semantic patterns from text ([Leximancer White Paper](#), 2010).

The sophistication of such analyses suggests the possibility of adapting the approach to look at forms of "co-occurrence" which signify problematic dynamics and incommensurability, rather than a degree of commonality, compatibility and mutuality as is conventionally the preoccupation. Understood in binary terms -- as the oppositional "us and them" of psychosocial relations between A and B -- the question is whether these techniques then enable the detection of a third position (C) with which both A and B have distinct oppositional relations. Such analysis would constitute a form of "triangulation". The pattern could then be extended to detect D, with which A and C might both have distinct oppositional relations or incompatibility. In this way triangulated networks of "distintegrative dynamics", as depicted above, could be detected.

Understood as a "flat" representation, the question then becomes whether the triangulation is of a kind that enables (or necessitates) "folding", as depicted above, to configure structures of higher order and coherence ([Spherical Configuration of Categories -- to reflect systemic patterns of environmental checks and balances](#), 1994). Given the relevance of such techniques to hypermedia and web-enabled discourse, of particular interest is whether such an approach can go beyond facilitating the emergence of mutual interest groups which tend to exemplify (even "incestuously") a shared comfort zone and container for "groupthink" ([Spherical Configuration of Interlocking Roundtables: Internet enhancement of global self-organization through patterns of dialogue](#), 1998; [Dynamically Gated Conceptual Communities: emergent patterns of isolation within knowledge society](#), 2004).

Could such folding of "flat-pack" conventional thinking render explicit forms of higher and more integrative order, exemplifying the divisive challenges of current psychosocial dynamics -- with which a degree of cognitive engagement is required ([Polyhedral Empowerment of Networks through Symmetry: psycho-social implications for organization and global governance](#), 2008)?

Conclusion

Any assumption that the folding/unfolding process described is obscure, and beyond normal competence, needs to be corrected in the light of the widespread construction of many kinds of container from various kinds of "flat-pack". Especially significant is the construction of cups and other vessels, as with the [Orikaso Fold Flat Tableware](#) for outdoor activities -- and their "reflattening" for subsequent travel. It is all the more significant in the light of the extensive arguments regarding the "container metaphor" (George Lakoff and Mark Johnson, [Metaphors We Live By](#), 2003; Earl Woodruff, [Manifold Relational Understanding: moving beyond the mind-as-container metaphor in educational technology](#), 2005). How is global civilization to be understood as a "container"?

The curious tendency to think of global civilization as "flat" is evident in the award of the first [Financial Times and Goldman Sachs Business Book of the Year Award](#) to a much-celebrated book of Thomas L. Friedman ([The World Is Flat](#), 2005). The award recognizes the business book that provides "the most compelling and enjoyable insight into modern business issues, including management, finance and economics." Does this imply some form of "delivery" of a "flat pack" civilization, as separately questioned ([Irresponsible Dependence on a Flat Earth Mentality -- in response to global governance challenges](#), 2008)? Or, given the challenge of a collapsing global civilization, is Friedman ironically a herald of its collapse into a "flattened" form -- as a consequence of a growth paradigm, incapable of functioning sustainably as a viable container (cf. Bob Lloyd, [The Growth Delusion, Sustainability](#), 2009)?

Does Friedman's questionable argument help to reinforce the case for finding ways to "fold up" the implicit "flat pack" mind map of the world -- an as-yet-to-be-discovered cognitive analogue to the admirable animation of the folding of the [Dymaxion map](#) of global geography? Can relevant human "distintegrative" tendencies be "triangulated" and represented spherically, as previously suggested ([Spherical Configuration of Categories -- to reflect systemic patterns of environmental checks and balances](#), 1994)? Is "playfulness" vital to the integrative creativity called for in this process ([Engaging with Globality through Playful Re-categorizing](#), 2009; [Enacting Transformative Integral Thinking through Playful Elegance: a symposium at the end of the universe?](#) 2010). This tends to be confirmed by the continuing appreciation of the many [videos](#) and [toys](#) of the "jitterbug" originally used by Buckminster Fuller to illustrate the folding/unfolding of the cuboctahedron.

One of the distintegrative dynamics contributing to the collapse of global civilization is that significant insights are variously made subject to constraining intellectual copyright -- as with those of Stafford Beer and Buckminster Fuller ([Future Coping Strategies: beyond the constraints of proprietary metaphors](#), 1992). Fortunately there are many polyhedra variously suitable for such mapping, although the unfortunate possibility of "polyhedral squatting" exists -- by analogy to [cybersquatting](#). To what extent is survival of global civilization jeopardized by self-interested parties holding it to ransom through intellectual copyright?

The supermassive black hole, associated with the image of Centaurus A (reproduced above), drives powerful jets of particles to a speed close to that of light, releasing intense bursts of radio waves and x-ray radiation [[more](#)]. Ironically the visibility to humanity of a distant collision on a galactic scale highlights the contrasting invisibility of the collision with reality on the planetary scale of Earth -- in our own backyard. Hopefully the capacity to comprehend what is happening 11 million light years away will inform insight into global civilizational

collapse. Are there fruitful parallels or metaphors worthy of consideration (*Towards an Astrophysics of the Knowledge Universe? from astronautics to noonautics*, 2006)?

Is the "black hole" of our global civilization to be understood like the proverbial "elephant in the living room", or that in the traditional tale of the *seven blind men and the elephant* (*Climate Change and the Elephant in the Living Room*, 2008)? What is required to recognize its effect on global governance (*Strategic Challenge of Polysensorial Knowledge: bringing the "elephant" into "focus"*, 2008)? Like a massive black hole, does it distort the way strategic information is "bent" around it (*Lipoproblems -- Developing a Strategy Omitting a Key Problem: the systemic challenge of climate change and resource issues*, 2009)? Certainly a matter of great gravity !

Coincidentally with publication of the image of Centaurus A, an issue of the *New Scientist* journal (18 June 2011) reports on the capacity, using a radio telescope under construction in Chile (the *Atacama Large Millimeter Array*), to detect objects from the cosmic "dark ages" of the universe *13 billion years ago*. The previous issue reports on the current construction of such a telescope in China -- capable of resolving objects *7 billion light years from Earth* (Anil Ananthaswamy, *China starts building world's biggest radio telescope*, 13 June 2011). That same issue carries an *interview* with *Stephen Law*, author of *Believing Bullshit: how not to get sucked into an intellectual black hole* (2011).

It is appropriate to reinforce the point made above, that the thinking and resources behind the new radio telescopes are in no way comparable to those applied to exploring the intellectual "black hole" which would seem to characterize the inability of science to respond to the challenges of global governance at this time. Science would seem to have an ostrich-like preference for distant matters of no immediately apparent relevance. **Is the real world -- as faced by governance and real people -- too complex for science?** As with the religious worldview, has science sunk into a pattern of cultivating ever higher dimensionality -- ever more elusive to most -- in order to avoid confronting issues resulting from simplistic reliance on its methodology? Are both to be considered as exemplifying "transmundane" detachment, irrespective of the mundane consequences of the irresponsibility they engender? Might it even be said that -- as worldviews -- science and religion are in some kind of "*morphic resonance*", perhaps together with "democracy", now that it is effectively defined as an unquestionable "political religion"?

Arguably science has already been sucked deep into such a black hole, if only as indicated by its inability to deal "scientifically" with the psychosocial dynamics indicated by the map above. The most striking example is its complicity in the support of certain metrics whose flaws are only now being disastrously demonstrated (*Uncritical Strategic Dependence on Little-known Metrics: the Gaussian Copula, the Kaya Identity, and what else?* 2009). Also striking is the unquestioned capacity to focus on "explanations" of conditions -- as with the current *report on the rapidly degrading conditions of the oceans* -- but without the slightest interest in addressing remedial capacity (*Remedial Capacity Indicators Versus Performance Indicators*, 1981).

With the failure of *unmapped climate change negotiations* (significantly due to factors in the map above) and the impact of the recent nuclear disaster at Fukushima, science is now being asked to re-examine geo-engineering options (John Vidal, *IPCC asks scientists to assess geo-engineering climate solutions*, *The Guardian*, 15 June 2011). How is the enthusiastic complicity of science in such "easy" technical challenges to be compared to Law's "bullshit" -- given the demonstrably problematic track record of initiatives based on "proven" science (nuclear technology, introduction of species, groundnut scheme, large dams, deep-sea oil drilling, etc)? Is the attribution of "bullshit" to non-scientific perspectives a reflection of a massive "black hole" at the very core of the scientific approach -- a form of deep bullshit commensurate with that in governance (*Viable Global Governance through Bullfighting: challenge of transcendence*, 2009)?

The black hole metaphor is potentially comforting, however, in that it suggests that the psychosocial energies associated with civilizational collapse may well be driving insight close to the "speed of light" -- with "x-rays" now offering the capacity to see what has hitherto been invisible (*Hyperaction through Hypercomprehension and Hyperdrive*, 2006). Is this collective "enlightenment" the "upside" foreseen by *Thomas Homer-Dixon* (*The Upside of Down: catastrophe, creativity, and the renewal of civilization*, 2006)?

Image of the Puyehue-Cordón Caulle volcanic eruption in Chile on 4 June 2011

Within days the ash cloud reached cities all around the Southern hemisphere, forcing airlines to cancel hundreds of international and domestic flights and causing travel chaos



The image of a modern natural disaster is curiously reminiscent of that currently offered by science (at the top of this page) of the condition of Centaurus A 11 million years ago -- at what is effectively the *Tortonian* (late *Miocene*) stage in the geologic timescale of Earth. Modern mammal and bird families first became recognizable in that period, long before the emergence of humans -- for whom the insights of science into the governance of psychosocial systems in the present are now desperately needed.

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