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Radical Cognitive Mirroring of Globalization

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Introduction

There is no lack of references to the complexity of global society and to the challenges it faces -- nor to the manner in which people experience an increasing sense of disempowerment and uncertainty. The question is whether it is possible to think otherwise about this experience -- to reframe it more fruitfully in some way.

The suggestion here is that in a strange way -- that remains to be understood in all its dimensions -- this confusion perceived externally constitutes a kind of mirror of an internal cognitive reality. Somewhat ironically, to what extent this is the case, and whether for everyone or only for some on some occasions, is a matter for "reflection".

The assumption here is that possibilities may not have been exhausted by the arguments associated with [social constructionism](#), [personal construct theory](#), [embodied cognition](#), and the like. Can the argument be presented more fruitfully? For whom?

Rather than a simple binary distinction between "external" and "internal", as with the enduring nature-versus-nurture debate, is there a case for reframing the relationship in ways which transcend ready simplification -- perhaps through recognizing a form of resonance, more consistent with use of the optical metaphor of mirroring. Irrespective of whether this is considered a potential collective opportunity, however that might be promoted, there is a case for considering any opportunity in which all can engage on their own.

Inclusion of "outed" in the subtitle exploits the sense in which this is indicative of rendering explicit to "others" what may be experienced as inherently ambiguous -- unthinkingly rendering definitive (without consent) what may be primarily characterized by uncertainty. This is contrasted in the subtitle with the use of "inning" -- used metaphorically in its occasional sense of [reclamation of flooded or marshy land](#).

The implication is that there are cognitive modalities which have been "flooded" by externality and could be fruitfully "drained" for internal benefit, if only within a "tidal" cycle. Questions are then usefully raised regarding the nature of the cognitive container implied metaphorically by such suggestions of "in" and "out" (Gary Williams, [Examples of the pervasive container metaphor](#), *Minds and Brains*, 23 July 2012; [The Mind as Container Metaphor](#), *Jayarava's Raves*, 27 July 2012)

How then does one engage with issues presented as external global realities (elsewhere), and as an ideal target onto which all blame for personal experiential suffering can be projected -- given the intimate experience of inner reality (in the here and now)? The question of

how this dynamic "internal reality" might be more fruitfully organized then also merits "reflection".



The approach has been previously related to a range of specific issues within the global problematique: hunger, pollution, unemployment, etc., as noted separately (*Degrees of Cognitive Engagement with Interrelated Global Categories*, 2009). The argument here is introduced by questioning assumptions regarding the nature and reality of complex abstractions, whether in the form of such problems on a global scale or in the case of the entities purportedly dealing with them. At the time of writing, with the [meeting of the G7 in Brussels](#), a particular focus is given to the global implications, most notably for local residents faced with a total lockdown of the city centre. The challenge to comprehension is compounded by the subsequent commemoration of [D-Day](#) (6 June 1944) by the leaders assembled -- an event whose very existence is necessarily increasingly tenuous as a reality in the memory of emerging generations.

Reality and existence of complex abstractions

Reality of abstractions? What to make of the abstractions gathered for a meeting of the "G7", promoted as realities by the media: "Canada", "France", "Germany", "Italy", "Japan", the "UK", and the "USA" -- to say nothing of representatives of the "European Council" and the "European Commission", or of the dramatic absence of "Russia" and other entities purportedly represented in the "G20"? Variously gathered in deepest secrecy -- as with respect to ongoing negotiations of the proposed [Transatlantic Trade and Investment Partnership](#).

Faced with such "actors" disporting themselves in the external global drama they claim to define, is one obliged variously to internalize them in some way as "puppets" of one's imagination -- as vitally important to one's own personal psychic drama? As such, are they to be understood as [archetypes](#), emerging partially from the unconscious, or as so-called [subpersonalities](#) kicking in on a temporary basis to allow a person to cope with certain types of psychosocial situation?

With the average person recognized as having about a dozen subpersonalities -- does one effectively have an internal G7, G8, G15, or G20? Does the apparent external disorder of these groups on a chaotic global scene engender and mirror a form of [multiple personality disorder](#) in the individual -- and *vice versa*?

Representation of subpersonalities of an individual (reproduced from Wikipedia entry)	Representation of multiple personality disorder (reproduced from Wikipedia entry)
	

Concrete evidence of existence: The difficulty in considering what is promoted as having real existence is appreciating what constitutes concrete evidence for the complex abstractions upheld as "existing". The difficulty is evident in the case of the so-called ["international community"](#). As noted by *Wikipedia*, that term is used in international relations to refer to a broad group of peoples and governments of the world. The term is typically used to imply the existence of a common point of view, towards such matters as specific issues of human rights. Activists, politicians and commentators use the term in calling for action to be taken with regard to global problems. Even if "existence" is held to be primarily a matter of legal description, the international community does not "exist" -- unlike the United Nations. It is however unclear how the "United Nations" can be said to "exist", other than in terms of the reality created by legal description.

The question to be asked is to what extent such acclaimed entities can be said to "exist" in the minds of millions who are called to believe in their "reality". In what way does the "USA" then "exist" in a Brussels dealing with the reality on the ground of a total traffic lockdown imposed by security requirements? To what extent does the "G7" exist -- and for whom -- in claiming to coordinate the views of the leadership of the major countries of a global civilization?

Image and identity: The difficulty is compounded by very deliberate efforts to make use of public relations techniques to uphold the existence and reality of such complex abstractions. The focus is on building and sustaining a coherent "image" of such entities and of the global "problems" with which they are claimed to deal. With the focus on an image, it is appropriate to ask what is the reality framed by the image -- especially when the image is acknowledged to be a fabricated illusion, from the perspective of news management and "spin". Also of relevance is the extent to which those involved come to believe their own propaganda, as separately discussed (*Cultivating Global Strategic Fantasies of Choice*, 2010).

Few would deny that image is fundamental to a gathering of the G7 -- or to a commemoration of D-Day on the following day. However the concrete evidence for those exposed to the effects of the gathering in Brussels is one of total lockdown -- recalling the adage of media analyst [Marshall McLuhan: the medium is the message](#) (*The Medium is the Message: an inventory of effects*, 1967).

Commentators focus on the symbolism of the commemoration, including whether Barack Obama can successfully avoid shaking the hand of Vladimir Putin -- leader of the "Russia" temporarily suspended from the G7/G8 as a consequence of its annexation of "Crimea".

Mirroring and identity: Through the so-called [mirror test](#), self-awareness in non-human animals is determined. Variants of the test are used as an indication of entrance to the [mirror stage](#) by developing human children through which a sense of self-recognition and personal identity is recognized. The possibility of use of an analogue by hypothetical extraterrestrials is instructive with respect to any

more developed sense of identity, as separately discussed with respect to *Mirror self-recognition and environmental mirroring*, *Multidimensional indication through transcendence of "pointing"?*, and the *Cognitive challenge: resolving the problematique (Self-reflective Embodiment of Transdisciplinary Integration (SETI): the universal criterion of species maturity?* 2008).

The eminent social scientist and author of *Image* (1956), [Kenneth Boulding](#) teasingly remarks:

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

The question is the kinds of metaphor through which identity might be sustained -- and whether the globe and its globalization are fruitful metaphors, if not the universe itself (*Being the Universe: a Metaphoric Frontier*, 1999). How do symbols serve as mirrors?

Emergence of noopolitics: Such questions could be framed as "unreal" and irrelevant in a world of *Realpolitik*, namely politics or diplomacy based primarily on power and on practical and material factors and considerations, rather than explicit ideological notions or moral or ethical premises. They acquire greater reality and relevance in the recognized transition to a world of *Noopolitik*, understood as the network-based *geopolitics* of knowledge, especially associated with *smart power*. This framing has been articulated by [John Arquilla](#) and [David Ronfeldt](#) (*The Emergence of Noopolitik*, 1999; *The Promise of Noopolitik*, *First Monday*, August, 2007) and by S. B. Nikonov (*Global Information Space as an Environment of Noopolitics*, *The World and Politics*, 2012; *Noopolitics as a Component Part of a Strategy of State Conflict*, *European Journal of Social Sciences*, 2012; *Noopolitical Aspect of International Journalism*, *Middle-East Journal of Scientific Research*, 2013).

The sense of reality and existence which is meaningful for the individual of course varies considerably -- as strikingly demonstrated in the case of religious beliefs, however these may be deprecated by belief in an evidence-based reality, as most notably promoted by science. However the abstractions promoted as real by science pose their own difficulties with regard to the reality of their existence -- especially as may be viewed by the future. They constitute a real challenge to comprehension (*Dynamics of Symmetry Group Theorizing: comprehension of psycho-social implication*, 2008).

The issue is complicated by the emphasis placed on "concrete proof" in negotiations regarding problematic situations, as strikingly illustrated in the case of controversy regarding use of nuclear research in Iran -- to say nothing of patterns of denial regarding other problematic situations in other countries. Any sense of reality and existence is further complicated by claims of necessary secrecy (Gabriel Schoenfeld, *Necessary Secrets: national security, the media, and the rule of law*, 2011). The availability and credibility of "concrete proof" is elusive, as separately discussed (*10 Demands for Concrete Proof by We the Peoples of the World*, 2012).

Problems as complex abstractions: It is in this context that the nature of "problems" as complex abstractions needs to be carefully explored, especially when claimed to exist as global realities, How is their existence and reality to be meaningfully experienced -- whether individually or as framed in global discourse? Are conventional assumptions regarding their nature inherently questionable? This could be considered in relation to the problems framed by the much-vaunted UN [Millennium Development Goals](#) and the manner in which those problems have eluded the strategies framed to address them.

Commentaries on the issues raised by the [World Problems Project](#) highlight the elusive challenges of recognizing the "existence" of problems which critics would deprecate as merely perceptions (*Problem disguises and problem evasion; Problem perception and levels of awareness; Beyond the problem-lobby mindset*). Insights into the nature of [wicked problems](#) are especially relevant (*Encycling Problematic Wickedness for Potential Humanity*, 2014).

Hyperobjects?: The climate change debate has illustrated the issues of consensus with regard to the existence and problematic nature of "global warming". The quest for consensus can be fruitfully explored as a delusion in its own right (*The Consensus Delusion: mysterious attractor undermining global civilization as currently imagined*, 2011). Global warming has been explored as a particularly dramatic example of a "hyperobject" by [Timothy Morton](#) (*Hyperobjects: philosophy and ecology after the End of the World*, 2013). These are entities of such vast temporal and spatial dimensions that they defeat traditional ideas about what a thing is in the first place.

Such arguments recall the challenges of [Gödel's incompleteness theorems](#), now reinforced by the work of [Harvey Friedman](#) (*Boolean Relation Theory and Incompleteness*. 2010) through identification of entirely new forms of incompleteness. In his summary of such challenges, Richard Elwes (*It doesn't add up*, *New Scientist*, 14 August 2010) asks whether "a gaping hole has opened up in the foundations of mathematics". Curiously, as noted by Elwes:

With Friedman's work, it seems Gödel's delayed triumph has arrived: the final proof that if there is a universal grammar of numbers in which all facets of their behaviour can be expressed, it lies beyond our ken.... The only way that Friedman's undecidable statements can be tamed, and the integrity of arithmetic restored, is to expand [Peano's rule book](#) to include "large cardinals" -- monstrous infinite quantities whose existence can only ever be assumed rather than logically deduced.... We can deny the existence of infinity, a quantity that pervades modern mathematics, or we must resign ourselves to the idea that there are certain things about numbers we are destined never to know

The environmental emergency is thus also a crisis for philosophical habits of thought, exposing the world to a problem that seems to defy both control but also understanding. As he argues, hyperobjects have implications for how people think and coexist with one another and with nonhumans, and how politics, ethics, and art are to be experienced. For Morton there is a need to reinvent how people think to even begin to comprehend a global context. An accessible critique is provided by [Stephen Muecke](#) (*Global Warming and Other Hyperobjects*, *Los Angeles Times*, 20 February 2014), who concludes: *Dare I say it, but the writing that has made a case for*

hyperobjects has created an offshoot, the hypersubject.

Hypersubjects? The future may see as significant that this requirement for "hyper-reflection" emerges in a period in which astrophysics is called upon to frame the reality of the universe in terms of the existence of [branes](#). These are higher dimensional dynamical objects that can propagate through spacetime according to the rules of quantum mechanics. The implication of such thinking for psychosocial organization remains to be explored (*Global Brane Comprehension Enabling a Higher Dimensional Big Tent? Strategic implication in encompassing nothing and coming to naught*, 2011).

Given the case made here for mirroring, it would appear appropriate to argue that any recognition of "hyperobjects" necessitates (or engenders) recognition of "hypersubjects", if not hypersubjectivity, however this might be experienced (Temenuga Trifonova, *Is There a Subject in Hyperreality? Post Modern Culture*, 2003; Jasmine L. A. Powell, *Hypersubjectivity as a Creative Vector*, 2013). For Steve Jones:

If we understand humans in a fashion similar to the way we understand digital being, might we not also level the value of our selves, or at least imagine into being a hypersubjective realm in which mediation of the self through communication is the sine qua non of networked society (*The Cyber and the Subjective*, 1999)

How this might be fruitfully described remains to be discovered, as separately suggested (*Hyperspace Clues to the Psychology of the Pattern that Connects*, 2003; *Hyperaction through Hypercomprehension and Hyperdrive: necessary complement to proliferation of hypermedia in hypersociety*, 2006).

The various current conventional uses of the term tend to frame the condition as highly dysfunctional -- but without being able to fully establish the functionality of any contrasting condition in the present era. Thus for Ronald Britton (*Hyper-Subjectivity and Hyper-Objectivity in Narcissistic Disorders, Fort Da*, Fall 2000; *Belief and Imagination: explorations in psychoanalysis*, Routledge, 2003):

In the hyper-subjective mode the patient seeks to incorporate the analyst within his or her subjective world. To do that, any difference between the patient's version of the analyst and the analyst's person has to be eliminated. In the hyper-objective mode the alliance with the analyst is sought in a world of reasoned understanding based on a denial of their subjectively experienced relationship (p. 46)

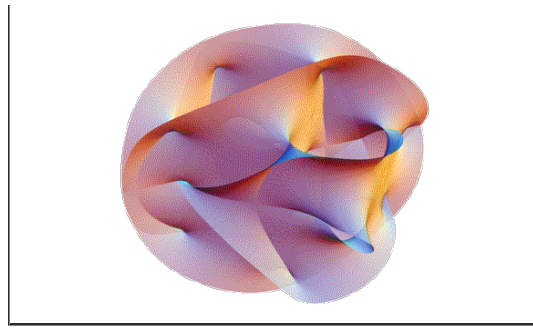
It would appear that, as with [Knight's move thinking](#), what is framed as a highly creative possibility in one domain (chess) is considered symptomatic of thought disorder in another (*Stratagems and ploys characteristic of Knight's move thinking*, 2012). This comparison can be used to make the point even more strongly in that conventional chess moves could be compared to the simplest of moves required of parading soldiers from whom "lockstep" is typically desirable. The Knight's move could however be compared to one of the simpler dance steps, suggestive of the many more complex variants widely appreciated. Arguably it is that aesthetic variety, in contrast to lockstep, which is so unfortunately framed as disorderly.

The possibilities are considered otherwise by various authors from other disciplines, notably including [metacognition](#) and transsubjectivity in the arts ([Bracha L. Ettinger, *The Matrixial Gaze*](#), 2006; Rudolph Bauer, *The Wonder of Wonders: subjectivity as non-duality, Transmission: Journal of the Awareness field*, 22 August 2011; [April Durham, *Networked Bodies in Cyberspace: orchestrating the trans-subjective in the video artworks of Natalie Bookchin*](#), *Art Journal*, Fall 2013; Gabriel Catren, *Prolegomena to Speculative Absolutism*, 2011).

Consideration is given to ways of reframing "self" through use of prefixes such as "hyper", "trans" and "meta", whatever they may be experienced as meaning. Seemingly consistent with the argument developed here, a dual-process model of perception developed by Seymour Epstein ([Cognitive-Experiential Self-Theory](#)) considers that people operate using two separate systems for information processing: analytical-rational and intuitive-experiential. Curiously again, the possibility of a higher order of "cognitive fusion" is framed as both a thought disorder (mistaking thoughts for the phenomena that the thoughts represent) and a challenging requirement for the future (A. Josang and R. Hankin, *Interpretation and fusion of hyper opinions in subjective logic, Proceedings of 15th International Conference on Information Fusion*, 2012). The latter is organized by the [International Society of Information Fusion](#). However, exploiting the design challenges of nuclear fusion as a metaphor, the future potential of cognitive fusion can indeed be speculatively explored (*Enactivating a Cognitive Fusion Reactor: Imaginal Transformation of Energy Resourcing (ITER-8)*, 2006; *Mass-Energy transformation in psychosocial system containers*, 2011).

Missing would appear to be some recognition of the possibility of complementing speculation regarding [Boltzmann brains](#) or "large cardinals" (as noted above), with seemingly improbable subjective modalities, as suggested by [synesthesia](#), [grokking](#), and the like (*Authentic Grokking: emergence of Homo conjugens*, 2003; *Implication of Indwelling Intelligence in Global Confidence-building*, 2012). The nature of [hyperintelligence](#) is already a matter of debate with respect to future development of artificial intelligence and related speculation (cf. [global brain](#), [Matrioshka brain](#)). However such speculation tends to avoid the nature of hypersubjectivity. The associated controversy is evident in the view of hypersubjectivity as characteristic of the postmodernism notoriously criticized from the perspective of physics by [Alan Sokal](#) (*Beyond the Hoax: science, philosophy and culture*, 2009).

**Visual rendering of the Calabi-Yau manifold
used to suggest the nature of a brane
(reproduced from Wikipedia)**



If global warming merits exploration "otherwise" -- as a hyperobject -- **is there a case for recognizing the degree to which other problems could be better understood as complex abstractions, as much internal as external**, if fruitful engagement with them is to be possible? Just as collective entities like the G7 and the G20 might be recognized as "subpersonalities" by the individual, should problems be internalized as "complexes" -- perhaps framed as negative archetypes with which one is called to engage?

Internal reality versus External reality?

The issue has been variously explored previously (*Psychosocial Implication of Without Within*, 2013; *En-joying the World through En-joying Oneself: eliciting the potential of globalization through cognitive radicalization*, 2011; *Embodying the Paradoxes and Contradictions of the Pursuit of Happiness: en-joying the world through en-joying oneself*, 2011; *Existential Embodiment of Externalities: radical cognitive engagement with environmental categories and disciplines*, 2009).

Internal irresponsibility? Given the tragic development of many of the problems perceived as being an external reality, it can readily be argued that any effort to perceive them as internal realities is naive, unrealistic and irresponsible -- even an exercise in escapism of the most dubious and illusory kind. On the other hand, it can also be argued that to frame them as somehow elsewhere, the responsibility of others (or systemically engendered), and completely dissociated from the perceiver, may also be avoiding some important considerations. This might then also be considered a high order of irresponsibility -- consistent with various patterns of systemic denial.

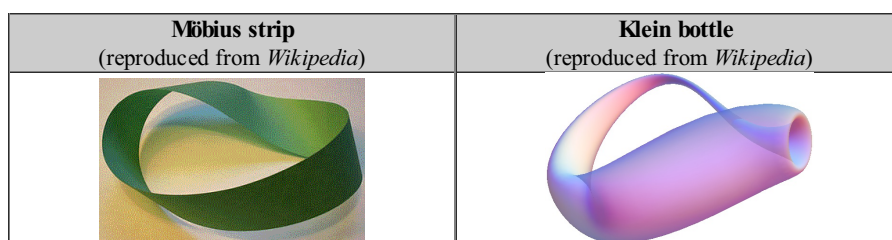
Most striking is the manner in which many external global problems have at their roots some internally determined pattern of behaviour. This is most obvious in the case of those **lifestyle diseases** engendered by ill-considered consumption (*Cognitive Implications of Lifestyle Diseases of Rich and Poor: transforming personal entanglement with the natural environment*, 2010).

It is somewhat obvious with respect to the environmental degradation associated with unconstrained oil extraction to meet personal preferences, now framed as both needs and rights (transportation, heating fuel, plastics, etc). It is less obvious with respect to those value commitments which reinforce unchecked population growth, with its accumulating impacts on a variety of issues -- exacerbated by collective failure in the management and distribution of resources.

Paradoxical transcendence of binary logic: Rather than frame the situation as "internal-versus-external", there is the possibility that this binary logic may be inadequate to the complexity of the situation as experienced -- as with the nature-versus-nurture debate (*Transcending Simplistic Binary Contractual Relationships*, 2012). More fruitful may be the possibility that the relationship merits framing with the requisite complexity of the **uncertainty principle** of fundamental physics -- as partly considered by **Garrison Sposito** (*Does a generalized Heisenberg Principle operate in the social sciences? Inquiry*, 1969).

Some such possibility featured in an earlier discussion (*Defining the objective ∞ Refining the subjective ?!: Explaining reality ∞ Embodying realization*, 2011). This drew attention to the manner in which "inside" and "outside" were paradoxically related in the **Möbius strip** (below left). In topological terms this is described as "non-orientable", namely with no fixed beginning or end and no fixed orientation. Such a strip has the unique property that allows movement around it continuously, always returning to the starting point on the strip. However on each return to the starting point, the orientation is reversed -- whether initially assumed to be "inside" or "outside".

A more complex variant is the **Klein bottle** (below right) -- again with no conventional "inside" or "outside" -- whose cognitive implications have been extensively explored by **Steven M. Rosen** (*The Self-Evolving Cosmos*, 2008; *Topologies of the Flesh*, 2006).



Both the above surfaces help to frame the possibility that issues and problems may be mistakenly assumed to be exclusively "outside" and external, when they are as much "inside" and internal. However that is the case only if appropriate account is taken of the dynamic through which they are experienced in their exploration over time -- perhaps through a form of **enantiodromia** (*Psychosocial Energy from Polarization: within a cyclic pattern of enantiodromia*, 2007). Framing the experience solely as "external" then implies being stuck in a static frame potentially inappropriate to the dynamic complexity for which appropriate engagement calls (*Eliciting a Universe of Meaning -- within a global information society of fragmenting knowledge and relationships*, 2013; *Dynamic Transformation of Static Reporting of Global Processes*, 2013).

Identity imagined otherwise: There is the even more intriguing and exciting potential of imagining personal identity quite otherwise -- as the future may choose to do (if creativity in such matters is not constrained for evermore, as some methodologies might well imply). If the personal sense of identity can be understood to have evolved both through the process of maturation of an individual, and over long historical periods, what scope is there for imagining identity otherwise in relation to context, however that too is to be understood?

Some possibilities have been previously explored (*Being a Waveform of Potential as an Experiential Choice: emergent dynamic qualities of identity and integrity*, 2013; *Emergence of Cyclical Psycho-social Identity: sustainability as "psychically" defined*, 2007; *Intercourse with Globality through Enacting a Klein bottle: cognitive implication in a polysensorial "lens"*, 2009). These notably refer to the exercise of Douglas Hofstadter (*I Am a Strange Loop* (2007) beyond the reflexivity of his earlier work (*Gödel, Escher, Bach: an Eternal Golden Braid*, 1979).

The purpose here is not to argue the following cases at length -- as partially done in the previous documents cited -- but rather to identify fruitful images and questions through which the inner reality might be explored, within a paradoxical inner-outer dynamic. This may well call into question the nature of that distinction (*World Introversion through Paracycling: global potential for living sustainably "outside-inside"*, 2013; *Being Neither a-Waving Nor a-Parting: cognitive implications of wave-particle duality in the light of science and spirituality*, 2013).

Climate change and global warming as internal realities?

Does the language of weather and of climate change offer useful metaphors through which to articulate subjective experience, as separately explored (*Enveloping Development through Cognitive Enactivism: engaging with climate change by changing apprehension of climate*, 2009). Some "external" terms may already be used on occasion. Many accept a degree of resonance between external weather and internal weather in the preference for sunny weather and concern at exposure to "bad weather". Many recognize that they are affected internally by the weather.

How then to think more systematically about the cycles of one's internal weather -- and the role of its different phases? Thunder? Lightning? Storms? Experience of the latter in a particular setting may even be detectable (and describable) by others using those same terms.

What then of the "external" threat of "climate change"? How might problematic changes to "internal" climate be engendered? What might be their accumulating internal consequences -- "globally" understood?

Especially intriguing is an interpretation of "global warming". Extensive use is commonly made of temperature as a descriptive metaphor of internal conditions: being hot and bothered, glacial disposition, etc. Such usage refers to periodic experiences. With respect to global warming, the question is how a more permanent internal change might be engendered. Where indeed are one's internal "glaciers" and to what extent is one indifferent to their rapid melting? And the retreating "polar ice caps"?

In the external case, widely repeated explanations of the consequences of carbon emissions are presented as primary causative factors -- whether qualified as anthropogenic or not. What might be understood as an analogous internal process with analogous systemic consequences? Given the manner in which there is ambiguity in the response to calls for collective behaviour modification to limit carbon emissions, what equivalent resistance and avoidance is to be recognized in the case of the "internal emissions" of an individual?

One lead is offered by the external sense in which the carbon emissions result from unconstrained productivity of a particular form -- information, opinions, and extending to procreation. "I emit, therefore I exist"? This could be understood as dependence on a dysfunctional global economic model of growth. Is there a case for recognizing dysfunctional internal productivity, perhaps to be associated with busyness, substance abuse, and what is described as "inner chatter", "mental chatter", or "inner voices" -- notably by self-help and meditation disciplines? This could then be understood as an inappropriate internal growth model.

Aside from the advice and injunctions of those disciplines, what exactly are the problematic consequences of such "carbon emissions"? How do they lead to a form of internal global warming? How may analogues to "rising sea levels" -- "flooding", "drought", and the like -- be experienced? Is this to be recognized in increasing mental illness and depression in their various forms of being "overwhelmed", "drowned" in relevant information, or creatively challenged by "aridity"? In this sense could it be said that the inner reality is anticipating an outer reality whose full effects are yet to be experienced?

Environmental degradation as an internal reality?

The degradation of the external environment is a theme of repeated commentary -- as with the increasing [extinction of species](#) (and associated [loss of biodiversity](#)) -- as a consequence of overexploitation of natural resources (overfishing, deforestation, etc). The disposal of waste, and its accumulation in the environment, is a matter of increasing concern -- especially in the case of nuclear waste, or the space junk in orbit around the planet.

To what extent can degradation of an individual's internal environment be recognized as echoing this process -- if not reinforcing it? The question is given a degree of focus in the light of engagement with the media and the manner in which this entrains internal thinking, feeling and imagination. This is considered in terms of the [debate on media violence](#), but more recently in the [psychological impact of internet use](#) (Nicholas Carr, *The Shallows: what the internet is doing to our brains*, 2011). There is a concern that people are being groomed and cocooned within [filter bubbles](#) (Eli Pariser, *The Filter Bubble: what the internet is hiding from you*, 2011)

For the individual, the challenge of how to "dispose of" unwanted explanations and factoids is reminiscent of the [Great Pacific Garbage Patch](#), also described as the Pacific Trash Vortex, namely the massive "gyre" of [marine debris](#) in the central North Pacific Ocean. Is there an analogous circulation and accumulation of "junk" within the individual psyche -- as a form of [midden](#) of one's own personal global civilization? Is each person faced with a form of orbiting [space junk](#) -- endangering travel "elsewhere"?

The correspondences are particularly striking in the case of the progressive loss of wilderness areas and the associated wildlife -- facilitated and justified by tourism and encouraged by wildlife videos of the remotest environments and peoples, and of the rarest species. Where are the "wilderness areas" within oneself? If known, are they adequately protected -- as "Heritage Sites" -- or are they vulnerable to some analogue to deforestation by one's very own "multinationals"?

How then to recognize the loss of "biodiversity" within oneself? Is this a consequence of progressive simplification of categories through which experience is framed -- echoing the reduction in admissibly farmed (and marketed) species imposed by such as the European Commission. Does one have some internal equivalent to the "European Commission" -- as with a "Pacific" garbage patch on the "other side" of one's world?

Expressed in those terms, how does one "clean up the mess" -- or is its accumulation tolerable? Such tolerance is evident with respect to the personal effects of smoking -- despite the warnings. Suggestions by those with various motivations to "clean up one's act" are readily shrugged aside. It is with a perverse pride that people adapt progressively to the "junk" in their lives -- presumably anticipating the collective response to global environmental degradation and eventual collapse.

Irrespective of the suggestions of others, what might encourage such an internal clean up process? More interesting is whether it could be enabled by forms of creativity offering clues to the external situation, as separately discussed (*En-minding the Extended Body: enactive engagement in conceptual shapeshifting and deep ecology*, 2003).

Curiously this internalization recalls the special cognitive relationship of many indigenous peoples through which they understood themselves to be embedded within their environment. Termed **indigenous knowledge**, this has been extensively documented by **Darrell Posey** (*Cultural and Spiritual Values of Biodiversity*, 1999) and by Jeremy Narby, *The Cosmic Serpent: DNA and the Origins of Knowledge*, 1995).

Malnutrition and ill-health as internal realities?

The challenge of hunger and starvation "elsewhere" is widely reported and readily ignored. It becomes more evident when faced with people living in the streets and obliged to obtain food by any means possible, including from refuse.

Although apparently living in a world of plenty -- to the degree that over-eating and obesity are highlighted as problematic -- there is much concern voiced regarding the unhealthiness of much that is consumed, and the manner in which this contributes to lifestyles diseases (*Cognitive Implications of Lifestyle Diseases of Rich and Poor: transforming personal entanglement with the natural environment*, 2010)

From an internal perspective, is there a sense in which one is starving. Are there "remote" parts of oneself that are dangerously undernourished -- despite the ease with which their needs can be ignored? Does one occasionally indulge in sending "food packets" to those regions of one's psyche as a sop to one's conscience?

How to recognize and understand the nature of that malnourishment and the associated ill-health (*Emerging Memetic Singularity in the Global Knowledge Society*, 2009)? What are the psychic vitamins one may be lacking?

Ironically, and tragically, it could even be said that those reported by the media as dying of starvation elsewhere could be understood as **indicator species** -- like canary birds in coal mines -- warning of dangers to one's own psyche.

Unemployment as an internal reality?

As an external reality, unemployment is clearly experienced as having major implications. It is intimately associated with an inadequately challenged economic growth model through which "jobs" are commodified. It condemns many to the experience of feeling "useless" through failure to acquire an adequate "job". This sense of uselessness is also experienced as a reality by those variously institutionalized (prisons, hospices, etc), by those variously disabled, and by the aging.

Framed otherwise, everyone is necessarily "employed", whether or not this is remunerated or appreciated by others. The "job culture" as a focus of social concern can be questioned in that light (*12 Mindsets Ensuring Disappearance of Employment Opportunities: towards a systemic reframing of the job culture*, 2012).

Many are obliged to discover how to be internally "employed" as their circumstances change. One apparent remedy may well reinforce the challenge by creating dependence on external stimuli -- entertainment, recreation, drugs, and the like -- especially when commodified and requiring financial resources. Such employment, especially the remunerated varieties, can however be usefully understood as engendering internal employment through giving people "something to do"

Missing is a more comprehensive understanding of the manner in which such senses of "employment" contribute to reframing the person's internal economy. Some understanding may be derived from articulation of **voluntary simplicity**, as summarized by **Duane Elgin** (*Voluntary Simplicity: toward a way of life that is outwardly simple, inwardly rich*, 2010). Intentional communities, especially of monastic form, necessarily cultivate other understandings of "employment" -- with hermits offering an extreme example. The question may be framed as the challenge of what to do with oneself in ways that sustain a sense of self-esteem.

Widespread ignorance as an internal reality?

Concern is repeatedly expressed at the level and quality of education around the world. (**Nicholas Rescher**, *Ignorance: on the wider implications of deficient knowledge*, 2009). Ideologies and belief systems may deplore ignorance of what they have to offer. The focus is primarily on lack of resources to enable education in remote areas.

Much is expected of the use of the internet in that respect. There is also concern with regard to the quality of education in urban areas where social forces impact on the process, whether through bullying and violence (within school or outside), or through the pressures to receive certification in an increasingly competitive environment. Specific concerns are expressed regarding [ignorance](#) of particular problems or the remedial strategies possible (*Mapping the Global Underground*, 2010; *Recognizing the Psychosocial Boundaries of Remedial Action*, 2009).

Irrespective of such factors, concerns are expressed as to what is learned, its relevance to a much-challenged economic system, and the new kinds of thinking that are imagined to be necessary for the challenges of the future -- highlighted by the failures of the past.

At the same time, there is little doubt that no civilization has ever rendered accessible the currently available quantity and quality of information by which learning can be nourished. The emergence of a knowledge-based civilization has been recognized. This has however rendered ever clearer the constraints on individual cognitive ability to engage effectively with more than a small proportion of this information. This may be expressed in terms of [information overload](#), busyness, [attention deficiency](#), or as the distractions offered by internet-related facilities (social media, online gaming, entertainment, etc). There could be said to be a civilizational crisis of [throughput](#). Expressed otherwise, useful information has an increasing possibility of becoming useless.

This situation is deplored as giving rise to superficial knowledge, to the pretence of knowledge, or even to deliberate cheating (David Callahan, *The Cheating Culture: why more Americans are doing wrong to get ahead*, 2004; Stuart P. Green, *Lying, Cheating, and Stealing: a moral theory of white collar crime*, 2006). This tendency could be recognized otherwise in the process of [news management](#) to put a positive spin on information to reduce knowledge of realities variously unwelcome.

Ignorance is as characteristic as knowledge in such a context. Ignorance "elsewhere", in the case of "others", is curiously entangled with one's own sense of ignorance. Knowledge produced elsewhere, beyond one's ken, effectively increases one's relative ignorance -- without awareness of the process. Those elsewhere will in many cases be ignorant of knowledge one has acquired. Whether known or not, it may be considered "irrelevant" -- effectively then framed as appropriate ignorance. On the other hand, the massive secret acquisition of "information" by invasive surveillance could be considered to be increasing collective ignorance -- with little assurance that that information becomes "knowable" or "knowledgable".

The situation is complicated by whether there is even knowledge of what is unknown, as framed by the notorious "poem" of [Donald Rumsfeld](#) (*There are known knowns*, 2002):

There are known knowns; there are things that we know that we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns, the ones we don't know we don't know.

Further complication is associated with the meaning of knowing in relation to being ignorant, especially when what is considered "knowing" in one context may be framed as "ignoring", or "meaningless", from other perspectives and cultures -- and especially by the future. The situation is further exacerbated by the erosion of memory, whether individual or collective, namely the process of forgetting what may have been known in some way (*Societal Learning and the Erosion of Collective Memory*, 1980). This is a process typical of aging.

The nature of the entanglement between "external" and "internal" is clearly greater than with respect to the cases discussed above. Encompassing the relative ignorance or knowledge of "others" is more intimately associated with engaging with one's own. Exposure to indications of distant knowledge, as in extensive libraries (or faced with incomprehensible explanations), would seem to call for a non-binary framing beyond knowledge-ignorance. Assumptions of knowledge regarding the very existence of "others" and "oneself" may be readily called into question -- if only as being on different sides of a Möbius strip.

Can the relative ignorance of another be usefully recognized as mirroring one's own in some way? A distorting mirror? Given recognition of the fundamental role of information in emerging models of physical reality, does the complexity of such models (and the challenge to their comprehension) offer useful pointers?

Given thinking about information and [event horizons](#) in relation to the [black holes](#) of astrophysics, is there any sense in which one's own identity may be centered on some form of "black hole" in terms of knowledge? Such possibilities can be further explored with respect to possible *existential implications -- of a "hole" in conventional reality* (*Unthought as Cognitive Foundation of Global Civilization*, 2012).

Rather than associating acquisition of knowledge with "higher" education, could subtler possibilities be considered in terms of "meta" education, as separately argued (*Higher Education & Meta-education? Transforming cognitive enabling processes increasingly unfit for purpose*, 2011). This would be consistent with the argument of Gregory Bateson that the quality of knowledge is intimately associated with recognition of a meta-pattern of connectivity.

As may be provocatively argued, exploration of any astrophysical metaphors regarding the universe as emerging from nothingness then suggests the possibility of a "university" of ignorance (*University of Ignorance: engaging with nothing, the unknown, the incomprehensible, and the unsaid*, 2013).

Uncontrolled boundaries as an internal reality?

Considerable stress is currently aroused by unchecked movement of peoples -- notably so-called [boat people](#) -- from the disadvantaged regions to those of relative advantage. The immigration of [economic refugees](#) and [asylum seekers](#).

This is exacerbated by ever increasing population in disadvantaged regions -- encouraged by the unchallenged complicity of the major religions of the world (*Root Irresponsibility for Major World Problems: the unexamined role of Abrahamic faiths in sustaining unrestrained population growth*, 2007).

A related concern is the challenge to boundaries which sustain and reinforce a sense of identity. Hence the concern with erosion of cultural identity and challenges to the meaning of being English, French, German, etc partly symbolized by reduction in the significance of "Made in France" etc. This is further exacerbated by the strong dependence of identity on reinforcement of the physical boundaries, irrespective of any extensive global diaspora (*Affinity, Diaspora, Identity, Reunification, Return: reimagining possibilities of engaging with place and time*, 2013).

Many stressed by these factors feel themselves to be invaded by "otherness" to the point of feeling no longer "at home" in their own country. The question is then how "otherness" of any kind can best be integrated as an internal reality. Framed conventionally as "us" and "them", the continuing challenge is obvious (*Us and Them: relating to challenging others*, 2009). That challenge is intimately experienced in family relationships with the arrival of a new relative (partner, wife, son-in-law, child, etc). More troublesome and tragic is the "otherness" arising from recognition of metastasizing cancer cells within one's own body -- or the evidence of aging.

Much of the difficulty derives from unchallenged conventional assumptions regarding the nature of boundaries framing concepts and distinctions (Douglas G. Flemons, *Completing Distinctions: interweaving the ideas of Gregory Bateson and Taoism into a unique approach to therapy*, 2001). Is the boundary defined by a line (as on a map), a frame (as with a fence), or a volume (as with any container)? These all trigger cognitive patterns of cognitive engagement.

There is little attention to more complex geometry through which inner reality might be distinguished from external reality otherwise, as suggested above by the Klein bottle (*Metaphorical Geometry in Quest of Globality -- in response to global governance challenges*, 2009). A boundary also implies the possibility of unexplored forms of "intercourse" ("*Human Intercourse*": "*Intercourse with Nature*" and "*Intercourse with the Other*", 2007; *Marrying an Other whatever the Form: reframing and extending the understanding of marriage*, 2013).

The question could then be the nature of the space or form with which identity is associated and how higher degrees of "otherness" can be incorporated into it. The sense of otherness is an incitation to complexify that space -- to enrich the ecosystem it sustains.

Dependence on growth as an internal reality?

Economic growth is widely stressed by political leadership as the universal panacea for collective ills and inadequacies -- the primary requisite of collective health, as framed in economic terms (and notably at the time of writing in response to the European crisis). Unthinking advocacy of growth is central to collective strategy and governance -- despite contraindications (George Monbiot, *It's Simple: if we can't change our economic system, our number's up*, *The Guardian*, 27 May 2014). Any constraints on it are simply unacceptable -- as with the assertion of Margaret Thatcher: *There Is No Alternative* (TINA). Growth is then held to be the only imaginable response to unemployment -- presumably with war and disease held subconsciously in reserve

Such external understandings of growth are variously echoed internally in terms of status, wealth, education, and even size (according to gender and anatomical signifiers). Less evident is the meaning to be associated with growth in experience and maturity, especially where this might substitute for more tangible forms of growth. How might the latter be reframed internally -- as templates and metaphors for internal growth, whatever than can be experienced as meaning? How then to understand one's own "global growth" through progressive "globalization"?

Are there indications that use of such metaphors can characterize the psychology of the exceptionally wealthy and their pursuit of even greater wealth, as separately explored (*Wholth as Sustaining Dynamic of Health and Wealth: cognitive dynamics sustaining the meta-pattern that connects*, 2013)? Or is their psychology an example of dubious conflation of external and internal?

Ironically, given the extent to which processes of external economic growth are seemingly indistinguishable from a vast **Ponzi scheme**, does dependence on internal growth suggest a curious equivalent to an internal Ponzi scheme. Internally understood, one more insightful ("cunning") cognitive modality might then frame growth as a vital attractor to another more gullible internal modality -- as suggested by phrases such as "kidding oneself" or "deluding oneself"?

Could global civilization be fruitfully considered as "kidding itself", having bought into a vast confidence trick (*Primary Global Reserve Currency: the Con? Cognitive implications of a prefix for sustainable confidality*, 2011).

Problematic governance as an internal reality?

Much is made of the challenges of global governance -- raising the possibility of ungovernability (*Ungovernability of Sustainable Global Democracy?* 2011). There is an extensive range of entities claiming competence with regard to governance -- despite a remarkable track record of incompetence and systemic neglect of the highest order. Much is also made of a mysterious **international community**, to say nothing of secretive groups (Bilderberg Group, World Economic Forum, etc), secret and esoteric societies (freemasonry, scientology, etc), and conspiracies -- to say nothing of organized crime. How to reflect on the future of governance (*Tomorrow, Who Will Govern the World?* 2011).

Considered otherwise, these entities are all experienced by the individual somewhat like advertising panels, balloons, or even distant stars of varying brightness. With the latter readily to be understood as variously forming patterns of constellations in one's cognitive sky -- at night. Some may be defined and experienced like features of the solar system -- as moving planets. Of course one may have a sense of orbiting around a Sun, dependent on a particular belief systems for light and warmth (and perhaps of being exposed to the varying forms of a Moon).

Ironically the conventional deprecation of astrological influences is then curiously called into question by whether these acclaimed external entities exert any real influence on one's life -- benefic or malefic -- as many would claim. Is any influence by external collective entities usefully to be understood as illusory in some way -- as with the scientific deprecation of astrology?

The challenge of governance may then be as much a challenge of self-governance. How does one understand and manage one's "globe" -- and its "globalization processes"? Is the array of external bodies curiously echoed within? Does one have an "international community", some kind of "United Nations" with its panoply of Specialized Agencies, etc -- possibly even a "World Economic Forum", challenged by a "World Social Forum"? And what about powerful "multinational corporations" with dubious agendas and dirty tricks -- even a "military-industrial complex"?

As symbolic functions and archetypes, this array then recalls the degree of psychological entanglement with the gods of previous empires -- the *Dii Consentes* of Rome and the *Dodekathēon* of Greece. As such they also blend into the significance currently associated in some cultures with deities, angelic entities, spirits and saints -- from whom intercession is variously sought through procedures bearing a curious resemblance to solicitation of funds from the array of supposedly external bodies.

Framed as in some way central to this array -- the ultimate ruler supposedly empowered to "pull all the strings" -- what models of governance does one adopt? Does assuming one can act as emperor offer the sense of greatest ease of control over an essentially imperial system -- with the quest to extend the empire around one's globe? How to handle the recalcitrant -- the rebels and the terrorists? Targetted assassination? Does one engender internally a globally invasive surveillance network enabled by orbiting satellites and a swarm of drones? Is a global network of military bases required to ensure security and stability -- implanted in colonies and client states?

How then to engage with the contrasting cultures and ethnic groups around one's globe -- their belief systems and claims to unique understanding of the world? Are there sites sacred to such worldviews -- even a Holy Land, regarding which one righteously makes incommensurable claims? How to manage conflict regarding such a location symbolic of supernal insight?

By contrast, how might one go about enactivating for oneself an "open society", as variously argued by alternative and progressive movements? Is one then to be faced with the dilemmas of governance -- of dealing with an ecology of incommensurable models of governance, as they variously frame the processes within one's "global system"? Given the complexity, is it possible to use external manifestations (and their dynamics) as mnemonic templates of some kind -- through which to order one's internal processes? This suggests a curious form of "delegation" from the internal to the external, an ultimate failure of personal responsibility -- one tending to the pattern of dependence sought from an external perspective.

So framed, what might psychological independence then mean? Are there more interesting ways of framing the possibilities through which to explore "self" governance? What could the desperate quest for consensus then mean? Is it an illusion -- as currently framed externally (*The Consensus Delusion: mysterious attractor undermining global civilization as currently imagined*, 2011). What might it mean to be "at one" with oneself -- without imposing some simplistic pattern of agreement? How might one's various cultures "sing" together -- without the requirement that they "sing from the same hymn sheet"? Does a suggestive key lie in multi-part singing, as separately discussed (*Enabling a 12-fold Pattern of Systemic Dialogue for Governance*, 2012; *A Singable Earth Charter, EU Constitution or Global Ethic?* 2006).

The challenge of self-governance -- as the ruler of one's own globe (the [human microbiome](#)) -- can be provocatively reframed by the research of the [Human Microbiome Project](#). This has recognized the existence of trillions of bacteria in (or on) the human body, with some 500-1,000 species of bacteria living in the human gut. There are at least ten times as many bacteria as human cells in the body (approximately 10^{14} versus 10^{13}). How is one perceived from the perspective of any one of them? As a vehicle? A shelter? A wilderness? A human being is indeed a fruitful metaphor of a global system.

Global civilizational collapse as an internal reality?

There is extensive argument regarding the probability of global civilizational collapse -- as an externality -- if only in the light of historical precedents (*Mind Map of Global Civilizational Collapse*, 2011). This may be framed as overshoot and "die-off" (Jay Hanson, *Overshoot Loop: evolution under the maximum power principle*, *Dieoff.org*, 12 November 2013; John Siman, *Speaking very gently about die-off*, *Resilience*, 10 October 2006).

The case for "end times" as a personal experiential crisis has long been made by religions and welcomed as a final justification (*Spontaneous Initiation of Armageddon: a heartfelt response to systemic negligence*, 2004). Other commentators address the socio-political reality of living through the process (Slavoj Žižek, *Living in the End Times*, 2010).

Such preoccupations can be readily associated with the incidence of [psychological depression](#) -- justifying arguments that collective depression may well reinforce such trends. Civilization has to be believed in, if it is to exist?

Of greater relevance to this argument is the manner in which thinking about such collapse frames (and is framed by) any personal sense of decline (*Metaphors To Die By: correspondences between a collapsing civilization, culture or group, and a dying person*, 2013). How then to "ingest" the reality of such collapse? Given any sense of personal mortality, and symptoms of decline, how do these then serve -- possibly as metaphors -- to order thinking about collapsing external reality?

Of greater potential interest is the implication of thinking regarding the eventual collapse of the solar system (or the universe). Given the imaginative subtlety of astrophysical insights, what resonance with such patterns can be fruitfully sustained to order internal reality, as separately discussed (*Psychosocial Implications of Stellar Evolution? Reframing life's cycles through the Hertzsprung-Russell diagram*, 2013)?

As a human microbiome, how to think about collapse from the perspective of the trillions of dependent bacteria?

Systematic mirroring of the global problematique as an internal reality?

The above examples extend the effort at articulation previously explored (*Degrees of Cognitive Engagement with Interrelated Global Categories*, 2009). Consideration might similarly be given to:

- Energy scarcity as an internal reality
- Global insecurity and conflict as internal realities?
- Widespread inadequacy of shelter as an internal reality?
- Global public indebtedness as an internal reality?
- Overpopulation as an internal reality?

The issue is how the radical cognitive possibility could be presented as a process in which people could meaningfully engage. Potentially more interesting is how the process could be articulated and applied more systematically to the global problematique as a whole in all its complexity. Under what circumstances might this be viable?

As argued above, this does not imply a binary strategy of switching to "internal" from "external". The question is how to transcend any such switch metaphor, as previously discussed (*Recontextualizing Social Problems through Metaphor: transcending the 'switch' metaphor*, 1990). A complex space could be imagined within which particular zones favoured such reframing in some manner, with others resistant to it -- according to an appreciation of circumstances. This would be consistent with arguments regarding:

- **catastrophe theory** -- especially since problematic experience can be potentially explored as catastrophes of a particular type (René Thom, *Structural Stability and Morphogenesis*, 1972). Particularly intriguing is the sense in which experience of problems gives rise to a limited variety of **WH-questions** (what, which, where, when, why, how, who) that can be understood as conforming cognitively to so-called **elementary catastrophes** (*Conformality of 7 WH-questions to 7 Elementary Catastrophes: an exploration of potential psychosocial implications*, 2006)
- **complex systems** -- especially with respect to cognitive implication through third order cybernetics (and higher?), as argued with respect to "problematique", "resolutive", "ludique" and "imaginative" (*Imagining the Real Challenge and Realizing the Imaginal Pathway of Sustainable Transformation*, 2007; *Consciously Self-reflexive Global Initiatives: Renaissance zones, complex adaptive systems, and third order organizations*, 2007)
- **wicked problems** -- especially given the sense in which the "wickedness" of a problem may be a matter of personal appreciation, as separately discussed (*Encycling Problematic Wickedness for Potential Humanity*, 2014). Framed otherwise, until one can understand how one is part of the problem, one cannot understand the nature of the solution required. Despite any sense of righteous innocence, everyone can be readily understood as an exemplar of problematic wickedness for some others.
- **mirror neurons** -- understood as firing both when an individual acts and when the individual observes the same action performed by another, thus "mirroring" the behaviour of the other, as though the observer were itself acting (Giacomo Rizzolatti, et al, *Mirrors in the Mind*, *Scientific American*, November 2006). The function of the mirror system is a subject of much speculation in cognitive neuroscience and cognitive psychology. Mirror neurons may be important for understanding the actions of other people, and for learning new skills by imitation. Of relevance to this argument is how this process may relate to interaction with collective "persons" or with other "others" in the environment (*Mirroring of self and other: enjoyment "through" the world*, 2011; *Looking in the Mirror -- at Josef Fritzl ? Global conditions on reflection*, 2009; *Stepping into, or through, the Mirror: embodying alternative scenario patterns*, 2008). Of related interest, the mirror is fundamental to reflection in other contexts (Alex Wayman, *The Mirror as a Pan-Buddhist Metaphor-Simile*, *History of Religions*, 1974; Noriyuki Inoue, *Mirrors of the Mind: introduction to mindful ways of thinking education*, 2012)
- cognitive invagination? -- given the metaphorical implications of **invagination** in embryology, as variously explored, there is a case for understanding internal reality as engendered through a process of cognitive invagination (*Engendering Invagination and Gastrulation of Globalization*, 2010; *Invagination in Psychosocial Terms: understandings from web resources*, 2010)
- **embodied cognition** -- whereby it is assumed that the nature of the human mind and cognition is largely determined by the form of the human body, as extensively argued by George Lakoff and collaborators (Mark Johnson, Mark Turner, and Rafael E. Núñez)

Enabling internal reality through cognitive embodiment and enactivism

A succinct summary of cognitive embodiment is provided by Jérôme Proulx, as translated and illustrated in the following. As a Canadian, the author uses his experience of expression in French through gesture to develop his argument within the context of a special journal issue on *Knowing Bodies* -- stressing the contrast with conventional cartesian thinking.

Clarification of cognitive embodiment by Jérôme Proulx
Translated from French version (" <i>Enactivism</i> " ou la théorie cognitive de la " <i>Personnification</i> "): <i>une tentative pour mieux comprendre notre activité langagière</i> . <i>Journal of the Canadian Association for Curriculum Studies</i> , 2004)
<i>I am embodied in my ecosystem</i>
As a species in the biosphere and the living ecosystem, so I am <i>embodied</i> and included in a story, a whole culture and biology that describe me and identify me. My thoughts, my actions, my body, my mind, my emotions, my whole physical and mental person is <i>embodied</i> within a historicity, a culture and a biology which define me as a species. My <i>predisposition</i> and my <i>enculturation</i> describe and determine me. I live them and perpetuate them. I am part of the living ecosystem and I take part in its

deployment.

So I am part of, and I am *embedded* in, my society which is *embodied* in a culture which is in turn *embedded* in the evolving biological history of my species -- briefly put, a woven and entangled (non separable) system. I am thus embedded nested in my ecosystem.

My ecosystem is embodied within me.

Correspondingly, this ecosystem is *embodied* within me. My *historico-biological predisposition* and my *enculturation* are *embodied* in me. My evolving historicity, my culture and my society are *embodied* in my person, in my actions. That is to say I represent my history, I represent my culture, I represent my society: I represent the evolution and adaptation of my species. My *historico-biological predisposition*, in addition to having brought me to where I am and having equipped me, is represented in me and through me: it describes and determines me, but I live and *embody* it. My *enculturation* is part of me, it *embodies* me as I take part in my social life. These phenomena are *embodied* in me: in my actions, my thoughts, my person, that is to say in my way of being.

The argument follows from the work of various authors on [enactivism](#), notably ([Humberto R. Maturana](#) and [Francisco J. Varela](#), *The Tree of Knowledge: the biological roots of human understanding*, 1987; Francisco J. Varela, [Evan Thompson](#) and [Eleanor Rosch](#), *The Embodied Mind: cognitive science and human experience*, 1991) -- as usefully summarized in various tables by [Randall Whitaker](#) (*Enactive Cognitive Science in Context: comparisons with earlier traditions*, *Observer Web*, 2001).

The term enactivism was proposed to *emphasize the growing conviction that cognition is not the representation of a pre-given world by a pre-given mind but is rather the enactment of a world and a mind on the basis of a history of the variety of actions that a being in the world performs.*

The Three Traditions of Cognitive Science			
Table reproduced from Randall Whitaker (<i>Enactive Cognitive Science in Context: comparisons with earlier traditions</i> , <i>Observer Web</i> , 2001) as based on Varela, Thompson and Rosch (1991)			
	Cognitivism	Emergence (Connectivism)	Enactive
Metaphor for Mind	Digital computer	Parallel distributed network	Inseparable from experience and world
Metaphor for Cognition	Symbol processing	Emergence of global states	Ongoing interaction within the medium
The World in Relation to Us	Separate Objective	Separate Objective	Engaged 'Brought forth'
	Representable (in symbols)	Representable (in patterns of network activation)	Presentable (through action)
Mind vs. Body/World	Separable	Separable	Inseparable
	Cartesian dualism (mind and body hermetically sealed from each other)	Epiphenomenal dualism (mind related to body and world via emergence)	Phenomenology (mind and world enacted in history of interactions)
Exponents	Simon, Newell, Chomsky, Fodor, Pylyshyn	Rumelhart, McClelland, Dennett, Hofstadter	Maturana, Lakoff, Rorty, Piaget, Dreyfus

Enabling social change through cognitive internalization of globalization?

The previous points raise the question of how embodied cognition and enactivism might relate to the challenges of globalization as understood externally and collectively. One approach to this is to build on the insights of [Douglas Hofstadter](#) (*I Am a Strange Loop* (2007) -- as undertaken separately (*Sustaining a Community of Strange Loops: comprehension and engagement through aesthetic ring transformation*, 2010).

In his discussion of the future of globalization, [José María Ramos](#) (*Alternative Futures of Globalization: a socio-ecological study of the World Social Forum Process*, 2010) is relatively unique in discussing global collective dynamics in terms of embodied cognition, recognizing that:

Embodied cognition is the idea that our cognising of the world around us is located in us as individuals (cognising) and as groups (co-cognising). We are primarily social beings interacting and co-cognising with others, 'structurally coupled' into cultural (e.g. language, religion, tradition), and ecological / geo-geographic contexts...

The embodied cognition of actors through the WSF(P) is foundational to understanding what hegemonic and counter hegemonic globalization means in the present era. The WSF(P), by virtue of the groups and people that come, represents knowledges which have been marginalised or obscured by the dominant and official liberalist discourse on globalization (as inevitable, necessary, progressive, developmental, etc)... Counter-hegemony through the WSF(P) is fundamentally an expression of the embodied cognitions that diverse actors express....

I have attempted to see how discourses and ideas guide the strategies of actors in thinking about and working for alternative globalizations, emphasising the embodied cognition of a diversity of groups. While this action research offered an insiders view, this thesis invites a broader cognitive mapping of the counter hegemonic energies in many locales toward the construction of a greater common humanity.... One of the significant findings in this thesis is how the organizational dimensions of the WSF(P) and AGM has a fundamental influence on the strategies for social change used by AGM actors and the substance of alternative futures of globalization.

In stressing insights from the dynamics of action -- from process -- Ramos effectively raises the question of the degree of internalization of globalization. However his arguments place much greater emphasis on the collective action process than on the individual cognitive implications for those who participate in it. and enable it.

The difficulty with this framing is the sense in which in a complex knowledge-based society (characterized by information overload), **it is uncertain who hears what and by what is any process initiative guided?** This is especially significant when it is assumed that such initiatives, whether locally or globally, are assumed to be an appropriate response to changing an external world -- one composed of many actors potentially indifferent to any such initiative and actively pursuing their own.

The point is partially made by the original enthusiasm for the [United Nations Climate Change Conference](#) (Copenhagen, 2009), and the subsequent disappointment, as separately discussed (*Insights for the Future from the Change of Climate in Copenhagen*, 2010). For many, one conclusion was "never again". Despite the analysis of Ramos, it is unclear that the [World Social Forum](#) is capable of being fruitfully held -- in ways to match the "hideous strength" of the [World Economic Forum](#), or to engage effectively with the latter's disastrous framing of globalization (*All Blacks of Davos vs All Greens of Porto Alegre: reframing global strategic discord through polyphony?* 2007).

There is little indication that any face-to-face global social gathering is capable of enhancing its processes to the degree which could be considered relevant to the challenges of the times. What is then achieved by a gathering of the G7 or others claiming relevance?

The point can be reframed by arguing that much is now effectively achieved through social media, cited as vital to the various [Arab Spring revolutions](#) and to the success of the [Occupy Movement](#). This is challenged by such as [Evgeny Morozov](#) (*The Net Delusion: the dark side of internet freedom*, 2012; [Sherry Turkle](#), *Alone Together: why we expect more from technology and less from each other*, 2012; [Ethan Zuckerman](#), *Rewire: digital cosmopolitans in the Age of Connection*, 2013).

In an age of news management ("spin"), and the associated dependence on "positive" appreciation of any initiative, there is a further concern that an initiative will anyway be reframed as significant -- irrespective of the outcome and relevance in practice. The point has long been made with respect to eliciting consent ([Edward S. Herman](#) and [Noam Chomsky](#), *Manufacturing Consent: the political economy of the mass media*, 1988). It has been made more generally by [Barbara Ehrenreich](#) (*Smile Or Die: how positive thinking fooled America and the world*, 2009).

The danger is especially evident in a context in which process is emphasized and outcomes are primarily evaluated in terms of "networking" and "feel good" factors. Collective cognitive embodiment in relation to strategic action can then be reframed in terms of collective fantasy, as separately argued (*Cultivating Global Strategic Fantasies of Choice*, 2010). Some commentators remark on the degree to which the potential of social media is seen to have peaked.

Understood in this way, **there is a case for recognizing a neglected cognitive possibility in changing the system not the planet**, as argued separately (*From Changing the Strategic Game to Changing the Strategic Frame*, 2010). The latter is a critical comment on the alternative Cancún Declaration by the [International Forum for Climate Justice -- The People's Dialogue](#) (*Foro Internacional de la Justicia Climática -- Diálogo de la Pueblos*), specifically its slogan: *Let's change the system, not the planet*. However, rather than changing the system, the focus in the comment is on how the system is framed.

The above argument goes further in emphasizing how **any framing benefits from being cognitively embodied**(*Embodiment of Change: Comprehension, Traction and Impact? Discovering enabling questions for the future*, 2011). As yet to be explored is how cognitive embodiment of externality can be understood in a collective context in which the embodiment is practiced by others assembled together. How is this to be distinguished, if at all, from collective fantasy and delusion? What then is the engagement, if any, with those whose focus is purely external?

Use of the common optical metaphor of "focus" in strategic thinking is clearly appropriate in any discussion of "mirroring" (and associated references to "image"). Within a more complex context, the question is what the term could come to imply both for an individual and for a collective. The term is the theme of a recent study by [Daniel Goleman](#) (*Focus: The Hidden Driver of Excellence*, 2013; *The Focused Leader*, *Harvard Business Review*, December 2013; *7 Ways to Sharpen Your Focus*, *The Huffington Post*, 15 November 2013; *Why Professionals Need Focus*, *Forbes*, 8 October 2013).

Mirroring globalization to enable a sense of enough

Curiously implicit, in both globalization (as an abstraction) and in the associated problems (so frequently cited), is the mystery of "enough".

Simply expressed, can one ever have "enough"? Can a civilization? Can a country? Can a corporation? Can a religion? This plays out with respect to the quest for wealth, the quest for status, and the quest for a larger / better home or vehicle. The unquestionable code word is "growth" -- at any cost, as noted above.

Some of the mystery of "enough" is sensed with respect to consumption of food or drink. It is evident to a degree in the case of sexual intercourse and procreation. It is more obvious in the case of physical exertion leading to weariness. In the case of food, the sense of satiety results (for many) from registration by the brain of chemicals released when food or drink is put in the stomach. this feedback may not operate for some.

The question is how "enough" might be registered in other domains: wealth, status, children, etc. For a collective, when has it achieved "enough"? How could a civilization recognize itself as having had "enough" -- as having exhausted its sustaining inspiration? Many civilizations of the past offer indications in this respect ([Johan Galtung](#) and [Sohail Inayatullah](#), *Macrohistory and Macrohistorians: perspectives on individual, social, and civilizational change*, Praeger, 1997)

Are there no meaningful limits to continuing growth (*Is There Never Enough?* 2013). The question is effectively raised by astrophysicists -- in energy/information terms -- with respect to the duration of the expanding universe. When will it collapse -- and why?

Such questions are most evident with respect to the duration of human life. How do some people sense that they have had "enough" -- in contrast to others who aspire to live as long as possible? How to recognize "when one's time has come" and to engage meaningfully with that phase of a life cycle, as discussed separately (*Metaphors To Die By: correspondences between a collapsing civilization and a dying person*, 2013).

The question is also evident with respect to lifestyle and ambition. How to recognize a condition of sufficiency, rather than continuing to aspire for something "more" -- in response to the mirage of "growth"? In exploring the complex relationship between inner and outer realities, these questions relate implicitly to some sense of "where" any form of growth towards "more" is going and how that might be reframed. Where is globalization going? How might that be reframed? Mirroring may indeed offer a personal sense of the growth associated with globalization, as previously argued (*Personal Globalization*, 2001).

However, if sustainability is to be understood as the dynamic through which the sense of "enough" is sustained acceptably, how does mirroring constrain and redirect any desire for "more"? There is a degree of irony to the manner in which mirroring offers one form of valuable feedback to those otherwise insensitive to excessive food consumption -- and their evident "globalization" in physical terms. Missing however is any sense of how mirroring might operate with respect to intangibles -- unless the externality of the mirror is somehow internalized, echoing folktales regarding magic mirrors (*Stepping into, or through, the Mirror: embodying alternative scenario patterns*, 2008). Cognitively the challenge is to become the mirror -- in ways as yet to be understood.

Engendering external change in terms of internal reality?

As noted and indicated above, the argument here assumes that the relation between "external" and "internal" is far more complex and subtle than is claimed with respect to essentially mechanistic (Newtonian) views of action. There is a degree of entanglement and resonance that remains to be understood and articulated -- even if its nature is intuitively comprehended by individuals to some degree in many situations. Fundamental physics and aesthetics both offer clues.

A fruitful metaphor through which to explain the possibility is offered by [Francisco Varela](#) (*Laying Down a Path in Walking: essays on enactive cognition*, 1997). The much-cited metaphor of "laying down a path" originates from Buddhist understanding. As to what is "laid down", this could be usefully recognized in terms of disparate articulated concepts -- externalized definitions, "outed" in response to the circumstances of the cognitive terrain. In terms of collective organization, this could be considered in terms of a "potential association", triggered into "existence" from a condition of latency as separately described (*The Role of the "Potential Association"*, 1971). Emergency response groups may be activated in this way, effectively ceasing to exist when no longer required.

So framed, the concepts can be understood as "stepping stones" offering looser connectivity, rather than requiring the higher degree of connectivity implied by contiguity of paving elements in a more structured path (see discussion of *Metaphorical geometry as a cognitive vehicle*, 2014). The explanatory "stones" may not need to "fit together" as is required with some stonework. It may well be composed of "ill-fitting" stones. If the "path" is configured like a Möbius strip, the paradoxical connectivity is then furnished through a cognitive process. The criterion is whether the "stones" enable a space to be traversed -- as in crossing a river. They may well be "inned" after that is achieved. As stressed above, the cognitive container is topologically of a paradoxical nature.

The hope might be that "I am so changed" by the work on the "world within" that the "world without" is also transformed in sympathy - or at least the relationship between them, as "I perceive it".

This image, fantasy, or expectation is a central one in Jungian psychology and might be called "The Rainmaker Image". It is based on the following story, told by the sinologist, [Richard Wilhelm](#) (translator of the Chinese classic, *The Secret of the Golden Flower*). It was cited with respect to the [UN Earth Summit](#) in Johannesburg (*My Reflecting Mirror World: making my World Summit on Sustainable Development worthwhile*, 2002):

<i>The Rainmaker Image</i> engaging a hyperobject with hypersubjectivity?
Richard Wilhelm was in a remote Chinese village which was suffering from a most unusually prolonged drought. Everything had been done to put an end to it, and every kind of prayer and charm had been used, but all to no avail. So the elders of the village told Wilhelm that the only thing to do now was to send for a rainmaker from a distance. This interested him enormously and he was careful to be present when the rainmaker arrived.
He came in a covered car, a small wizened old man. He got out of the car, sniffed the air in distaste, then asked for a cottage on the outskirts of the village. He made the condition that no one should disturb him and that his food should be put down outside the door. Nothing was heard of him for three days, then everyone woke up to a downpour of rain. It even snowed, which was unknown at that time of year.
Wilhelm was greatly impressed and sought out the rainmaker, who had now come out of his seclusion. Wilhelm asked him in wonder: <i>So you can make rain?</i> The old man scoffed at the very idea -- <i>Of course not</i> he said. <i>But there was the most persistent drought until you came</i> , Wilhelm retorted, <i>and then -- within three days -- it rains?</i>
<i>Oh</i> , replied the old man, <i>that was something quite different. You see, I come from a region where everything is in order, it rains when it should and is fine when that is needed, and the people also are in order and in themselves. But that was not the case with the people here, they were all out of Tao and out of themselves. I was at once infected when I arrived, so I had to be quite alone until I was once more in Tao and then naturally it rained!</i>

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