In Quest of Optimism Beyond the Edge
through avoidance of the answering process

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Introduction
Each year the World Question Center, initiated by The Edge, formulates a question that is submitted to a network of people of appropriate eminence in a relevant field. The Edge Annual Question of 2007 is as follows:

<table>
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<th>What are you optimistic about? Why?</th>
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<td>As an activity, as a state of mind, science is fundamentally optimistic. Science figures out how things work and thus can make them work better. Much of the news is either good news or news that can be made good, thanks to ever deepening knowledge and ever more efficient and powerful tools and techniques. Science, on its frontiers, poses more and ever better questions, ever better put. What are you optimistic about? Why? Surprise us!</td>
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The 160 responses are available on the Edge website. They have also been presented in a book edited by John Brockman (What are You Optimistic About? 2007).

The following is a commentary on an encounter by the writer with that set of responses. It follows from earlier responsibility for the Encyclopedia of World Problems and Human Potential, use of its databases to generate questions of possible significance (Generating a Million Questions from UIA Databases: Problems, Strategies, Values, 2006), an effort to derive significance from them (Preliminary NetMap Studies of Databases on Questions, World Problems, Global Strategies, and Values, 2006), a concern with fixation on the positive (Being Positive Avoiding Negativity: management challenge of positive vs negative, 2005) and with questions of a "higher order", and a continuing preoccupation with the challenge of comprehension (Musings on Information of Higher Quality, 1996). Aspects of these initiatives notably enabled the work of the German Research Centre for Artificial Intelligence in its development of a question-based interactive web media facility for Dropping Knowledge (Enabling a Living Library, 2006).
The Edge question to scientists itself raises the question as to the manner in which science can be described as "fundamentally optimistic" when "optimism" has never been considered a meaningful concept in conventional "science". How then can it be asserted to be "fundamentally optimistic"? Is it more appropriate to consider that scientists in some way believe themselves and the application of their methodology to be optimistic?

As a belief, how is such a belief to be distinguished from that associated with other "belief systems"? This suggests that it might have been appropriate to consider how the question would have been answered within other belief systems -- as "states of mind" that consider themselves to be "fundamentally optimistic". Religions are an obvious example. If "put to the question", how would those of religious persuasion have addressed that question?

The question asserts that "Science figures out how things work and thus can make them work better". Presumably this assertion would also hold for other belief systems which would each consider that acceptance of their recommendations would "make things work better" -- if only through following the basic precepts of their preferred cognitive or spiritual discipline. Implicit in the 160 responses however is the technical application of scientific knowledge and the unquestioned positive evaluations of the consequences of such application (in a "fix-it" mode) -- which some at least would consider merit debate.

In a period suffering from hype and spin at the hands of every institution, discipline and belief system, it is unfortunate that the question included the assertion that "Much of the news... can be made good, thanks to ever deepening knowledge and ever more efficient and powerful tools and techniques".

The discussion below is effectively a commentary on the final assertion in the above question, namely that "Science, on its frontiers, poses more and ever better questions, ever better put."

Unsurprising surprises

The question enjoined respondents to "surprise us" by the focus of their optimism. But curiously most of the surprises presented had long been anticipated by theoreticians, and/or, embodied in science fiction. The possibility of "surprising surprises" was barely considered. What kinds of surprises are in store for those for whom 9/11 was a surprise?

A first reading of the responses was quite disappointing. As might be expected many of the responses of scientists are characterized by explicit or implicit "techno-optimism" -- especially when the solutions advocated are effectively presented as "silver bullets" to deal with some currently recognized crisis. The quality of healthy doubt and uncertainty regarding the methodology of science, and its ability to enhance its capacity to move beyond its conventional (unquestioned) patterns, seemed remarkably low.

Although forced by evolution of fundamental physics to recognize potential implications of quantum theory and the results confirming it, the embedded implications regarding patterns of thinking appeared to be far less obvious in the responses. Uncertainty and probability were not apparent in the "can do" approaches to planetary issues such as global warming. The technological fixes proposed within the current techno-optimistic mindset take no account of disastrous consequences, considered to be of "low probability", that may be associated with them -- as so ably documented by Nassim Nicholas Taleb (The Black Swan Effect: the impact of the highly improbable, 2007). In a countervailing spirit of optimism, presumably analogous arguments could be made for the serendipitous consequences of other events considered to be of "low probability" -- as those of spiritual inclination might claim.

Is it appropriate to consider that the set of responses was characterized by "in-the-box" thinking and did not get into "out-of-the-box" thinking beyond its "edges" -- however ironic that might be given the source of the question?

Contrasting approaches might have been recognized, such as:

- the call by Jennifer Atlee, Tom Atlee, Susan Cannon and Peggy Holman for "Phoenix Conversations" -- namely "A Call to Prepare Together for Uncertain Futures" -- described as follows:

  An undercurrent of conversations is bubbling in all sectors -- among business people, government officials, futurists, activists, citizens over back fences and blogs... There is a growing sense of crisis that neither mainstream leaders nor the public quite know what to do with. Many of us are talking about it in our own circles, separately, out of the public eye. Very little of this conversation is visible in the mainstream press and political debates, so we don't realize how many other people and institutions are discussing it.

  Practically everyone has an opinion about this uneasy topic of crisis. Indeed, there is widespread, legitimate disagreement about the extent to which a "perfect storm" of complementary crises may be emerging in the near future, involving, but not limited to: * peak oil, accelerating climate change, serious economic disruption, loss of democracy, significant resource depletion (including fresh water and arable land), international instability and terrorism, increasingly disruptive technology developments and "wild card" events such as pandemics. [see also The Phoenix Project]

- other ways of knowing with which scientists may claim to be less comfortable -- which nevertheless constitute a source of optimism especially in cases where science and technology seemingly have little of immediate relevance to offer

Where are the surprises of a degree corresponding to that associated with the much-cited Bohr-Pauli exchange. Niels Bohr declared in response to Wolfgang Pauli: "We are all agreed that your theory is crazy. The question which divides us is whether it is crazy enough to have a chance of being correct. My own feeling is that it is not crazy enough." To which Freeman Dyson added:

"When a great innovation appears, it will almost certainly be in a muddled, incomplete and confusing form. To the discoverer,
Could the challenge of the differences between the perspectives offered by the respondents, and their disparagement of each other's "craziness" be fruitfully seen in this light? Investment in this possibility might offer more hope than seeking crudely to eliminate and demonize insights that may, in some as yet unknown way, be vital to the future creativity and diversity of humanity?

**Res extensa vs Res cogitans**

On first reading of the collection of responses, the one that seemed most extraordinary was that of quantum physicist Anton Zeilinger ([The Future of Science, Religion and Technology, 2007](http://www.edge.org/3rd@foreach.html) -- titled only as *The Future of Science* on the Edge website) who notes:

> In contrast with the strong statement of Zeilinger, however, that of Hoffman's
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> Consistent with the view of David Peat, for example, Hoffman argued that:
>
> **Problem fix responses**
>
> Although the original question courageously framed science as "a state of inadequate. The**
>
> Any optimism dependent on the elimination of those that offer a contrary insight or in terms of new comprehension of more traditionally worded insights could well enable a radical reframing of the supposedly "external" problems (global warming, resources, poverty, etc) in the light of new understanding of the mindsets that in some way sustained them -- whether in terms of new insight or in terms of new comprehension of more traditionally worded insights (cf *My Reflecting Mirror World: making my World Summit on Sustainable Development worthwhile*, 2002). As such this could prove "surprisingly" fruitful in what is essentially a stuck conceptual situation in which many would argue that global leadership has both "lost the plot" (as implied by the above call for Phoenix Conversations) and is in deep denial regarding such inadequacy.

Framed in this way there is an implication that there might be some kind of cognitive and strategic "gateway" between the seemingly opposed worldviews of science and religion. The nature of that gateway, in terms of the paradigm shift implied, would clearly be vital to a new kind of response to the world "without" (*res extensa*) through a new relationship with the world "within" (*res cogitans*).

Unsurprisingly, some respondents indeed framed their optimism in terms of the final elimination of religion as the fundamental hindrance to a comprehensive scientific worldview. In contrast Zeilinger's indication could well enable a radical reframing of the supposedly "external" problems (global warming, resources, poverty, etc) in the light of new understanding of the mindsets that in some way sustained them -- whether in terms of new insight or in terms of new comprehension of more traditionally worded insights (cf *My Reflecting Mirror World: making my World Summit on Sustainable Development worthwhile*, 2002). As such this could prove "surprisingly" fruitful in what is essentially a stuck conceptual situation in which many would argue that global leadership has both "lost the plot" (as implied by the above call for Phoenix Conversations) and is in deep denial regarding such inadequacy.

Any optimism dependent on the elimination of those that offer a contrary view might be appropriately considered to be fundamentally inadequate. The view of Gregory Bateson (*Mind and Nature: a necessary unity*, 1979) offers more challenging leads.

Although the original question courageously framed science as "a state of mind", unfortunately, amongst a plethora of optimistic techno-fix responses to a challenging future, this view was only partially echoed by the response of Donald D. Hoffman (*Solving the Mind-Body Problem, 2007*, titled on the Edge website as *We Will Soon Devise a Scientific Theory for the Perennial Mind-Body Problem*). Consistent with the view of David Peat, for example, Hoffman argued that:

> Evidence is mounting that the mind-body problem requires revision of deeply held presuppositions. The most compelling evidence to date is the large and growing set of proposals now on offer. All are nonstarters. They are, to quote Pauli, not even wrong. We have yet to see our first genuine scientific theory of the mind-body problem....
>
> I am optimistic, however, that the obstacle is not in our genes but in our presuppositions. Tinkering with presuppositions is more clearly within the purview of current technology than tinkering with our genes. Indeed, tinkering with one's presuppositions requires no technology, just a ruthless reconsideration of what one considers to be obviously true. Science has risen to the task before. It will rise again. But progress will be tortuous and the process psychologically wrenching. It is not easy, even in the light of compelling data and theories, to let go of what once seemed obviously true.

In contrast with the strong statement of Zeilinger, however, that of Hoffman's implies little need to change the scientific mindset that is...
assumed might somehow achieve this reframing through a form of scientific "business as usual". This is seemingly in complete contrast with the kind of articulation offered by other cognitive scientists (George Lakoff and Mark Johnson, *Philosophy In The Flesh: the embodied mind and its challenge to western thought, 1999; George Lakoff and Rafael Nunez, Where Mathematics Comes From: how the embodied mind brings mathematics into being, 2001*).

These views are consistent with a surprising case study by Richard A. Koenigsberg (*Hitler's Ideology: embodied metaphor, fantasy, and history, 2008*):

Hitler imagined that Germany was suffering from a "disease within the body politic" caused by Jewish bacteria. In order to save the life of the nation, it was necessary to destroy the source of Germany's disease. Genocide represented the acting out of an immunological fantasy. Insofar as knowledge is organized when a source domain gets mapped into a target domain, it follows that Hitler's perception of a disease within the body politic articulated a disease that Hitler experienced within his own body. What was the nature of Hitler's (psychosomatic) disease? How does the suffering of human beings get projected into culture, creating diseases such as war and genocide?

The implications of such thinking for more appropriate forms of strategy have been explored elsewhere (*Consciously Self-reflexive Global Initiatives: Renaissance zones, complex adaptive systems, and third order organizations*, 2007) and are highlighted in what follows. Transcending the optimism of the original question, in reaction against a questionable pessimism, there might then be some form of "transcendental optimism" of greater realism and of a more cognitively radical nature.

**Self-reflexive?**

Following the challenging reframing offered by Douglas R. Hofstadter (*Gödel, Escher, Bach: an Eternal Golden Braid, 1979; I Am a Strange Loop, 2007*), the issue raised by Anton Zeilinger brings into focus several forms of self-reference:

- that of the respondents as scientists reflecting on their profession, and those aspects of it with which they disagree
- that of the respondents reflecting on the question and the nature of their response, especially in the light of other responses with which they are not in sympathy
- that of the Edge and the World Question Center in positioning themselves as instigators of the process, handling its responses, and presumably excluding some as inappropriate
- that of appreciators of the responses in general -- and those, such as this writer in particular, in choosing to comment on them.

Questions which might then emerge include:

- the extent to which science is a belief system in a set of other belief systems, each with their peculiarities. This raises the issue of how a set of belief systems is to be understood in its diversified entirety, as explored elsewhere (*Tuning a Periodic Table of Religions, Epistemologies and Spirituality -- including the sciences and other belief systems*, 2007). If, as a mode of knowing, science was to be compared to sight or vision, how is smell or taste to be understood within a vision framework? How meaningless is it? How much of significance can be transferred from "smell" to "vision" -- as explored in relation to *synaesthesia*?
- how views of a "scientist" are reconciled with those held by the same person:
  - as a believer of some other kind?
  - as an actor in a politicized or commodified system which may exert pressures to which the "scientist" is acquiescent or in which the scientist is complicit?
- how disagreement is to be processed and why consensus is held to be preferable?
- what is the understanding of how the future will "disagree" with any currently emergent consensus?

The last points were partially addressed by one contributor -- Gerald Holton (*The Increasing Coalescence of Scientific Disciplines, 2007*) well-known for his early comments on complementarity (*The Roots of Complementarity, Duedahs. 1970*). However, given its prevalence, there is surely a case for exploring more systematically the nature of disagreement, especially if any consensus achieved is essentially premature and unstable. The "coalescence" he notes might be better understood as acceptance of the need for a bigger toolbox -- but without any significant insight into a new methodology of multi-tool use. Shifting metaphors, the chef may have a wider choice of ingredients and equipment but this says nothing about the skills, recipes and parameters required to produce more tasty, nourishing foods.

A more radical exploration might follow from the inquiry of Nicholas Rescher (*The Strife of Systems: an essay on the grounds and implications of philosophical diversity, 1985*) into the disagreement inherent in the relationships between schools of philosophy precluding any prospect of agreement (from his perspective). Given the manner in which philosophy and epistemology underpin the methodology of scientific inquiry, this would suggest the need for more radical explorations of the possibility of structures built on incommensurability (*Beyond Method: engaging opposition in psycho-social organization, 1981; Using Disagreements for Superordinate Frame Configuration*, 1992). Given the conflicts to which they give rise, the pathic incapacity of religions to process their disagreements confirms the inadequacy of approaches dependent on "coalescence". A similar point might be made with regard to the natural and social sciences and the manner in which various "sciences" are marginalized, as variously explored by Paul Feyerabend (*Against Method: outline of an anarchistic theory of knowledge*, 1975).

In elaborating this commentary, how then is the set of questions as a whole to be encountered? What might be understood as going on when faced with the views of 160 people of eminence presenting a variegated optimistic understanding of the future? One contributor clarified the inappropriate past initiative to envisage a "unity of knowledge" -- despite Holton's perspective. Another was optimistic that such will not be found (Frank Wilczek, *Physics will not achieve a Theory of Everything, 2007*).
What kind of coherence, if any, is then to be expected from the encounter with the set of questions? Is the emergent significance of any synthesis to be appropriately described in terms of the delightful German term -- Buchbindersynthese -- namely a synthesis framed solely by the binding of the book in which the collection of replies is set? Or perhaps by Projektlogiksynthese -- namely a synthesis framed by the specifics of the task of the moment?

How then to interpret one's direct experience of the set of questions in the moment? Specifically:

- what does one "get out of it"? Namely what filters does one apply in selecting patterns of significance and connecting the dots of meaning so detected?
- what does one "put into it"? Namely what significance does one bring to it in supplying a connective pattern -- if such is to be sought?
- how does one find reason to approve of particular responses as appropriate and relevant whilst disapproving others as especially inadequate?

Beyond the edge of known territory, some incomplete maps of former times (based on a flat Earth understanding) had zones labelled "here be dragons". As with such maps, perhaps it is useful to conceive of current frontier zones of understanding as inhabited by equally surprising beasts. The "dragons" might usefully be understood as markers for the need to transform metaphorically the flatness of cognitive territory into one at least as complex as a sphere -- to allow for self-reflexivity. Dragons are indeed convenient for this purpose because of their association with the widespread symbol of the tail-biting serpent Ouroboros.

Polarization

It is somewhat curious that a degree of (unresolved, if not unconscious) polarization is built into the initiative by the World Question Center:

- a question posed is conventionally defined in polar relationship to an answer sought. This is a particular way of framing any advance in understanding and precludes the possibility of other modes which might challenge the sufficiency of that mode and offer complementary modes or alternatives. Such reframing is increasingly of relevance in fundamental physics and the associated implications and insights for more appropriate awareness (Am I Question or Answer? 2006)

- in stressing "optimism", and asserting its value in contrast to that of "pessimism", the initiative sets up a relationship that might be beneficially challenged. Perhaps there are more appropriate and less dualistic forms of optimism? The question is prefaced by the assertion "Science, on its frontiers, poses more and ever better questions, ever better put". It is not so evident from the responses what questions were "better put". Curiously, from a cybernetic or systems perspective, to the extent that "optimism" is associated with positive feedback and "pessimism" with negative feedback, it is surely a more appropriate and integrative balance between the two which is required, as argued elsewhere (Being Positive Avoiding Negativity: management challenge of positive vs negative, 2005)

- the optimism of science was effectively contrasted with a pessimism or inappropriateness characteristic of other modes of knowing -- which science has a marked tendency to disparage. Given the "two culture" challenge (C P Snow, The Two Cultures, 1959), is this not a dynamic worthy of a degree of future reframing -- with which a new kind of "optimism" might be associated? Some reference was made to this possibility in the responses, but surprising advances in methodology were not envisaged -- perhaps in contrast with those tentatively explored by Nobel Laureate Hermann Hesse (The Glass Bead Game, 1943). Given the above-mentioned work of George Lakoff and other cognitive scientists, the future role of metaphor might have been cited (cf Metaphors as Transdisciplinary Vehicles of the Future, 1991; Guiding Metaphors and Configuring Choices, 1991).

- implicit in the question, and in the call for optimism, is the challenge of how to respond to the "news that can be made good" -- presumably because it is "problematic" in some way. Curiously, and seemingly consistent with the optimism sought, the implication that there are any concrete "problems" that need to be urgently addressed is avoided -- if not dangerously denied. And yet many of the respondents frame their optimism in terms of the "problems" to be overcome (climate change, energy, ignorance, disease, etc) by the technological "solutions" they envisage. No effort was made to address the appropriateness of this polarized problem-solution framing. Perhaps more fruitful framings may emerge in the light of questions of a "higher order", as discussed elsewhere (Engaging with Questions of Higher Order: cognitive vigilance required for higher degrees of twistedness, 2004).

The simplistic approach to polarization evident in the responses is in curious total contrast to the sophisticated insights regarding "dualities" considered appropriate to the fundamentals of string theory (cf Paul Hulpern, The Great Beyond: higher dimensions, parallel universes and the extraordinary search for a Theory of Everything, 2004). Given the manner in which society is challenged by polarization and duality, and the current "clash of civilizations", is there not a case for imagining the possible relevance of frameworks commensurate in complexity with those appropriate to fundamental physics? Or are the psychosocial challenges to be considered of far greater simplicity than those of fundamental physics -- despite the virtually total incapacity to deal adequately with them? What might this imply for any optimism regarding the capacity to implement techno-fixes in complex psychosocial systems?

Physicists attach significance to the 10 (to 26) dimensions (of the res extensa) of string theory in the full expectation that non-physicists should believe them. Is it not then appropriate that those who invest years of disciplined endeavour in the complexities (of the res cogitans) of consciousness research should expect comparable belief from those who have not -- especially when both approaches to a "Theory of Everything" are incomprehensible to most?

Might it then be possible that those focused on res cogitans have in some cases partially anticipated the insights of physicists -- albeit through other modes of knowing and explication -- or that each could learn from the other? If there is a degree of isomorphism between
"In-the-box" vs "Out-of-the-box"

As suggested by the last point, it is appropriate to ask to what extent the collection of responses reinforces "in-the-box" thinking, or even a form of "groupthink", that precludes the emergence of other modes of understanding that may be more appropriate for the future. Specifically, it would appear that the geographical and cultural distribution of respondents obscures the possibility of responses that might have emerged from those more sensitive to other modes of knowing (Enhancing the Quality of Knowing through Integration of East-West metaphors, 2000; Knowledge Gardening through Music: patterns of coherence for future African management as an alternative to Project Logic, 2000).

From a scientific perspective, another mode might have emerged from consideration of the adaptive cycle (a focus of the Resilience Alliance) and the consequent need for resilience in anticipation of the probability of societal collapse -- as most ably documented by Thomas Homer-Dixon (The Upside of Down: catastrophe, creativity, and the renewal of civilization, 2006). The issue is how resilience in an adaptive cycle is to be understood in relation to knowledge and belief systems -- as distinct from the adaptive cycle in social and environmental systems (however these may be underpinned by a less tangible cycle). Homer-Dixon rightly insists on the need to explore the means by which psychosocial systems could be designed to "degrade gracefully" in anticipating the collapse phase of any such cycle. This design characteristic is now carefully built into some technical systems vulnerable to collapse -- although the pursuit of efficiency may preclude this in other cases. How might systems of knowledge be designed to "degrade gracefully" -- if only in the case of aging scientists obliged to experience loss of memory and senility in its various forms? How is it that little of the "optimism" identified the possibility of transcending the constraints of the scientific method itself -- seemingly envisaged to be calling for little further improvement (as is the case with other belief systems that science tends to disparage)? When scientists are so optimistic about their theoretical and technical capacities in response to the challenges of the future, how is it that the ability to explain (or predict) the differences between them (as evident in the responses) is so modest -- especially when such differences are rarely a significant factor in informing their optimism?

Pre-logical biases?

In reflecting on one's experience in relation to the set of responses, they usefully raise questions about the beliefs:

- one "buys into"
- one fabricates for oneself or one's group
- one is forced into by circumstances

Anthropologists have helpfully documented the extent to which notions of space and time may be characteristic of particular cultures. With respect to time, this notably extends to distinctions between linear time (as promoted by western science, when time itself is not considered to be an illusion) and circular time, perhaps including a sense of process reality. Such diversity may be extended to the significance of relationships, but especially to a sense of personal or group identity, notably as explored elsewhere (Emergence of Cyclical Psycho-social Identity: sustainability as "psychically" defined, 2007). Kenneth Boulding (Ecodynamics; a new theory of social evolution, 1978) makes the insightful point that:

> 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 group, organization, department, discipline or science. If personification is a metaphor, let us not despise metaphors -- we might be one ourselves.

In such terms, who are the respondents? Who do they think they are? Who are those who declined to respond? What might be understood about the identity of any person exposed to the responses -- including this commentator? What are the relationships between these various identities and how is this significant to any understanding of their "pessimism" or "optimism" with regard to the future? Given the radical nature of some theories of fundamental physics, what significance should be attached to any sense of identity associated with either respondents or responses -- whether inferred or attributed, or to their possible "entanglement"? The point might be most challengingly formulated in the statement of Gregory Bateson (1972): "We are our own metaphor"

In perusing the responses, to what extent does one attribute significance to the respondents and their responses? How appropriate or inappropriate is that process? Are they to be recognized as "stars" in the universe of knowledge -- whose "brightness" has been achieved by some special process combining accumulation of "knowledge" and special "insight, as acknowledged by others in neighbouring parts of that firmament? What then of contrasting assessments, by other respondents (or oneself), regarding their relative "brightness"? How should one's own sense of insight be relativized by any such encounter? What significance is to be attached to any personal sense of "resonating" with one set of views rather than another? Why does variation of appreciation -- perhaps derived from pre-logical biases -- not get fed back into assessment of the "objectivity" of any degree of "optimism"? (cf Axes of Bias in Inter-Cultural Dialogue, 1993)

A curious analogy?

The responses are provided in a period of ever increasing recognition of information overload and the incapacity to process significant proportions of it with any adequacy (cf Coherent Policy-making Beyond the Information Barrier: circumventing dependence on access, classification, penetration, dissemination, property, surveillance, interpretation, disinformation, and credibility, 1999). Knowledge generation is matched by attention deficiency and readiness for forgetfulness -- if only as an appropriate psychological defence mechanism. This
occurs in a period when increasing attention is being given to global warming and climate change -- the policy "flavour of the month", as notably evident in the responses.

In systemic terms, there is a curious degree of isomorphism between the process of carbon "emission" that is giving rise to global warming and the quantity of information emitted in a variety of forms within a global society. This accumulation, whether to be caricatured as "hot air" or not, gives rise to a form of global warming -- as suggested by increasingly "heated" debate between mutually opposed views. As concluded by the editors of Scientific American (Enough Hot Air Already -- to slow climate change, it's time to talk about real action, December 2007):

> Talk is cheap. It's time for politicians to stop spewing hot air and start enacting hard limits on dangerous emissions.

This debate might be caricatured as "overheated", destabilizing, and capable of engendering various forms of social collapse. Does the use of this metaphor in management of the economy and financial markets, characterized by other forms of emission, point to intuitive collective understandings of the generic challenge of global society -- as a form of "overheating"?

Is it possible that there is a characteristic common to the mindset that engenders unrestrained carbon emissions and that which engenders unrestrained emission of opinions and perspectives? Both might be seen as intimately bound up in the intimate psychosocial process whereby identity is defined and affirmed -- especially through any process of reproduction. This is most likely to be the case if there is a degree of mirroring, resonance, entrainment or entanglement between the processes of res extensa and of res cogitans -- as might be implied by recent research on mirror neurons.

In such terms there are striking relationships between:

- the reproductive drive, so important to individual psychology and any sense of legacy, that nevertheless increases the population of the planet, its use of energy and thereby engenders and sustains the global warming process
- the creative drive to assert opinions and to "make one's mark", so important to affirming individuality and affirming less tangible forms of legacy and recognition

Much of the controversy regarding global warming, to the extent that the phenomenon was recognized, has been whether it was indeed problematic in the longer term. Its disruptive effects on weather systems and rising sea levels (as a consequence of melting ice caps) are however increasingly acknowledged. Are there equally pernicious effects to be recognized as a consequence of "emissions" associated with undisciplined individual and group creativity -- perhaps to be framed as "opinionated" and disrespectful of traditional knowledge (especially of the wisdom imputed by some to sacred literature)?

Is it now the decision-making ("whether") systems that are effectively being chaotically disrupted? Furthermore, to the extent that there is merit to the analogy, what is it that has been "locked up" in cognitive "ice caps" that is now in the process of "melting"?

Curiously the response may lie, by comparison with the type of molecular bonding associated with ice formation, with the psychosocial bonds characteristic of the formation of coherent groups. There is no lack of research to indicate the breakdown of traditional patterns of social bonding, whether in terms of individual relationships, neighbourhood communities, or on a wider scale -- to the level of the "clash of civilizations". These processes have been noted as increasing individualism and alienation. Ironically an equivalent to the "rising sea level" may perhaps be found in the acclaimed emergence of an increasing sense of global community -- potentially problematic in its marginalization of traditionally isolated "low-lying" cultural islands (Dynamically Gated Conceptual Communities: emergent patterns of isolation within knowledge society, 2004).

Just as research is suggesting that the pattern of resource use, and the associated global ecological footprint, may require 3-8 additional planets for it to be sustainable, is it the case that a form of global psychosocial footprint requires considerably more psychological space than currently envisaged? This possibility would appear to be confirmed by the psychosocial pressures in high density urban environments -- despite assumptions that humans can readily and fruitfully adapt to such conditions on a long-term basis. The assumption that sustainable lifestyles are feasible on a single planet (with suitable techno-fixes) is then matched by the assumption that psychosocial tensions can be sustainably contained within mega-city environments of the future. Indeed one respondent specifically points to such lifestyles as the remedy for current planetary ills (Stewart Brand, Cities Cure Poverty, 2007).

**Why "emit"?**

Beyond the decision by the World Question Center to "emit" its annual question, why did the respondents choose to "emit" their answers? Why the choice of this writer to "emit" this commentary? Such cases call for self-referential reflection if the insights are not merely to be seen as a further contribution to information overload -- cognitive global warming -- requiring appropriate defensive responses in terms of selective attention.

It is intriguing that any such emission may be framed as having components such as:

- a response from a particular perspective to a sense of inadequacy in the pattern of knowledge that would otherwise be produced as definitive. This implies a form of remedial, corrective response to the "pattern that connects" -- an effort to fine tune it to hold some personally intuited sense of greater insight, coherence or even wisdom
- an effort to process the alienating "otherness" of some contributions to the pattern, recognized as a challenge, and thereby to engender a larger whole in the pattern
- a degree of presumption that putting in one's "10 cents worth" is of some significance in the larger scheme of things, if only as an affirmation of one's own identity
There is even a case for considering "emissions" of opinions and explanations -- in academic papers, media pieces, internet discussion lists or blogs -- as functioning in a manner similar to that of "greenhouse gases" by effectively creating a closed conceptual greenhouse within which the creative rays of a symbolic sun are trapped.

The human cognitive world may be effectively dependent on such a sun, as myths of many cultures have always implied -- indicating the existence of processes of psychosynthesis functionally analogous to those of photosynthesis. This is in sympathy with the recognition of belief systems as greenhouses within which it is unwise to "throw stones" (cf. *Dynamically Gated Conceptual Communities: emergent patterns of isolation within knowledge society*, 2004). There might even be some merit to considering how peer review and gatekeeper processes act as appropriate constraints on information emissions -- effectively anticipating the function of the constraints of carbon trading on greenhouse gas emissions.

**Not-knowing and uncertainty**

In considering the appropriateness of a pattern of responses, and what that pattern might seem to obscure or exclude, some sensitivity to forms of "not-knowing" might have merit:

- In its simplest form, not knowing may only be a question of ignorance and not seeking to know -- or a failure to understand. Typically this would be associated with a form of complacency -- contentment with an habitual pattern of thought. This might occur with the best informed as with the least informed. The challenge of understanding a mathematical theorem might be a sophisticated version of this form, as suggested by Øystein Linnebo in a *review* of a study by Stewart Shapiro (*Philosophy of Mathematics: Structure and Ontology*, 1997):

  Although I suspect Shapiro would not welcome this conclusion, it seems to me it may point the way to a transformation of the traditional epistemological problem posed by mathematical realism. Instead of being primarily a problem about access to abstract objects, it now becomes a problem about our grasp of mathematical concepts. The central notion is that of coherence. A theory is coherent if it is in principle possible to assign a unique truth-value to each of its sentences, observing the principles of logic. But in the vast majority of cases, we're not actually able to determine what truth-value is assigned to a sentence. What, then, does our understanding of the theory consist in?

- Not knowing of a different kind occurs with recognition of the possible inadequacy of what is known and the need to explore beyond its frontiers -- as motivated by curiosity. However that is to be scientifically defined. Typically this is what drives research, the need to respond to anomalies, and to challenges calling for unforeseen forms of remedial action. It also drives the search for certainty through non-scientific belief systems from divination to religion.

- Not knowing what to do might be distinct from the previous case, especially for any individual tortured by existential doubt. It might be a fruitful admission on the part of collectivities and leadership to guard against tendencies to assume the adequacy of a strategy in situations where it may be quite inappropriate. The doubt associated with accepting ignorance of what to do may be a prerequisite for adequate dialogue amongst those who together can conceive a way forward. No doubt, no dialogue! (*Future Generation through Global Conversation: in quest of collective well-being through conversation in the present moment*, 1997)

- In the recognized absence of certainty and adequate knowledge, a precautious attitude may be cultivated -- the kind of not-knowing associated with the precautionary principle. This is of course the strategic posture favoured by those sensitive to the possibility of systemic surprises arising from unforeseen combinations of events. The posture may also be associated with any form of risk management -- raising the issue of how much weight is to be attached to what is not known. It is of course significant to game-playing in its more technical and strategic sense.

- Not knowing may also be cultivated as an attitudinal and philosophical style that questions the value of seeking a high level of certainty regarding the medium or long-term future. Here the issue is the attitude required for living in the present moment, in terms of the information available, accepting what might subsequently emerge -- however disruptive. It specifically challenges the sense of insecurity associated with the need to know in order to control.

Each of these modes may be simultaneously operative to some degree. Each affects the need to ask questions, to answer them, and the manner of doing so. Together they constitute a knowledge process that may well be fundamental to the sustainability of a knowledge system underlying a society (cf. *Sustaining the Quest for Sustainable Answers*, 2003). Clearly a healthy balance is required between them and any excessive development of one at the expense of others is liable to prove dysfunctional. Excessive preoccupation with knowing and the need for certainty is, for example, typical of obsessive over-control.

**Res cognita vs Res incognita: reframing the edge of the known?**

One way of thinking about such disparate forms of (not) knowing is that of the logical quadri-lemma especially favoured in some Eastern cultures -- as noted by Kinhide Mushakoji (*Global Issues and Interparadigmatic Dialogue: essays on multipolar politics*, 1988). This framework might be used to make the following distinctions:

- knowing
- not-knowing
- knowing and not-knowing
- neither knowing nor not-knowing
Together these pose the question of the nature of the question-answer process and the psychosocial engagement with it. As a psychoactive pattern, they are together a challenge to any sense of identity (whether individual or collective) dependent on particular forms of questioning or answering. They call for a dynamic response that avoids dependence on one or the other -- but requires an appropriate dance between them. This might be seen as consistent with the traditional Sanskrit adage: Netti Netti (Not-This, Not-That). The above interrelationships are discussed in more detail elsewhere (Relating to the unknown -- beyond denial, 2005). They might be fruitfully be considered as mapped onto a complex plane to highlight the complexity of the boundary between the known and the unknown (cf Psycho-social Significance of the Mandelbrot Set: a sustainable boundary between chaos and order, 2005).

The contemporary framing of the challenge is that of US Defense Secretary, Donald Rumsfeld (DoD News, 12 February 2002):

> Reports that say that something hasn't happened are always interesting to me, because as we know, there are known knowns; there are things we know 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. And if one looks throughout the history of our country and other free countries, it is the latter category that tend to be the difficult ones.

This much-cited remark has been reviewed in the light of its inadvertent wisdom (see Philip Stephens, Rumsfeld's Unwitting Wisdom, Financial Times, 12 December 2003). Whilst acknowledging that: "The chaos in Iraq testifies to what happens when politicians substitute hubris for intelligent thought" he acknowledges the merits of Rumsfeld's statement: "Sometimes we can be certain about things; sometimes we know the direction to take but are aware of gaps in our knowledge; and sometimes we just stumble around in the dark". According to Stephens, compounding Rumsfeld's error in ignoring his own advice, his unstated error is his assumption that the present can be readily projected into the future.

These considerations all raise the challenge of how to navigate "betwixt and between":

- res extensa and res cogitans, or
- res cognitiva and res incognitiva

To what might traversing such a pass lead -- individually or collectively? Will this be the discovery of the pioneers of the 21st century? Should such possibilities be the focus of an optimism "beyond the edge" to deal with the current cognitive challenge of polarized thinking:

- optimism vs pessimism?
- positive vs negative?
- solutions vs problems?
- intellectual abstractions vs operational praxis?
- hope-mongers vs doom-mongers?

"A-void-dance"?

There are several Eastern patterns that provide degrees of complex coherence appropriate to such a patterned dynamic:

- the style and process -- a blend of directness and indirectness -- of the question and answer associated with the Zen koan
- the emergent integrative understanding of what has been ambiguously translated as a Gateless Gate whose nature is indicated through a classic collection of 48 Zen koans (Mumonkan; Wu menguan) and their many commentaries.
- schematic and artistic representations in the form of psychoactive mandalas and yantras

In different ways these variously point to the importance of a form of central cognitive (or epistemological) "emptiness" or nothingness (Shunyata) as a focal reference. A mnemonic confirmation of this is to be found in the widely distributed traditional Chinese talisman, the jade bi disk (or pi disk), characterized by its empty centre. Its shape may originate in the circular path of the sun, with the central hole standing for the fixed Polar Star, or for the philosophical principle of the Absolute (t'ai chi) or "Absolute Oneness" (t'ai-i).

Susannah Goonatilake (Toward a Global Science: mining civilizational knowledge, 1999) presents a well-argued case for vigilant attentiveness to the insights of relevance to future science and technology that may emerge from non-western civilizations and cultures, notably those of South-East Asia (cf Enhancing the Quality of Knowing through Integration of East-West Metaphors, 2000). As an example, in the above-mentioned article by David Peat (Trapped in a World View -- website preview entitled Is there a language problem with quantum physics?, New Scientist, #2637, 5 January 2008), he points to the compatibility of the process-oriented language of the Montagnais people (of Canada) to understandings of quantum physics.

The fundamental cognitive implications of "void" are however more meaningful from a Western perspective in terms of:

- understandings of ignorance in comparison with knowledge -- or even wisdom -- and the implications for learning processes (cf Ronald Duncan, Encyclopaedia of Ignorance, 1978; UNESCO Philosophy Forum "What do we not know?", 1995; Ayyam Sureau (Ed). What We Do Not Know, 1996)
- the technological implications of the wheel, notably for purposes of transportation
- the scientific and cultural significance associated with (discovery of) the concept of zero or nothing (cf Robert Kaplan, The Nothing that Is: a natural history of zero, 2000; John D. Barrow. The Book of Nothing: Vacuums, voids, and the latest ideas about the origins of the universe, 2001)
- the function of communication "holes" around which communication circulates within groups in large institutional structures (cf Ron Atkin, Combinatorial Connectivities in Social Systems: an application of simplicial complex structures to the study of large organizations, 1977), as summarized elsewhere (Social organisation determined by incommunicability of insights)
- the astrophysical concept of void as the empty spaces between filaments, the largest-scale structures in the universe -- together
with the associated phenomena of black "holes"

- the architectural principles associated with void creation by arching structures, notably those that are spherically symmetrical as with those based on principles of tensional integrity
- the topological significance associated with the torus, notably as a dynamically emergent structure
- the fluid dynamics that sustain the coherence of a torus as a dynamic structure centred on a void (Comprehension of Requisite Variety for Sustainable Psychosocial Dynamics: transforming a matrix classification onto intertwined tori, 2006)
- the challenging technological possibilities of magnetohydrodynamics in managing nuclear plasma in a toroidal fusion reactor, namely a tokamak

With respect to the last point, the hopes recently invested in fusion reactor technology (the ITER research initiative), as a source of energy to sustain human civilization, offer a striking metaphor for a corresponding cognitive challenge -- especially any sense of achieving sustainable cognitive fusion as a basis for any psychosocial civilization of the future (cf Enactivating a Cognitive Fusion Reactor: Imaginal Transformation of Energy Resourcing (ITER-8), 2006). Both might be understood in terms of engendering and managing processes associated with a void -- perhaps well-labelled as "a-void-dance" -- as another understanding of the cultivation of "mindlessness" (Paul J. Griffiths, On Being Mindless: Buddhist Meditation and the Mind-Body Problem, 1999).

As with the circular movement of plasma in a fusion reactor, or around a particle accelerator, the issues of collective attention management and concentration are challenging and resist description in logical terms. This is indicated by a quotation from the preface of the Gateless Gate by the compiler Mumon (or Wumen):

The great path has no gates,  
Yet thousands of roads enter it.  
When one passes through this gateless gate;  
He walks freely between heaven and hell.

Whether the focusing ("magnetic") constraints are a single polarity, or a configuration of multiple polarities, the ambiguous nature of experience of them is well-indicated by effort to move a metal object between two magnetized pillars. The capacity to do so is then well-indicated by the ability to "walk freely between heaven and hell" (between "positive" and "negative" forces) or other variant translations and understandings. This might be an appropriate description of the opportunity for a viable mode of thought between res extensa and res cognitans -- as the pillars of such a gateway.

The relationship between the counter-intuitive dynamics of the "gateless gate" and those of a fusion reactor are explored in more detail elsewhere in the light of emerging recognition of the global ocean conveyor (Potential Misuse of the Conveyor Metaphor: recognition of the circular dynamic essential to its appropriate operation, 2007).

That such indications are considered "meaningless" from within many conventional frameworks may in fact be what merits further exploration. So much philosophical, conceptual and institutional commitment is made to the achievement of "unity" in its various guises that the understandings of such unity obscure the possibility of an underlying "zero" or "void" of some kind. This could play a vital role analogous to that of the zero in the numerical system. Perhaps the hope for "unity" should be reframed in terms of hope for a central void -- an empty centre -- around which the variety of cognitive and institutional modalities could be more appropriately configured. One approach to the functioning of such a "structural zero" has, for example, been extensively explored by R Buckminster Fuller (Synergetics: the geometry of thinking, 1978-9). Its role is a theme of the Chinese classic, the Tao Te Ching:

Thirty spokes share the wheel's hub.  
It is the centre hole that makes it useful...  
Therefore profit comes from what is there;  
Usefulness from what is not there.

Science has notably advanced over the past century through the recognition of the special conditions associated with more and more extreme degrees of vacuum -- and has enabled the technology to achieve them. Although more dubious scientific research has focused on sensory deprivation, the possible role of a form of cognitive void has only been explored through modes of knowing unrecognized by science. Given the organizing dynamics associated with voids, how might cognitive "a-void-dance" come to be understood?

Might such understanding not prove highly relevant to the sense of meaninglessness and pointlessness characteristic of the many -- including scientists -- tortured by existential doubt and experiential challenges to their very sense of identity? How is it that those who consider themselves most closely associated with the advancement of knowledge, through their various professional communities, disparage other contexts as places where "nothing happens"? Is this sense fundamental to most communities who attach little significance to what happens "elsewhere" -- whether or not some are tortured by the possibility that "everything is happening elsewhere"? Is "nothing happening" in most places? How is this related to the sense that leads to their being caricatured as "holes" -- possibly characterized by a dynamic into which it is dangerous to be drawn?

Such conditions have also been described in terms of a "social void". This may be understood to be inhabited by the marginalized and "losers", then characterized as "political zeros" or "social zeros" (as discussed in Luis Gonzalez y Gonzalez, La Vida Social, 1956). Such a void may also be understood as a feeling of lack of identity with average sized groups, institutions or associations. "Zero" is also used to caricature those of opposing views, intellectuals, new-born children (T H Huxley, On the Natural Inequality of Man, 1890) or women. The "social void" is also associated with discussion of corporate governance (Lee A. Tavis, Corporate Governance and the Global Social Void, 2001) and of the consequence in developing countries of the departure of colonial powers -- notably with respect to
engendering a "political void".

It is ironic that so many habitual patterns of "substance abuse" -- of major economic significance to governments and world trade -- are adopted in an effort to "fill" such a poorly acknowledged experiential void. The role of alcohol, drugs and oil may be seen in this light. Global society is liable to be characterized by the future as a "world gone mad" in its mindless sacrifice of what are claimed to be its highest values. Is it to be understood as driven in some way by a perverted intuition of "mindlessness" -- of a higher order of meaninglessness and emptiness? (Global Strategic Implications of the Unsaid: from myth-making towards a wisdom society, 2003).

Are we all "zeros" in a sense as yet to be understood and cognitively embodied? Is this what is implied by the paradoxical "temporal topology" (cf Robin Le Poidevin, Relationism and Temporal Topology: Physics or Metaphysics?, 1990) of such statements as:

- The first shall be last, and the last shall be first (Matthew 20:16)
- And the end of all our exploring / Will be to arrive where we started / And know the place for the first time (T S Eliot, Little Gidding)

The question has even be raised as to whether, in terms of quantum physics, time itself is an illusion (Amanda Gefter, Is time an illusion? New Scientist, 19 January 2008). In this sense, the future to which the attention of respondents was directed by the Edge question may be an illusion in their own scientific terms.

In the light of such issues, and the insights of quantum physics regarding the insubstantiality of matter, rather than the quest for a "Theory of Everything", would it not be more appropriate to explore the possibility of a "Theory of Nothing", as suggested by Russell Standish (Theory of Nothing, 2006)? Given the cognitive points raised by Lakoff and others regarding embodiment and process reality, "Nothing" might even be explored in terms of "Knowing". "Theory" might also be a synaesthetic modality of knowing for which an appropriate grammatical form has yet to emerge -- if it is not to be understood as a resonant hybrid between the nine categories of grammar (as notably highlighted by the explorations of Arnold Keyserling, Weltgrammatik, 1979)

A-void-dance as intimate sensing

There is a case for exploring the degree to which "a-void-ing" is effectively a form of "intimate sensing", to be contrasted with conventional uses of the senses of vision, hearing, tasting, feeling and smelling. The latter senses may then be considered as various modalities of "remote sensing" whereby more meaningful engagement is effectively avoided. By contrast, the nature of intimate integration has been eloquently described by David Abram (The Spell of the Sensuous: perception and language in a more-than-human world, 1997). *** less is more -- senses?

But the extent to which such sensing involves a degree of "cognitive digestion" calls for a stronger set of complementary clarifying metaphors associated with that process of a-voiding:

- the dynamics of the process prior to capturing cognitive prey from res extensa (leading to its de-definition from an unbounded, infinite context) might also be understood as involving "cat-and-mouse" playfulness (on the part of the cognitive predator) -- a somewhat macabre a-void-dancing prelude (from the perspective of the cognitive prey)
- the draining of significance from res extensa (through rendering meaningless as a source of nourishment) might be compared with the processes employed by those animals that capture and immobilize their prey to consume them (live) at their convenience.
  - this bears some resemblance to the manner in which a complex system is cognitively described and defined as a "unit" -- a form of embalment that closes any "doors" or "windows" through which they interact with their environment
- the digestive sensing of res extensa might be understood as achieved by enwrapping it in what is effectively an extruded stomach with its associated digestive enzymes
  - as the primary digestive organ, the stomach could be much closer to those processes ensuring nourishment than the remotest sense organs, effectively acting in a secondary role to facilitate access to nourishment; sensed "things" might indeed then be understood as "e-vents"
- extrusion of the stomach (stomach eversion) is a technique employed by starfish and related species. For example, with the crown-of-thorns starfish (Acanthaster planci) whose feeding patterns are of great concern for the management of the Great Barrier Reef; the extruded stomach of a 2-year-old would cover an area of about 160cm². [Curiously extruded stomach feeding is a imaginatively used in some role playing games]
  - disciplines could then be understood as classes of cognitive enzymes through which the "hinging" of res extensa is "grokked" -- a process envisaged in a science fiction novel that has given rise to that cult term (cf Authentic Grokking: emergence of Homo conjugens, 2003)
    - the palette of enzymes then corresponds to the various modalities of the scientific method, consistent with the sciences as cognitive "cutters" of various kinds (as suggested by the French scie and scier)
    - transformative metaphors, through which res extensa is cognitively modified, might themselves be fruitfully understood as cognitive enzymes

It is fruitful to compare such processes with the widespread emergence (and seemingly undisciplined phenomena) of the "blip culture" of sound bites, and the like -- so named by Alvin Toffler (The Third Wave, 1981). The associated cognitive predation might then be caricatured as "cognitive quickies in the now" -- through which the essence of a "happening" is extracted to nourish the processes of res cogitans. Its importance is to be seen in the extent to which more and more communications relate to the immediate present, its appropriation and its organization -- projects curiously informed by a process of projection.

This focus could be usefully explored in terms of the analogy with the addictive consumption of foodstuffs of high sugar content to provide a rapid -- if not immediate -- energy boost. Such foodstuffs not only contribute to obesity but are associated with the provocation of diabetes -- in contrast with those that release energy more slowly. Clearly res cogitans might be more beneficially
nourished by happenings of longer-term significance -- whether or not "information overload" is associated with a form of "information obesity" (cf Engaging Macrohistory through the Present Moment, 2004).

Optimizing the individual and collective learning process

The unconscious sense of an underlying or conditioning void has a curious influence on the enthusiastic engagement in many social change "projects" (cf John Rakton Saul, The Unconscious Civilization, 1995). These tend to be undertaken as though nothing similar had been undertaken previously -- namely in an ahistorical, atemporal mode of an assumed tabula rasa. Participants tend to be unconstrained by what they, or their predecessors, may have learnt from previous initiatives -- especially, self-reflexively, with respect to their personal contribution to the failure of those initiatives. From a learning perspective, such projects are therefore essentially asystemic -- confirming the recognition that those who fail to learn from history are condemned to repeat it.

The above argument points to the central importance in a knowledge-based society of the processes whereby closure is "avoided", or of how unavoidable closure is managed. The fundamental importance of closure in relation to reflexivity has been well explored by Hilary Lawson (Closure: a story of everything, 2001; Reflexivity: the post-modern predicament, 1986).

In the question-answer process, closure may however be usefully compared to the manner in which the dynamic engendered by a question is collapsed and brought to an end by an answer -- framed as the desirable "achievement of closure". By comparison with the challenge of managing nuclear plasma, such closure may however be compared with the (undesirable) phenomena of quenching -- whereby the plasma is de-energized and de-natured through contact with its container, namely the walls of the fusion reactor with which contact is otherwise prevented by magnetic repulsion technology.

Curiously some schools of philosophy, as well as some disciplines of meditation, advocate approaches that avoid closure in various forms -- certainly premature closure. An extreme example of the latter is of course the dysfunctional closure associated with groupthink (Groupthink: the search for Archaeoraptor as a Metaphoric Tale, 2002).

The case for suspension of the quenching-answer dynamic may be compared to philosophical arguments in favour of epoché or bracketing. Consistent with the query raised by Zeilinger (above) regarding res extensa vs res cogitans, this is understood as the theoretical moment where all belief in the existence of the real world, and consequently all action in the real world, is suspended. One's own consciousness is then subject to imminent critique so that when such belief is recovered, it will have a firmer grounding in consciousness. The phenomenological philosopher Edmund Husserl (Cartesian Meditations, 1931) develops the notion of "phenomenological epoché" -- where the world is "lost in order to be regained" through placing the epoché and thereby "bracketing" the world.

As discussed elsewhere (Present Moment Research: exploration of nowness, 2001), potentially much more relevant is the initiative of Francisco Varela (in several papers) to give an explicitly naturalized account of present experiential nowness based on two complementary approaches: phenomenological analysis and cognitive neuroscience (The Sceous Present: a neurophenomenology of time consciousness, 1997). He provides a valuable review of Edmund Husserls extensive philosophical studies of "intimate temporality", noting the concern of Maurice Merleau-Ponty that "Time is not a line but a network of intentionality" (Phenomenology of Perception, 1945). Varela presents a four-fold model of nowness based on flows and dynamical trends. He concludes that neurobiological attributes and the phenomenology of lived experience are interacting partners:

One thing is clear: the specific nature of the mutual constraints is far from a simple empirical correspondence or a categorical isomorphism. three ingredients have turned out to play an equally important role: (1) the neurobiological basis, (2) the formal descriptive tools mostly derived from nonlinear dynamics, and (3) the nature of lived temporal experience studied under reduction. What needs to be examined carefully is the way in which these three ingredients are braided together in a constitutive manner. what we find is much more than a juxtaposition of items. It is an active link, where effects of constraint and modification can circulate effectively, modifying both partners in a fruitful complementary way.

Elsewhere, Varela (The Gesture of Awareness, 1999) proposes a 3-fold cycle at the core of the act of becoming aware in the moment: "an initial phase of suspension of habitual thought and judgement, followed by a phase of conversion of attention from 'the exterior' to 'the interior', ending with a phase of letting-go or of receptivity towards the experience." Varela sees the phenomenological epoché as "the ensemble of these three organically linked phases".

In the current global situation the quality of questions and answers, and the dynamic of the question-answer process, would seem to be less than adequate to the challenges. There may therefore be a case for benefitting from the insights -- the cognitive patterns -- of the advanced science and technology fundamental to successful nuclear fusion in order to optimize sustainable collective learning processes. Exactly how might the question-answer dynamic then be "suspended" to avoid premature "quenching" closure, whilst sustaining the generation of insights vital to collective learning?

What might be the relevance for the organization of the communication dynamics of large conferences or electronically enabled collective communication processes that are so vital to collective decision-making (cf Documents relating to Dialogue and Transformative Conferencing)? Given the relevance of the "conveyor" metaphor to the global dissemination and circulation of knowledge (if not wisdom), there is a case for benefitting from insights into the global ocean conveyor that is seemingly so vulnerable to disruption by climate change (Potential Misuse of the Conveyor Metaphor: recognition of the circular dynamic essential to its appropriate operation, 2007).

There would appear to be is a degree of equivalence between:
the desperate focus on early consensus ("unity") and the associated elimination (or marginalization) of disagreement (or dissent) in the hopes of ensuring that global processes are manageable within the currently somewhat simplistic dominant mindset upheld in international discourse -- and in national voting systems

the desperate focus on knowledge (exemplified by its cultivation in exclusive elite networks of excellence) and the elimination of ignorance (or the marginalization of the ignorant) and meaninglessness in the belief that human ingenuity will prevail in ensuring emergence of insight appropriate to strategic challenges

Ignorance will continue to be omni-present and will necessarily continue to be engendered, and sustained, in a knowledge-based society - - if only through the birth of children and through the ageing process. This will necessarily be associated with the prevalence and generation of disagreement. There would therefore seem to be a case for working with such phenomena rather than assuming that they can be eliminated or considered insignificant. In an exponentially expanding knowledge society, the personal experience of ignorance is necessarily fundamental and central.

**Sustainable avoidance?**

Past decades have dramatically demonstrated the incapacity of collectivities to articulate strategies that:

- ensure agreement amongst a wide range of stakeholders,
- attract appropriate resources in practice (rather than as promises to be broken), and
- prove capable of being effectively implemented, rather than tokenistically, to the ends envisaged (eg "health for all", "jobs for all", "education for all", "justice for all", "housing for all", etc).

Decision-making in response to climate change offers the most recent example. In the light of such a track record, is it to be expected that collective action consequent on the optimism of the 160 respondents will be fulfilled through the mindsets with which they are associated?

Perhaps the apparently dysfunctional avoidance of remedial strategy-making and implementation could be reframed as indicative of the need for more radical insight into strategic indirectness -- grounded in a form of "a-void-dance"? Rather than deplore collective strategic inadequacies based on ineffectual agreement, perhaps others forms of collective insightful initiative can be based on the avoidance of global decision-making -- in ways other than the action avoidance and non-decision-making in which society has proved to be so proficient (The Art of Non-Decision-Making -- and the manipulation of categories, 1997; The Quest for the Socio-Economics of Non-Action, 1993). Is there indeed a collective art of "not doing" to be discovered -- as purportedly cultivated at the highest levels of the classical Chinese imperium?

In the light of such perspectives and possibilities, how do the Question Center and its respondents understand and manage what they avoid? Would there have been a case for configuring the set of responses on some form of map to identify what had been avoided and was implicitly conditioning the dynamics within the pattern of responses (as in the methodology developed by Ron Atkin, 1977)?

**Learning from this commentary**

The above comments raise the question -- for the writer -- of how best to learn from the process of engaging in it. How best to move beyond the boring conventional pattern of selective criticism and appreciation, inappropriately framing one or the other to make a point? How is one repositioned and reframed by engaging with the responses to which one is necessarily obliged to bring one's own meaning -- as with bringing a bottle of wine to an unlicensed restaurant? How does the process enable insight into the the meta-pattern identified by Gregory Bateson as "the pattern that connects"? How does this relate to any fundamental sense of meaninglessness and the "happening of nothing"?

Can the insights of the respondents indeed be fruitfully understood like stars distributed across the firmament of knowledge? What then of the patterns the relationships between them seem variably to form -- conveniently to be labelled, like the constellations of the zodiac, as an aid to comprehension? Are these to be understood as humanity's best effort at identifying the songlines of the noosphere? (Cultivating the Songlines of the Noosphere, 1996; From Information Highways to Songlines of the Noosphere, 1996)

Can the responses be experienced as trajectories to be dynamically "ridden" to other locations such as to elicit a larger pattern -- the meta-pattern as the archetypal "magical carpet" of legend, providing a new mode of transportation? Given the strategic allusion above to the legend of the phoenix, how does one give form to the phoenix or "re-cognize" its emergence? How is the "phoenix" to be cognitively formed, be-winged and flight-enabled -- to transcend the fate through fire of millions of "turkeys" commodified for sacrifice at the next optimistic thanksgiving? Rather than the conventional comparison of the "eagle vs the turkey", that of the "phoenix vs the turkey" might then offer a more strikingly ironic reminder of the challenge articulated by George Lakoff and Mark Johnson (Philosophy in the Flesh: the embodied mind and its challenge to western thought, 1999).

Can the responses be experienced aesthetically, through a form of synaesthesia, as verses in a poem offering facets of coherence -- a poiesis as a necessary prelude to auto poiesis -- explicating a larger implicit framework in the spirit of David Bohm (Wholeness and the Implicate Order, 1980)? Gregory Bateson suggested, for example, that:

> We can give to each other in poetry the access to a set of relationships in the other person and in the world that we are not usually conscious of in ourselves. So we need poetry as knowledge about the world and about ourselves, because of this mapping from complexity to complexity. (Cited by Mary Catherine Bateson, Our Own Metaphor, 1972, pp. 288-9)

Is this possibility a key to the global strategic challenge of the future, as argued elsewhere (Poetry-making and Policy-making: arranging...
Nicholas Rescher (The Strife of Systems: an essay on the grounds and implications of philosophical diversity, 1985) concludes his study by noting:

For centuries, most philosophers who have reflected on the matter have been intimidated by the strife of systems. But the time has come to put this behind us -- not the strife, that is, which is ineliminable, but the felt need to somehow end it rather than simply accept it and take it in stride. To reemphasize the salient point: it would be bizarre to think that philosophy is not of value because philosophical positions are bound to reflect the particular values we hold.

This said however, Rescher's argument does not necessarily preclude the possibility of new ways to take the strife "in stride". Indeed it has been argued elsewhere that new forms of transdisciplinarity may effectively emerge from "striding" (Transcending Duality as the Conceptual Equivalent of Learning to Walk, 1994; Walking Elven Pathways: enactivating the pattern that connects, 2007).

It might also be argued that the "strife" is fundamental to nonlinear dynamics and to the emergence of new patterns of order -- as through the "problem jostling" process identified by management cybernetician Stafford Beer (Beyond Dispute: the invention of team syntegrity, 1994). A related approach was used in endeavouring to configure the issues of sustainable development (Configuring Globally and Contending Locally: shaping the global network of local bargains by decoding and mapping Earth Summit inter-sectoral issues, 1992).

Does the source of optimism then lie in the question: when, and why, is the perceived connectivity of the delicate tracery of lines between the stars, the points in the above argument, in a poem, or in the proof of a complex theorem, to be considered meaningful -- or completely meaningless -- even "monstrous moonshine"? (cf Theories of Correspondences -- and potential equivalences between them in correlative thinking, 2007)

Synchronicity in playfully questioning the complexity of the edge

The final versions of the above commentary were prepared during travels in Tasmania. These evoked a set of impressions that highlighted and interrelated a number of the themes evoked above. These have been presented in a subsequent paper (Where There is No Time and Nothing Matters: cognitive challenges at the Edge of the World, 2008) with annexes (Memory Challenges at the Edge of the World, 2008; Import of Nothingness and Emptiness through Happening and Mattering, 2008; Transforming the Edge of the World through Voiding the Centre, 2008)

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