



laetus in praesens

Alternative view of segmented documents via Kairos

16th May 2012 | Draft

Engendering 2052 through Re-imagining the Present

Review of *2052: a Global Forecast for the Next Forty Years* as presented to the Club of Rome

-- / --

Introduction

Presentation context of the 2052 Report

Titanic implications?

Recognizing hidden dimensions -- the missing links?

Confidence and despair as existential indicators

Failure to integrate real-world dynamics

Global sensemaking and collective self-reflexivity

Misrepresentation of the 2052 Report?

Building with what is missing?

From appreciative inquiry to imaginative inquiry

Memetic warfare with aesthetic weapons?

Imaginative consciousness required to engage with the future?

Reframing the 2052 Report through imaginative inquiry

Re-imagining the future through the present: re-engaging Dreamtime

Conclusion

References

Introduction

Although this could be considered a "review" in the conventional sense, it is primarily concerned with what one might do about it -- notably in the light of the initial comments to be made, which are highly critical. These are based on the initial presentation at the book launch to a joint gathering of the Club of Rome and the World Wildlife Fund (Rotterdam, May 2012), together with the focus of the associated press release. This criticism is followed by an experimental exploration of how it might be possible to engage with the implications of the report as a metaphorical template -- notably in the light of an examination of the book itself, which included dimensions totally absent from the brief launch presentation.

The author of the report, [Jorgen Randers](#) of the [BI Norwegian Business School](#), indicates his involvement with the original *Limits to Growth* (1972) report to the Club of Rome, of which this is partly conceived to be a form of update. That report has had a most **turbulent reception**, as usefully documented by [Graham Turner](#) (*A Comparison of the Limits to Growth with Thirty Years of Reality*, 2007), and by those directly involved in earlier updates ([Dennis Meadows](#), [Donella Meadows](#) and [Jorgen Randers](#), *Limits to Growth: the 30-Year update*, 2004; [Dennis Meadows](#), [Donella Meadows](#) and [Jorgen Randers](#), *Beyond the Limits: confronting global collapse, envisioning a sustainable future*, 1993). The forecast is seen as an elaboration on one of the earlier overshoot-and-decline scenarios.

As an indication of bias, this "review" is written by someone who was appalled by the limited focus of the 1972 report -- especially its narrow selection of 5 core issues worthy of attention -- in the original systemic study of "world dynamics" on which it was based ([Jay Forrester](#), *World Dynamics*, 1971). This concern was articulated in two documents (*World Dynamics and Psychodynamic: a step towards making abstract "world system" dynamic limitations meaningful to the individual*, 1971; *Quo Vadis UNO? a review of some of the issues raised by the Club of Rome study of World Dynamics*, 1971). That concern resulted in a project, launched in 1972, to produce an *Encyclopedia of World Problems and Human Potential* (1976), which after three editions, continues to be available online. This has profiled thousands of issues with which international constituencies are preoccupied, together with the strategies they advocate in consequence. The degree of relationship of that initiative with the preoccupations of the Club of Rome is indicated separately (*Club of Rome Reports and Bifurcations a 40-year overview*, 2010).

The new report was launched just weeks after that of [The Royal Society](#), entitled *People and the Planet* (2012), reviewed separately (*Scientific Gerryandering of Boundaries of Overpopulation Debate*, 2012). Although concerned with the same period and the need for similar strategic responses, the reports do not acknowledge each other's existence. The former was the work of an eminent group, the

latter of an eminent individual variously advised by a group.

Presentation context of the 2052 Report

These preliminary critical comments concern the actual presentation of the report in Rotterdam (available on [video](#)) and the associated [press release](#) and commentaries in the press. The book itself was not scheduled for release until a month later.

Time stands still? The presentation offered a curious sense of time standing still. The format of the presentation (with speaker, panelists and selected questioners) can barely have differed in detail from that of the presentation to the Club of Rome of *The Limits to Growth* in 1972. The nature and focus of the graphs presented strongly recalled those of 40 years past -- as well they might, if nothing had been learned in the intervening period. It could be readily understood as an exercise in "we told you so". The style and contributions of the panelists, in response to the solo presentation, was less than inspiring. The recommendations made, and central to the press release, were essentially "more of the same". Will the pattern of analysis and reporting be repeated in forty years time?

Unchanging mindset? Perceived in this light, an option considered for this "review" could simply have been to "cut and paste" arguments made in the "review" of the Royal Society report, as mentioned above (*Scientific Gerrymandering of Boundaries of Overpopulation Debate*, 2012). The fundamental (and tragic) point to be made is that neither report seeks to derive insight from the lack of uptake of the insights of *The Limits to Growth* or other articulations of the global problematique. The "scientific" focus is on reviewing the data on the selected set of 5 core parameters. This is accompanied by extremely weak, if not naive, recommendations about what governments and individuals should do about the emerging situation -- with no capacity to explore why there is very little track record of effective action in this regard -- adequate to the nature of the challenges foreseen. Religions have adopted this posture over centuries. People continue to "sin".

Resolutique: This is curious in that it was in fact the Club of Rome that had initiated a preoccupation with a "resolutique" to complement their recognition of the "problematique" (Alexander King and Bertrand Schneider (Eds.), *The First Global Revolution: a report by the Council of the Club of Rome*, 1992). This could be seen as a reframing of the emphasis in the earlier report by Hasan Ozbekhan (as noted below). Separately it was argued that this preoccupation merited consideration in the light of two other complementary "-iques", namely an "imaginatique" and an "irresolutique" (*Imagining the Real Challenge and Realizing the Imaginal Pathway of Sustainable Transformation*, 2007).

Imaginatique: This term was suggested as a way of giving focus to the dimensions typically neglected in any resource-oriented report like that for 2052. It is appropriate to note that the Club of Rome had commissioned a so-called third generation report to focus on the social, psychological, and cultural inner limits which could give positive direction to human aspirations (Ervin Laszlo, *Goals for Mankind: Report to the Club of Rome on the New Horizons of Global Community*, 1977). This dealt explicitly with human factors and investigated those ethical commitments, world views and value judgments which could lead beyond perennial crises toward a healthier state of global human society. The two recent reports only make passing reference to imagination and none to that report.

Irresolutique: This term was proposed as a way of holding the degree of indecision and game-playing undermining any effort to respond "rationally" to the problematique. The extent to which the Royal Society and Club of Rome initiatives ignore each other is but one example of "turf wars" of which Turner (2007) gave a more extensive account in relation to *Limits to Growth*. The *irresolutique* can be recognized as a primary characteristic of governance at this time -- especially in response to the need for longer-term strategies, to which the *2052 Report* draws attention. Neither report makes reference to the kinds of game-playing so characteristic of "turf wars" -- and so fundamental to the frustration of efforts to initiate change

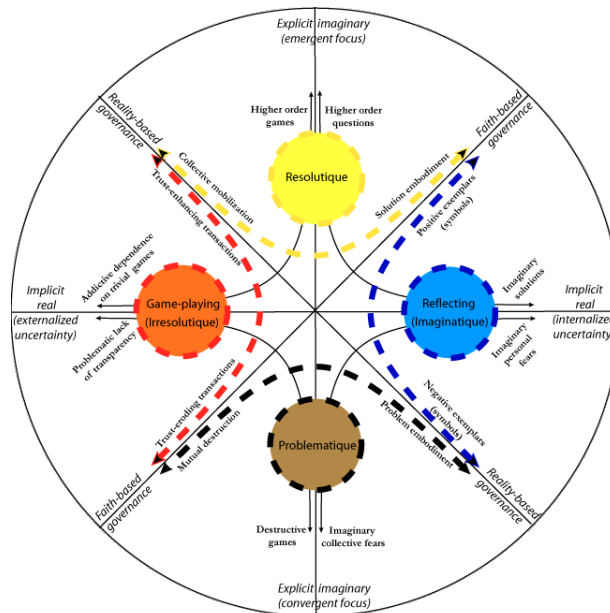
Governance and learning: What is extraordinary is the seemingly complete incapacity of the Club of Rome to take account of the insights in the 50 reports it has elicited over forty years -- and the seeming incapacity of its members to be aware of the pattern they might represent. Why, for example, are their contents not appropriately segmented into a single database -- analogous to the *Wikipedia* initiative -- tagged according to relevance to *problematique*, *resolutique*, and even to *imaginatique* and *resolutique*?

The reports include that with respect to governance by Yehzekel Dror (*The Capacity to Govern: a Report to the Club of Rome*, 2001), previously [reviewed](#). It might be said that the Club's capacity to give its authority -- to what must now be seen to be essentially pathetic recommendations -- constitutes an inherent incapacity to learn. This is especially ironic given that it has elicited a valuable exploration of "learning" (James W. Botkin, Mahdi Elmandjra and Mircea Malitza, *No Limits to Learning: Bridging the Human Gap -- A Report to the Club of Rome*, 1980), as previously reviewed (*Societal Learning and the Erosion of Collective Memory: a critique of the Club of Rome Report: No Limits to Learning*, 1980). The *2052 Report* makes no reference to any previous "Report to the Club of Rome", other than those relating directly to *Limits to Growth*.

The conclusion to be drawn is that, **if the Club of Rome itself is apparently incapable of learning from the rich source of insights at its direct disposal, how does it expect the world at large -- or individuals -- to benefit from those insights?** More tragic is its apparent inability to weave this accumulation of insights into a meaningful pattern -- if only to inform its own membership and immediate audience. Again, with what pattern of insights is the wider world, and those in government, expected to engage -- if the Club cannot make meaningful sense of its own reports? Nevertheless, the launch of the report is explicitly framed as enabling "[an overarching framework for action](#)" -- like so many down the years, now gathering dust on shelves.

Interrelating problematique, resolutique, "imaginatique" and "irresolutique"
(tentative)

(Reproduced from *Imagining the Real Challenge and Realizing the Imaginal Pathway of Sustainable Transformation*, 2007)



The structure and labels can be most fruitfully understood as evoking "questions" rather than as indicative of closure on a definitive pattern of "answers". For example it raises issues of how seemingly "positive" or "negative" qualities are best reflected therein -- especially as valued by mutually opposed constituencies -- and to what extent these may be otherwise understood. Similarly to what extent does "reality" depend on prior "imagination" for it to exist, whether within a "faith-based" or a "reality-based" commitment?

Titanic implications?

Blinkered response to constraints: The *2052 Report* emerges within this context as a seemingly blinkered focus on a very similar set of indicators to those publicised in 1972 -- and well-deprecated since, as the Royal Society report notes in passing (but without taking any account of the issues raised by Turner in 2007). The *2052 Report* makes only the briefest of mentions of Turner.

In this light there is no capacity whatsoever to engage with the demonstrable constraints inhibiting effective response to dramatic predictions of crisis. This was a primary thread in the critical [review](#) of the Royal Society report (2012). The latter indeed took specific account of the much-publicised Swedish study of nine "planetary boundaries", but completely ignored the factors inhibiting remedial action on those boundaries, as discussed separately (*Recognizing the Psychosocial Boundaries of Remedial Action: constraints on ensuring a safe operating space for humanity*, 2009). The *2052 Report* makes no reference to the report on "planetary boundaries" resulting from the work in Stockholm -- another instance of "irresolutique"? It does however recognize several boundaries to remedial action, but curiously fails to design them into its systemic model. In this sense, like the Royal Society report, it is fundamentally asystemic -- despite its claim to the contrary.

Again it might be said, however, if Norwegian and Swedish initiatives cannot get their act together, what is to be expected of the reactions of those in other countries?

Lack of transparency: Despite the report's preoccupation with sustainability, the *irresolutique* is further exemplified by significant involvement of Randers with the [Dow Chemical Company](#), at a time of [current controversy](#) regarding the latter's major sponsorship of the Olympic Games (2012) -- when there are unresolved issues concerning the tragic [Bhopal disaster](#) (1984), for which it is claimed it have a responsibility. For many this association will be enough to suggest that the *2052 Report* was in some way sponsored by Dow Chemical in its efforts to launder its image. Toyota (Norway) is however the only corporation acknowledged as a sponsor.

That Dow Chemical is [indicated as a participant](#) in the [UN Global Compact](#) does little to alleviate suspicions, especially since it is only Toyota (Pakistan) that is a participant in that Compact. The *2052 Report* does however have an extensive discussion of [corporate social responsibility](#). The accuracy of the 40-year forecast of the *2052 Report* might even be considered to have a probability as great as that of the report having been enabled in some way by Dow Chemical. Enabling this implication says a great deal about the Club of Rome itself and its failure to ensure appropriate transparency in this regard. It invites the suspicion it has long attracted from conspiracy theorists regarding its supposed hidden agenda.

Global implications for emergence of "new thinking": These questions are far from trivial in that both the Royal Society report and that of the Club of Rome are considered major inputs to the forthcoming [United Nations Conference on Sustainable Development](#) (Rio de Janeiro, 2012). As the successor to the [United Nations Conference on the Human Environment](#) (Stockholm, 1972) and the [United Nations Conference on Environment and Development](#) (Rio de Janeiro, 1992), **there is a specific need for attention to the incapacity to implement resolutions and strategies**. These are increasingly seen as exercises in pathetic, well-meaning tokenism. Neither of the new reports does more than indicate that crises are imminent and that urgent action is called for. Will the Rio+20 event aspire to more?

As exemplified by the panel presentation of the *2052 Report*, there is no so-called "new thinking" on what form that action might take, nor indeed on the very nature of the "new thinking" that might be of relevance. The press release notes the functions of the Club of Rome as a global think tank of individuals composed of 30 national associations -- at a time when the role of "think tanks" might itself be considered questionable (*Tank-thoughts from Think-tanks: constraining metaphors on developing global governance*, 2003). The report is however seen by the Club of Rome as part of an 18-month campaign to stimulate ideas on future options to shape the world in a

sustainable way -- taking its context from the 1972 report. What exactly has it learned since then? Where is this articulated?

Excluded perspectives: Of particular relevance to current assumptions regarding the place of *Limits to Growth* within the "overarching framework for action", is the manner in which the insights rejected at the time of adoption of that programme no longer call for any consideration. It is readily forgotten that that programme was adopted by the Club of Rome as an alternative to that elaborated, at the request of the Club of Rome, under the direction of [Hasan Ozbekhan](#) -- in consultation with [Alexander Christakis](#), [Erich Jantsch](#), and [Aurelio Peccei](#). That action-focused original "prospectus", in the form of a "report to the Club of Rome", was entitled: *The Predicament for Mankind: Quest for Structured Responses to Growing World-wide Complexities and Uncertainties* (1970). A distinct variant was later published by Hasan Ozbekhan (*The Predicament of Mankind*, 1976). What has been designed out of the overarching current framework? Should it now be caricatured as effectively a "**limited-to-growth**" perspective -- of which the *2052 Report* is a new incarnation? What might be the implications of the argument by Andrew Simms (*Clinging to economic growth suffocates the imagination*, *The Guardian*, 1 February 2012). He suggests that after 40 years, the message of *The Limits to Growth* report is still not being heard -- and that other ways are needed to share a finite planet.

Titanic scenario? At a time of widespread interest in the disaster of the [RMS Titanic](#) (2012) and its centennial celebration, it is curious to note that the preoccupation is with the past disaster itself and not with what might be learned from it -- of current relevance. In that sense it is useful to see the institutions of global governance as now having a systemic resemblance to that vessel and its governing authorities -- responding similarly to the appreciation and needs of the different classes of passengers.

It is tempting to see the worthy academic preoccupation with trends as corresponding to careful study of the trail of the vessel through the waters -- as seen whilst comfortably seated on the afterdeck. An "aftercast" rather than a "forecast"? Although explicitly regretted, there is no preoccupation with the incapacity of the vessel's authorities to even consider effective precautionary measures. That might be understood as "forward" thinking, but of a higher cybernetic order. The need for such concern is denied -- as in the case of the arrogant self-confidence so disastrously enacted a century ago. As argued with respect to the Royal Society report, this is seemingly not a worthy concern of the forms of "science" deemed to be "relevant".

Recognizing hidden dimensions -- the missing links?

Human face of systemic adjustment? In the "review" of the Royal Society report, attention was drawn to a form of "scientific gerrymandering" in the consideration of *People and the Planet* (2012). The question highlighted was what was "designed out" by this process. In that context it was suggested that it was the nature of the psychosocial engagement with sexual intercourse and its importance to the "people" of the planet -- notably as recognized by the advertising industry.

In the case of the *2052 Report* what would seem to be missing from the presentation and press release is any concern with human beings in their own right -- rather than with sustaining the viability of the system within which they function. That framework would be difficult to distinguish from the management logic of [intensive farming](#) and the productivity and development of such a system. This is consistent with a "**limited-to-growth**" framework. Environment and other issues are then secondary to the viability of that production system.

Designing out human perspectives: Expressed otherwise, the approach is to design out social and psychological dimensions to the extent possible -- as "[externalities](#)" -- making reference to them only in passing, when necessary to ensure the wider appeal of the recommendations in terms of "public relations" (cf. *Reintegration of a Remaindered World: cognitive recycling of objects of systemic neglect*, 2011). That statement is of course contentious, precisely because for the natural sciences the nature and relevance of "social" and "psychological" is the subject of continuing acrimonious debate between different schools of thought -- all deprecated by the natural sciences. Is this of systemic relevance in a [global knowledge society](#), the theme of the AAAS Conference in 2012 (Nina V. Fedoroff, *The Global Knowledge Society*, *Science*, 3 February 2012)? Curiously it is the management context, from which the *2052 Report* emerged, that has found the need to give far greater credibility to both. It is then somewhat strange that this did not encourage recognition of these dimensions in the primary focus of the report.

This argument is itself somewhat ironic in that the Secretary-General of the Club of Rome, in introducing the presentation of the *2052 Report*, made unusual reference to the manner in which it showed "heart" -- references readily interpreted as purely rhetorical. Many would regard the preoccupations of the Club of Rome as essentially "heartless". On the few occasions when the Club has endeavoured to create the impression that it is responding to these dimensions, it has been unable to work with the insights elicited (Laszlo, 1977). The strategic commitment of the Club is anchored in its **limited-to-growth** perspective -- having disassociated itself from the *Predicament of Mankind* -- its original inspiration, as noted above. The "predicament" is consistently framed in terms of ensuring the "growth" by which it assumed that "humanity" is sustainably enabled.

Despite the various growth models with which the Club of Rome has been associated (or has implicitly advocated), the challenge for real people at this point in time is the degree of suffering which they experience and its existential dimensions in terms of insecurity, dignity, self-esteem and despair. As such these intangible dimensions do not figure in the Club of Rome's worldview -- despite a passing reference to "happiness" in the *2052 Report* press release. No account is taken of them in the graphs forecasting conditions through to 2052. Negligible? Why is it that current formal investigation of happiness has been given focus by the initiatives of Bhutan, rather than by international institutions from which such sensitivity might be expected?

Threat, fear and despair: More curious in developing the framework from 1972 is the lack of reference to the levels of fear and threat to which society is now held to be ever-increasingly exposed. These too are seemingly held to be secondary consequences of the evolution of the tangibles over that period. This omission is especially strange in the light of the transition out of the fears of the Cold War into ever-increasing recognition of the threats of emerging crises and the fear these may imply.

This transition is accompanied by increasing recognition of the fundamental inadequacies of (global) governance -- seemingly having

"lost the plot" and "clueless" as to how to engender viable remedial long-term strategies which invite consensus. This recognition now extends dramatically to the people of the world, supposedly required to have confidence in the elites with which the Club of Rome is so intimately associated -- in whom confidence has been seriously eroded (*Abuse of Faith in Governance*, 2009).

Given the evident failures of governance as originally conceived and promoted, it could be argued that a switch (or reversion) is being effectively orchestrated to a form of reactive governance justified by threats successively framed (*Promoting a Singular Global Threat - Terrorism: strategy of choice for world governance*, 2002). This allows "emergency measures" of every kind to be justified -- systematically by-passing awkward democratic constraints. Following the Cold War and terrorism, the *2052 Report* could be understood as "crafting" future threats -- effectively eliciting fear to enable its manipulating, as noted by John L. Farrands (*Challenge of Overpopulation*. In: *Don't Panic, Panic: the use and abuse of science to create fear*, 1993). This offers means of further justifying this switch to a "simpler" mode of governance -- with which unilateral geo-engineering initiatives will be consistent, for example, as with targeted assassination and "enhanced interrogation methods" -- all that is possible through the prevailing "Titanic logic"

It is within this emerging context that real people live and are sustained by their imaginations -- specifically by their hopes and fears, and the beliefs which sustain them. Efforts may be made to "craft" the fears in relation to threats, or to offer hopes through the eternal round of (increasingly unsustainable) political promises. It is within this context that religions survive and flourish -- as is evident in the extent of faith-based governance, and most strikingly within the world's currently dominant superpower.

Confidence and despair as existential indicators

Popular confidence and beliefs: The *2052 Report* notably omits the manner in which confidence and coherence are offered by "beliefs" of every kind -- however much these may be deprecated by the "science" which is purportedly the basis of the credibility of that report. The importance of this intangible has proven to be only too evident in the case of the confidence in the financial system in the light of the ongoing crisis.

Specifically missing therefore is any scientific reflection on the credibility of the *2052 Report* and popular engagement with the issues it highlights -- as potentially contrasted with other sources of credibility, however much they may be deprecated by "science". The need for greater understanding of this dimension has been argued separately (*Mathematical Theology: Future Science of Confidence in Belief*, 2011). This extends "theology" to include the "deities" and "dogma" of any belief system -- including science.

The importance of this dimension is highlighted at the time of writing by the lead editorial of *The Economist* (*The euro crisis: Europe's Achilles heel*, 12 May 2012):

The worry is that, just at the moment when hardheaded realpolitik is needed, politics has fallen prey to self-delusion, with leaders in all the main countries peddling seductive half-truths that promise Europe's citizens an easier way out. The euro zone needs to do a lot of hard things.... but earlier this year, with the Italians, Spanish and Greeks all making some hard choices and ECB money flushing through, the politics seemed possible. Now they have lurched into dreamland. France is the most obvious example....

Across Europe the pattern repeats itself. In Italy the half-truth is that the country can escape its dysfunctional politics by entrusting hard choices to a technocrat...The German half-truth is that the euro zone's problems can be solved merely by the indebted countries slashing their way to prosperity.... Like some dreadful joke, the euro needs French reform, German extravagance and Italian political maturity. Explore our interactive guide to Europe's troubled economies It is worst of all in Greece. The half-truth in Athens is that bigoted northern Europeans give Greeks no credit for the hardship they have borne.... Whatever the make-up of its next government, the idea that Greece can repay this is the biggest fantasy of all.

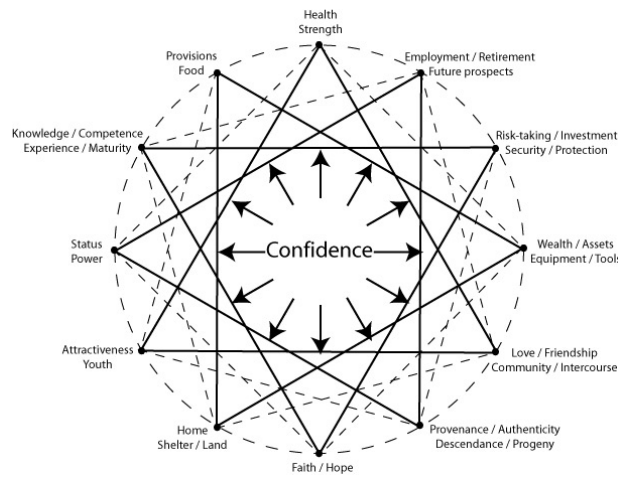
The Economist might be recognized by many as the journal which could be held to have been most complicit in reinforcing the lack of vigilance enabling the ongoing financial crisis. That crisis arose from the manipulation of confidence and belief, most notably in relation to the [subprime mortgage crisis](#) which triggered it, together with the misleading packaging of questionable [derivatives](#) -- the fantasy of an unrestricted supply of cheap credit.

At the time of writing, the negative Greek popular reaction to the carefully constructed bail out plan is currently an indication of factors that need to be integrated into any forecast -- rather than excluded from it

The question is how radical shifts in belief and confidence should be taken into account in relation to the 40-year forecast of the *2052 Report* -- irrespective of whether they are held to be a fantasy from a scientific perspective. The articulation of strategic options can be fruitfully explored as fantasies in their own right (*Cultivating Global Strategic Fantasies of Choice: learnings from Islamic Al-Qaida and the Republican Tea Party movement*, 2010; *Glabalooning -- Strategic Inflation of Expectations and Inconsequential Drift*, 2009).

Confidence and its Surrogates

indicative configuration of the variety of expressions and tokens of confidence
(Reproduced from *Varieties of Confidence Essential to Sustainability: Surrogates and tokens obscuring the existential "gold standard"*, 2009)



Imaginative engagement with despair: The concern with respect to the crises foreseen by the *2052 Report* is how people engage imaginatively with both their tangible aspects and the intangible hopes and fears with which they may be associated. This goes far beyond the implied adequacy of the "rationality" of the *2052 Report* or its contribution to the overarching action framework of the Club of Rome. This dimension is given focus by the existential despair -- already evident in countries where the young are significantly exposed to unemployment and where all, including the elderly, are faced with the challenge of adequate access to social security

How might the preoccupations of the *2052 Report* have been informed by psychosocial development and the increasing incidence of despair, depression and reactions to that condition through the emergence of extraordinary beliefs? These are readily characterized and conveniently condemned as "subjectivity" and "extremism" (*Norms in the Global Struggle against Extremism "rooting for" normalization vs. "rooting out" extremism?* 2005). One example is the *2012 phenomenon*, another is the (associated) anticipation of a *Second Coming* and the prophesied "end times" scenarios of various faiths which politicians dismiss at their peril (*Spontaneous Initiation of Armageddon -- a heartfelt response to systemic negligence*, 2004).

How might such radical beliefs reframe a variety of distinct collective responses to those conditions (*Implication of Personal Despair in Planetary Despair: avoiding entrapment in hopeful anticipation*, 2010)? Those constituencies will react vigorously to the *2052 Report* -- if they do not dismiss it as irrelevant.

How can any collective exploration at this time "go to that place of despair" which will so profoundly affect the uptake of the "rational" recommendations in response to the *2052 Report*, and others yet to come? The constrained uptake of the *2052 Report* will be further restricted by exponentially increasing degrees of information overload and limited attention span, presaging a form of "memetic singularity" (*Emerging Memetic Singularity in the Global Knowledge Society*, 2009). Comprehension will be increasingly partial at best, undermining any coherence offered by the *2052 Report* as a keystone to an overarching framework (*Living with Incomprehension and Uncertainty Re-cognizing the varieties of non-comprehension and misunderstanding*, 2012; *Towards the Dynamic Art of Partial Comprehension*, 2012).

Failure to integrate real-world dynamics

Neglected consideration of uptake: Curiously, and yet only too appropriately, the existential wasteland of that despair mirrors only too well the wasteland being engendered by a "limited-to-growth" perspective -- well-noted in both the *2052 Report* and the Royal Society report. The wreckage to the planet is being echoed in a degree of wreckage to the individual and collective psyche -- a strange echo of Newtonian "action and reaction". This is tragically evident in the wreckage to US society engendered by soldiers returning from the wreckage they have engendered in Afghanistan and Iraq -- having been effectively "trained" for terrorism within the Homeland, as Osama bin Laden would have wished.

As noted, the Club of Rome is explicitly choosing to base its future strategy on *Limits to Growth*. As remarked above, it remains curious that the systemic thinking, underlying that approach and that of the *2052 Report*, has been totally unable to factor in the lack of uptake of its insights. What in hindsight was then inherently inadequate in the *Limits to Growth* modelling -- in the failure to take account of that process of uptake, as is notably a preoccupation with any technological innovation? Was there some kind of expectation that, like Moses coming down *Mount Sinai* with the *Ten Commandments* of the Abrahamic traditions, that popular acceptance would be automatic?

The Biblical record of the reception of those commandments (*Exodus 32:19*) would seem to be in accord with the fate of any such "recommendations" at this time. This failure is liable to be perpetuated in the fate of the *2052 Report*. The key figure in the 1972 report (as with Moses) has recently made it clear that he considers that it is too late to take reasonable account of its insights -- and presumably, by implication, those of the *2052 Report*. Dennis Meadows recently declared:

In 1972, and for some time after that, I was very optimistic. I was naively optimistic. I honestly believed in what I called the "doorstep model of implementation." That is to say, you do a piece of work. You learn the "truth." You lay it on the decision maker's doorstep, and when he comes out in the morning, he finds it and changes his behavior. (Megan Gambino, *Is it Too Late for Sustainable Development? Dennis Meadows thinks so*, *Smithsonian.com*, 16 March 2012).

However, as a scientist, he could change his mind again -- as with *James Lovelock* (Ian Johnstone, *'Gaia' scientist James Lovelock: I was 'alarmist' about climate change*, *World News/msnbc.com*, 23 April 2012). The timing of both declarations is strange just prior to the

launch of the *2052 Report* by Jorgen Randers. Perhaps a feature of the *irresolutique*? What then of the future strategy of the Club of Rome? Given that proselytizing religions have considerable experience of doorstep interaction, was nothing to be learned from the resultant uptake of their insight?

Engagement with disagreement: As noted above, *Limits to Growth* evoked considerable controversy. The *2052 Report* notes:

For the critics, and they were in the majority, LTG was seen as misinformed and even dangerous hackwork predicting immediate collapse to the current social order because of resource depletion. During the first twenty-five years after its publication, no one seemed to pick up the real message of the study, which is that overshoot is a likely consequence of slow societal decision making, and that once in overshoot, there is only one way out, namely, decline back down into sustainable territory. (p. 307)

In a sense it is only recently that *People and the Planet* and the *2052 Report* have dared to engage again with the consequences of population increase -- but both of them in a more circumspect manner than in 1972. What is curious, as discussed in the review of the Royal Society report, is the inability to take account of "disagreement" as a factor necessarily central to the presentation of any new recommendations. In a global society, influenced to a high degree by faith-based governance and "disagreement" with its "commandments", the capacity to deal scientifically with "disagreement" regarding scientific pronouncements would seem to be no greater than at the time of Moses. The naive assumption is that "right" is might, and that since the science is necessarily "right", its conclusions must necessarily take precedence. This continues to be the assumption of many religions.

The inability to reframe systemically the disagreements evoked within the climate change debate makes questionable any presentation of recommendations that fails to integrate the probability of disagreement with them. As discussed separately, no use is made of [argument mapping](#) techniques -- although related systemic depictions have been explored to clarify the strategic options and constituencies in Afghanistan, as discussed separately (*Mapping the climate change context of Copenhagen*, 2010). Some such requirement would appear to be an essential requisite of any report that claims to be scientific -- but clearly is not.

The lack of learning capacity in this respect can be fruitfully highlighted by reference to a meeting of "young scientists" organized by UNESCO in May 1972, at which Aurelio Peccei, as founder of the Club of Rome, was present. This offered extensive criticism of the *Limits to Growth* report, and perhaps most notably:

Much the heaviest criticism of the model, however, was at the political level. Through its selection of five basic parameters which are purely technical, most participants felt that the model was not one which applied to the real world. The breakdowns predicted by the model if current trends continued resulted from the interaction of these five factors whereas breakdowns in the real world which were already apparent in the developing countries and which could be predicted for the future elsewhere could be argued to depend on quite other factors. Why, it was asked, were war, arms trade, colonialism and imperialism rejected as specific factors that might, and indeed already were, causing breakdowns? Why was the unequal distribution of resources, both between nations and within them, not included in the analysis? How could a model of this type, which specifically excludes those factors which are widely believed to be the root cause of global ills, be held by its inventors to be "a-political"? On the contrary, there was considerable agreement that the model was elitist (as evidenced by the use made of the recently published book) and that all assumptions were conditional on an unaltered status quo in world affairs: it was a "conflict-free" model of a world which, in reality, was torn by conflict. (*Young Scientists: population and the environmental crisis*, UNESCO, ED-72/Conf. Young Scientists/3, June 1972).

The point to be made is that considerations were articulated contrary to the focus of that methodology -- now reaffirmed in 2012 as providing the "overarching framework for action" by the Club of Rome. Claiming naively to be "a-political", no capacity has been developed to deal scientifically with contrasting policy perceptions. As argued in the [review](#) of the Royal Society report, such capacity is limited to what amounts to "scientific gerrymandering" -- designing the focus of a report to ignore contrary perspectives.

This is charmingly exemplified through the group of "friends" selected by the author of the *2052 Report* to offer their future visions:

To help me avoid tunnel vision, myopia, and the obvious limitations in my knowledge about most aspects of the world, I asked a number of my friends and colleagues -- independent thinkers and writers -- to tell me what they were absolutely certain would happen before 2052. Most accepted the challenge with enthusiasm, even when they were told to constrain their "glimpse of the future" to 1,500 words and to keep within a field they knew well. You will find nearly thirty-five of these glimpses -- in full or excerpted -- in this volume (p. 27)

Seemingly to his great surprise and satisfaction "the glimpses were surprisingly free from contradictions" (p. 7). Arguably this is an indication that the selection ensured insufficient variety to be of relevance in cybernetic terms to engagement with the dynamics of the future -- in which discord is liable to be the name of the game.

As is so evident in the climate change debate, **there is no sense of presenting the variety of views as a system which constitutes the dynamic with which governance is obliged to engage.** In this respect, as noted by [William Nordhaus](#), with respect to the general tenor of the recent exchange in the debate: *I have the sense of walking into a barroom brawl* (Steven T. Corneliusen, *Climate wars continue in the New York Review of Books, Physics Today*, 18 April 2012). Given that related issues are the preoccupation of the *2052 Report*, how is it that over forty years the capacity to process contrary perspectives is so limited?

If the report is not completely ignored, is its reception to be characterized as a "barroom brawl"? Is this the nature of an "overarching framework for action"? Is it simply hoped that -- having "fixed" the fight -- the "big guys" will beat up the "little guys" and thereby prove

that they are "right"? Is this the science on which governance of the next forty years is to be based?

Global sensemaking and collective self-reflexivity

Systemic analysis of past Club of Rome reports: Potentially more incredible, given the modelling expertise by which that approach is informed, is the complete failure to benefit from any systematic approach to the variety of insights engendered in the extensive [set of 50 reports to the Club of Rome](#) (most of them of book length). Beyond simply segmenting them into *Wikipedia* style profiles (of which there are many variants), there is the proven possibility of using text analysis software to map out and interrelate the various preoccupations (using applications such as [Leximancer](#), for example). This would enable a degree of self-reflexivity on the part of the Club of Rome -- allowing it to go where the modelling approach of *Limits to Growth* has proven unable to venture. Its current inability to map its own insights exemplifies the problems of collective intelligence gathering and is indicative of the fate of the *2052 Report* -- whose insights cannot currently be related to the context of any such map.

Ignoring past wisdom: The reasons this is not done are themselves worthy of considerable attention as characterizing the challenges of governance at this time. Irrespective of whether they are physically accessible together in any single physical location, it is more than ironic that the intellectual copyright is in fact owned by a scattering of commercial publishers variously resistant to the compilation of any synthesis. The information overload phenomenon suggests the high probability that few of the 50 reports have been examined by a statistically significant number of Club members -- even if they are aware of all of them and the range of topics treated. However, even if the insights could be portrayed in some new visual form, it is unclear that this integration would "make any more sense" or enable more integrative strategies -- despite the efforts of the [Global Sensemaking Network](#).

This raises the question of the form required to make sense of relevance to governance of the future? To what extent is the Club of Rome attentive to this issue? Are the insights of the *2052 Report* likely to be eminently forgettable for that reason -- and essentially impossible to communicate widely?

Being one's own metaphor: At this time, as with any initiative promoting change, the Club of Rome is very much a metaphor of its own problematic condition -- as insightfully articulated by [Gregory Bateson](#) in concluding a conference on the effects of conscious purpose on human adaptation: *We are our own metaphor*. (cited by [Mary Catherine Bateson](#), *Our Own Metaphor*, 1972, p. 304). Unfortunately there is a marked tendency to over-identify with the metaphor, making it difficult to obtain a sense of perspective.

Whereas the *2052 Report* explicitly regrets policy-making delays, and specifically recognizes a need to "kick-start" action, it might be asked what are the analogous delays within the Club of Rome and how appropriate paradigm change might be "kick-started" within it.

Until the Club of Rome understands how it is itself is part of the *problematique*, it cannot hope to understand the nature of the *resolutique* required. For that, as argued above, it needs to engender an appropriate *imaginatique* and to engage vigilantly with the dynamics of the *irresolutique*. This is the leadership it might have sought to provide. Despite its systemic laurels, it can be fruitfully concluded that the Club of Rome is "cybernetically underpowered" in its engagement with [requisite variety](#) (*Consciously Self-reflexive Global Initiatives: Renaissance zones, complex adaptive systems, and third order organizations*, 2007). This might not now be the case had it taken some account of the arguments of Hasan Ozbekhan (*The Predicament for Mankind: Quest for Structured Responses to Growing World-wide Complexities and Uncertainties*, 1970).

Misrepresentation of the 2052 Report?

The above representation of the report itself is potentially to be considered unfair in the light of more detailed examination of its contents. The detail is however necessarily lost in a 12-minute presentation (as noted by its author at the time) or in a 1-page press release. But it is through these modes that the book was launched, in careful anticipation of its delayed publication (a month later). It could be argued that it is through the "technical" information deliberately concentrated into such devices that interpretation of its wider significance was desired. In a sense the modality is that characteristic of the conventions of the past. In comparison, relatively few will choose to read the report in detail

The *2052 Report*, and that of the Royal Society, will be criticized for their failure to take account of parameters regarding quality of life, including exposure to violence and criminality (especially given the expected increase in social unrest), now carefully incorporated into the UNDP [Human Development Index](#) in relation to some of the concerns highlighted above. Given the role of confidence, it is curious that so little attention is paid to the [Consumer Confidence Index](#) or the various measures of business confidence.

More fundamental to any expectation of attention to the report's insights are measures of delivery capacity of the remedial initiatives of institutions of global agencies and governments -- notably exacerbated by instances of erosion of the chain of command and the emergence of "rogue elements". Despite highlighting greater social unrest, the report fails to consider the degree to which social bonds of trust may break down, threatening the very fabric of society -- especially to the extent that the delinking is reflected in communication between generations and an ever increasing disregard for the "other".

In an effort to take account of surprises, the *2052 Report* offers a set of "Wild Cards": Abundant Oil or Gas, Financial Meltdown, Nuclear War, Disease, Collapse of Ecological Systems, Counterrevolution in China, Revolution in the United States, and a Dedicated Global Effort to Stop Climate Change. Having been widely discussed, it is questionable whether these have the disruptive dimensions of unforeseen surprises.

Irrelevance: Of particular concern is an implication of comprehensiveness, with only passing reference to what has been excluded in its systemic approach. The *2052 Report* notes:

These system dynamics models embody a lot of academic theory -- drawn from economics, political science, sociology,

engineering, biology, agriculture, and environmental science. But as with any set of projection tools, they still provide only mild assurance that my forecast makes dynamic sense. Taken together, this diversity of sources and tools provides one perspective on the world socioeconomic-cultural-natural system. My forecast of the global future to 2052 is a reflection of this perspective. It is not the "complete truth". It describes some aspects of real-world developments, and neglects many others. This is unavoidable, but also desirable in order to avoid drowning in irrelevant detail. (pp. 53-54)

The issue here is "irrelevant" to whom? This has been the preoccupation of the *Encyclopedia of World Problems and Human Potential* in seeking out the perceptions of thousands of disparate international constituencies, many of which would find it difficult to identify with the concerns which are the focus of the report.

If the uncited insights of the other reports to the Club of Rome are to be considered irrelevant, do those in policy-making positions run the risk of "drowning in irrelevant detail" by considering them?

Assertions of "irrelevance" and the threat of "drowning" are even more strange now that massive simulations are being organized in the light of the data emerging from the electronic communications of social networking ([FuturICT Living Earth Platform](#); [Synthetic Environment for Analysis and Simulations](#), [Sentient World Simulation](#); Jostein Ryssevik, *The Social Science Dream Machine: resource discovery, analysis, and delivery on the web*, *Social Science Computer Review*, Summer 2001). At the time of writing, an application with proven capacity in the management of such detail, namely [Facebook](#) (originating in 2004, now with 900 million active users), has been put on the market for a record figure of \$100 billion.

It could be argued that earlier failures to attend vigorously to detail have been factors in enabling the subprime mortgage crisis. Can the eurozone crisis be considered a surprise when already in 2006 it was reported that for 12 years the European Union's auditors have refused to endorse the spending of large parts of the EU budget (Stephen Mulvey, *Why the EU's audit is bad news*, *BBC News*, 24 October 2006). If it is claimed that "the devil is in the detail", the *2052 Report* can be seen as avoiding the need for any such preoccupation. This is also indicative of dependence on earlier and simpler simplistic dynamical "models" without any consideration of the insights from the subsequent emergence of [chaos theory](#).

Arbitrary choice of paradigm? Perhaps more problematic is the very nature of such model building. The *2052 Report* explicitly notes:

A paradigm is a worldview. There are many different worldviews. Marxism is one, religious conservatism another. None is right. Different paradigms simply highlight different aspects of reality. A paradigm is also a simplification that helps you distinguish the noise from significant trends (as defined by your own paradigm, that is). But it is most important to understand that your chosen paradigm -- which is normally tacit, rarely described -- has surprisingly strong impact on what you see.... When trying to clarify the next forty years, it is important to include the possibility of a change in the dominant paradigm. At least one should avoid limiting oneself to analyses through one set of glasses, namely, the current dominant paradigm. (p. 9)

Again it should be stressed that the dynamics inhibiting any form of consensual policy-making derive specifically from congruencies adopting alternative paradigms. In contrast to the methodology of the *Encyclopedia* (see [Assessment: Global modelling perspective](#)), this degree of complexity is ignored -- presumably in the hope that a single paradigm will dominate to make matters simpler to understand.

Questionable questions? The report is equally explicit in assuming that only a limited set of pre-determined questions need be considered:

You cannot create a useful model unless you decide ahead of time what specific question you want to answer -- what social phenomenon you want to elucidate. As skilled model builders know well, unless you focus, you quickly get lost in an ocean of detail. I chose to let my forecasting effort be guided by two questions: *What will happen to consumption over the next forty years?* and *Under what conditions -- in what social and natural environment -- will that future consumption take place?* (p. 54)

Primacy of intangible challenges: Curiously the report variously acknowledges that the core challenges are psychosocial rather than tangible:

- Thus the main challenge in our global future is not to solve the problems we are facing, but to reach agreement to do so. (p. 225)
- The core problem lies in the systems and policies that allow or drive expansion beyond what is sustainable -- in growth beyond carrying capacity. (p. 308)
- Having been in your situation for some time, I do agree that the main challenge is mental. (p. 351)
- I am talking about a great shift of paradigm... In today's globalized society, without a globalized power structure, no one is in a position to stop such a shift. (p. 314)
- ...human culture will continue to evolve ... humanity in the future will organize itself in a very different manner and rely on unconventional inputs in decision making. (p. 313)
- ... the evolution of human values -- is currently perhaps the least visible. It concerns the answer to the question *What really matters?* (p. 190)

Inaction vs. the "kick": Recognizing these intangibles, the report also notes:

- Today we know what was done during the first forty years -- and what was not done. We know a great deal about the rationale for the decisions made during these decades. And we have a fair understanding of the pressures that have locked us into nonaction on a number of fronts. (p. 6)
- The complex and time-consuming decision making of democratic nation-states will ensure that. (p. 6)

- But my story also includes the societal response that will emerge in an attempt to solve the emerging problems of depletion, pollution, and inequity through increased investments (in both prevention and adaptation). (p. 55)

Despite such knowledge, and the final claim, no effort is made to integrate these factors into a systemic account.

Building with what is missing?

The critique above raised concerns regarding what is missing from the *2052 Report*. The review of the Royal Society cited the strategic insight highlighted so notoriously by the former US Secretary of Defence, Donald Rumsfeld, namely the subtlety required in the recognition of the **unknowns variously known, or not**, as discussed separately (*Unknown Undoing: challenge of incomprehensibility of systemic neglect*, 2008).

The commentary which follows shifts into an imaginative mode in which what is missing invites more creative attention. This follows from the arguments indicating how significance depends so much on the constraints implied by what is missing, as recently articulated by **Terrence W. Deacon** (*Incomplete Nature: how mind emerged from matter*, 2011; *The importance of what is missing*, *New Scientist*, 26 November 2011).

This is in delightful accord with the much-cited ancient Chinese insight of the *Tao Te Ching*, to the effect that:

The names that can be named are not definitive names. Naming engenders ten thousand things... 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. [Chapter 11]

Drawing on the considerable tradition of Chinese policy-making, embodied in such texts, would in fact be consistent with the strong argument made in the *2052 Report* for the future role of China as world leader and the considerable benefit of learning Mandarin. However, beyond learning the language, it fails to indicate the extent to which other insights from such a culture might be of the greatest relevance, as has been stressed by Susantha Goonatilake (*Toward a Global Science: mining civilizational knowledge*, 1999), and separately discussed (*Enhancing the Quality of Knowing through Integration of East-West metaphors*, 2000).

With respect to the need to transcend the fruitless style of dispute in failing to take account of contrasting perspectives, it is then useful to consider the cybernetic approach advocated by **Stafford Beer** (*Beyond Dispute: The Invention of Team Syntegrity*, 1994) -- in relation to his development of the **viable system model**. Consistent with the classic quote of Lao Tzu (above), the methodology explores the process of "problem jostling" to elicit strategic coherence, notably modelled by an icosahedron -- configuring contrasting perspectives around an "empty" centre.,

In further seeking to sustain an imaginative approach to the implications of the *2052 Report*, this cybernetic perspective is suggestively consistent with the famed tale by a Sufi poet, **Farid ud-Din Attar**, namely the *Conference of the Birds*. The 30 birds of the tale, each of differently constrained insight, are on a quest for a form of transcendent, integrative insight -- embodied in the legendary **Simorgh**.

If a number of the order of 30 reflects an understanding of requisite variety in a cybernetic sense, returning to the *2052 Report* it is interesting to note the author's indication of his incorporation of 35 "glimpses" (as mentioned above). The concern here is the extent to which these "glimpses" might fruitfully have been related cybernetically, as would be implied by the work of J. Martin Hays (*Mapping wisdom as a complex adaptive system, Management and Marketing*, 2010), Maurice Yolles (Maurice I. Yolles, *Organisations as Complex Systems: an introduction to knowledge cybernetics*, 2006), or the approach of Ervin Laszlo subsequent to his efforts on an earlier Club of Rome report (*Cybernetics and Human Knowing: a journal of second order cybernetics and cyber-semiotics*), and his instigation of the **Cybernetics and Systems Sciences Conference** (Vienna, April 2012). Why was the *2052 Report* not launched on that occasion? Another example of *irresolutique*?

From appreciative inquiry to imaginative inquiry

Generative metaphor: There is a well-developed literature and methodology concerning **appreciative inquiry** -- centered on the Weatherhead School of Management (see **Appreciative Inquiry Commons**). One lead researcher is **David L. Cooperrider** (*Business as an Agent of World Benefit: awe is what moves us forward*, 2007). A particular interest is development of the role of generative metaphor as an engine for change (Frank J Barrett and David L Cooperrider, *Generative Metaphor Intervention: a new approach for working with systems divided by conflict and caught in defensive perception*, *Journal of Applied Behavioral Science*, 1990).

Generative metaphor was originally articulated by **Donald Schön** as a perspective on problem-setting in social policy -- a figurative descriptions of social situations, usually implicit and even semi-conscious but that shape the way problems are tackled, for example seeing a troubled inner-city neighbourhood as urban "blight" and, hence, taking steps rooted in the idea of disease (*Frame Reflection: toward the resolution of intractable policy controversies*, 1994; *Beyond the Stable State*, 1973). The *2052 Report* makes no mention of metaphor, although it has long been recognized as the primary vehicle for imaginative reflection -- and increasingly with respect to issues of governance.

Exploring the 2052 Report "otherwise": In developing the possibility of engaging with the implications of the *2052 Report*, the question is how an imaginative approach might be developed much further. Arguably some such imaginative method is what is required to engender and engage with the future. This might be understood in musical terms as a "transposition of key", as previously argued (*Paradigm-shifting through Transposition of Key: a metaphoric illustration of unexplored possibilities for the future*, 1999). In this context it is an "assumption of virtue" as advocated by Shakespeare's *Hamlet* (Act 3, Scene 4):

Oh, throw away the worse part of it, And live the purer with the other half.... Assume a virtue if you have it not. That monster, custom, who all sense doth eat, Of habits devil, is angel yet in this... That aptly is put on. Refrain tonight, And that shall lend a kind of easiness. To the next abstinence, the next more easy.

The question then is how to re-imagine the *2052 Report*, treating it as an imaginative work. Could it be "re-read" as what it might have been -- and may be if one chooses to see it so, in the light of what the author might have intended?

Re-imagining, re-framing and re-enchantment: This "method" has been previously explored as a means of describing international conferences (*Transdisciplinarity through Structured Dialogue: beyond sterile dualities in meetings to the challenge of participant impotence*, 1994; *Gardening Sustainable Psycommunities: recognizing the psycho-social integrities of the future*, 1995; *Towards Spiritual Concord: report of the First World Congress towards Spiritual Concord*, 1992; *Enacting Transformative Integral Thinking through Playful Elegance A Symposium at the End of the Universe?* 2010). It has also been applied to "forecasting" the nature of governance in the more distant future (*Aesthetics of Governance in the Year 2490*, 1990).

Related approaches have long been developed by many authors (noted below in the [References](#)) (cf. [Morris Berman](#), *The Reenchantment of the World*, 1981; Bernard Stiegler, *The Re-Enchantment of the World: the value of the human spirit vs industrial populism*, 2013. A leading business newspaper frames the study by Charles Taylor (*A Secular Age*, 2007) in such imaginative terms (Daniel J. Mahoney, *The Re-Enchantment of the World*, *The Wall Street Journal*, 21 September 2007). Of particular relevance to the future wasteland foreseen by the *2052 Report* is the study by Petr Gibas (*Globalised Aestheticisation of Urban Decay*, 2010).

More evident is the extent to which it has become widely acceptable, even fashionable, that people should choose to "re-invent" themselves. The fashion industry reinforces this possibility.

Memetic warfare with aesthetic weapons?

The possibility could be understood as a memetic initiative which all are free to explore in a global knowledge society (*Missiles, Missives, Missions and Memetic Warfare: navigation of strategic interfaces in multidimensional knowledge space*, 2001). In the emerging context, the issue for many "belief systems", notably including science, is who to convince and how -- and how to sustain confidence, credibility and coherence in any preferred system (as noted above). This is most obvious in the case of product marketing, of religion, of finance, and of political ideology.

Re-inventing the present: It is relevant to note the initiative of *The Economist* on the occasion of its 150th anniversary (in 1993), in inviting selected commentators from around the world to imagine the future 150 years from now (*The Future Surveyed*, 11 September 1993). The document was divided into sections by region and topic (education, technology, health, etc). In commenting on this initiative at that time, the US [Center for Public Justice](#) noted that:

But even among this highly select group of rational humanists, the dissonance is significant.... Christians should now be hard at work seeking afresh, on biblical grounds, to re-imagine the future. The world as once imagined by modern humanism is now in crisis, just as the medieval imperial imagination came to crisis in the 15th and 16th centuries. **This is the time, then, to re-fashion our world image** -- our picture of a world that is more than ever before a "global village" demanding transnational justice, but a world in which competing religions (including secular religions) struggle for supremacy in hearts and minds to gain the power to define education, the family, economic enterprise, the task of government, and human nature itself. (*Re-Imagining the World*, March-April 1994) [*emphasis added*]

Boston University, used a sesquicentennial symposium to elicit metaphors best able to articulate the dilemmas of the time (Lance Morrow, *Metaphors of The World, Unite!*, *Time*, 16 Oct. 1989). A key metaphor that emerged was the "tessellation" of disparate orders. Such tilings of zones of order, might also be understood metaphorically as paving stones separated by cracks of varying sizes. For optimists these might be hairline cracks; for pessimists the degree of separation might be such as to prevent movement and to offer little protection from the disorderly 'gunge' rising from beneath.

Creating new realities: With respect to the credibility of political initiatives in relation to the increasingly delusional anticipation of any international legal consensus, especially insightful is the account of the neocon strategy of governance. This is presented by [Ron Suskind](#), following an exchange he had with an aide in the decision-making circle of President Bush, in the following terms:

The aide said that guys like me were "in what we call the reality-based community," which he defined as people who "believe that solutions emerge from your judicious study of discernible reality." I nodded and murmured something about enlightenment principles and empiricism. He cut me off. "That's not the way the world really works anymore," he continued. "We're an empire now, and when we act, we create our own reality. And while you're studying that reality -- judiciously, as you will -- we'll act again, creating other new realities, which you can study too, and that's how things will sort out. We're history's actors . . . and you, all of you, will be left to just study what we do." (*Without a Doubt*, *The New York Times*, In The Magazine, 17 October 2004)

In a memetic warfare context, a major strategic opportunity lies in responding proactively to this situation -- rather than deploring it. Inspired by the Eastern martial art philosophy, rather than endeavouring to resist, the "art" lies in going with the flow. The question is then how to imbue the situation with an even higher order of aesthetic attractors, whatever that might imaginatively mean, as previously explored (*Ensuring Strategic Resilience through Haiku Patterns: reframing the scope of the "martial arts" in response to strategic*

threats, 2006). Many traces of this approach are already emerging in the aesthetic contexts explored in the various forms of virtual reality and online gaming (as noted below).

As envisaged by the neocon strategy, those in a reality-based context are effectively "sitting ducks" -- easy targets for those operating within the fluidity of imaginative worldmaking "on the fly". Especially interesting in this transformation is that widespread use of "targets" and "targetting" -- as favoured by the neocon worldview -- becomes of questionable relevance with regard to strategic initiatives and social change. As separately discussed, the "targets" are no longer patiently awaiting their "assassination" (*Enhancing Sustainable Development Strategies through Avoidance of Military Metaphors*, 1998). They are on the move. They are no longer "reality-based" and are not where they might have been assumed to be. In a sense they may not even "exist" or have an "identity" in any conventional sense, as with "Al-Qaida" and the "Tea Party movement" -- or, perhaps more self-consciously, the *Imaginary Society*.

Avoiding pipeline dependency: The possibility has been expressed otherwise by the senior director of Global Community Affairs at Microsoft Corporation, *Akhtar Badshah* (*Reimagining the World: we are at the Center of Information Flow, Microsoft Corporate Citizenship*, 18 April 2011):

What is common among the recent events in the Middle East is that they are leaderless uprisings with no visible leader in the mold of a Gandhi or King. Why is that the case, what has changed? I would posit that the changes in how we consume and contribute information is at the center of these changes. **We are no longer at the end of the information flow pipe as consumers of information rather we are at the center of information flow. We are both creators and consumers of information and actively adding to the body of knowledge.** This I believe is a fundamental reimagining of the world and the opportunity it opens up for those of us in the development space is exciting. [*emphasis added*]

As implied by the last sentence, and from the widespread adoption of slogans like "reinventing the future", many groups are already orienting themselves in these terms -- initiating what may well be framed through competitive, military metaphors as an "imaginative arms race". Who can out-imagine whom? **The question is how radical is the nature of the invention open to the individual, irrespective of whether what is re-imagined is shared to any degree with others?**

With respect to the *2052 Report*, individuals are free to be part of the Club of Rome's "target" audience, or to respond imaginatively quite otherwise -- as suggested here.

Cognitive evolution: Is there a case for recognizing the possibility of a "metaphoric revolution", an "imaginary revolution", or a "revolution of the imagination" -- as previously explored (*Metaphoric Revolution: in quest of a manifesto for governance through metaphor*, 1988)? The *Arab Spring* of 2012 has been explicitly framed in these terms (*Tarik Ahmed Elseewi, The Arab Spring: a revolution of the imagination, International Journal of Communication*, 2011; Jonathan Jones, *Tahrir Square aflame: the visual basis of an imaginary revolution, The Guardian*, 9 December 2011). It has been framed as a quest of surrealism (Kate Gearity, *Revolution of the Imagination: the quest of André Breton*, 1999). The possibility of such a revolution has been contemplated by poets such as Wordsworth. The student revolution in France in 1968 -- notably inspired by the writings of Sartre on imagination -- has been interpreted as an imaginary revolution (M. Seidman, *The Imaginary Revolution: Parisian Students and Workers in 1968*, 2004).

Are the powerful metaphors of the future likely to enable new forms of integration and the emergence of collective entities of higher orders of complexity -- by analogy to the discover by mathematicians of new classes of symmetry groups? Or are they likely to be memetic analogues to the *neutron bomb* -- information bombs with catastrophic effects of unforeseen dimensions on identity and the social fabric? The possibilities of such metaphors are already evident in *viral marketing*. A worldwide tsunami of desperation?

Is the *2052 Report* to be understood as a revolutionary document, as a call for some form of revolution in thinking, or a call for imaginative engagement?. And, if not, why not? In the light of the trends presented, what is the requisite strategic *paradigm shift* and how does that relate to a *scientific revolution* in thinking?

Imaginative consciousness required to engage with the future?

Imagination: Imaginative consciousness has notably been distinguished from observational and reflective consciousness by *H. G. Wells* (*Experiment in Autobiography*, 1934). As noted in his conclusion of an extensive literature review by *Colin Wilson* (*The Strength to Dream: literature and the imagination*, 1962), according to Wells a new type of individual is appearing who wants this third dimension of imaginative consciousness for its own sake, not for survival:

The definition of the imagination -- as the third dimension of consciousness -- would seem to be broader than the "escapist" definition. The imagination, like the reasoning faculty, is an *extension* of the powers for survival. This suggests a speculation that has at least the virtue of unifying the theory of imagination. Wells had already hinted that he suspected that "men of imagination" were a new species, or at least an important variation on the old species... There can be no possible doubt that the imagination is synonymous with freedom -- as synonymous, at least as "air" and "wind". Imagination is man's attempt to break out of the prison of his body to possess an extension beyond the present. But if imagination is meaningless unless defined in terms of freedom, freedom is also meaningless unless defined in terms of evolution... But there can certainly be no doubt that the general notion of evolution is always connected with the imagination. (pp. 179-180)

Imagination and the future: G. Harry Jamieson offers perceptive insights into the nature of imaginative consciousness, in a chapter discussing imagination and the future (*Communication and Persuasion*, 1985):

In imaginative consciousness the normal restrictions of perception are set aside so that many points of view can coalesce into a single whole. It bears some similarity to Cubist art.... The power of imaginative consciousness is that it can visualise that which is absent, it can construct images which need bear no correspondence to external reality, it can see things as otherwise, and it can project itself to some future condition, at least an envisaged future condition... This is a powerful potential that can be enlisted for a variety of purposes, cultural, political or economic. It is a question to which persuasive communications, whether they be commercial in intent or propagandist, frequently address themselves. (p. 48)

One of Sartre's basic tenets regarding imaginative consciousness is that it possesses intentionality; that although it can be free-ranging, it obtains resolution only through intention.... Intention is a kind of focusing device in imaginative consciousness, it concentrates and thus excludes; it is a selective device, selecting an image to be raised into consciousness from a range of alternatives. (p. 49)

The creation of illusion for artistic purposes is part of man's cultural heritage; it has its source in the imaginative consciousness, a source which also lies at the heart of scientific endeavour. But the same source which provides the origin of artistic and scientific activity can be exploited by others for the purposes of persuasion. **It is only through imagination that we can grasp the future, and it is because we can so project ourselves, psychologically speaking, that we are able to conceive ourselves as otherwise.** However, the otherwise we may desire to become may owe something to the influence of others... (pp. 50-51)
[emphasis added]

Jamieson appropriately cautions:

Man's imaginative consciousness provides a ready-made vehicle or channel through which the author can appeal in the propagation of his ideas; likewise, it lays itself open to an avenue for those engaged in the business of persuasion. The "persuasion industry" utilises imagery in many of its appeals, inviting its audience to project themselves, via imagination, into some other state of existence, or some other time or place. In doing so, it feeds upon the potentiality of the imaginative consciousness to transcend physical or practical limitations. (p. 44)

Dreaming? With respect to such remarks, and Wilson's title (*The Strength to Dream*), it is appropriate to contrast:

- dreams, as deliberately marketed by the "persuasion industry" through advertising, whether for products, projects, or political policies (Mark Horvath, *Creating Movements and Cause: Marketing Dreams Can Come True*, Huff Post, 28 October 2011); most significant has been that associated with the appreciation, exploitation and promotion of cheap credit, enabling life to be lived as a dream. With respect to the concern of the *2052 Report* with consumption, such dreams reinforce **compulsive buying disorder**
- the dreaming of 900 million enabled by Facebook and highly valued commercially (Eliot Van Buskirk, *Your Facebook Profile Makes Marketers' Dreams Come True*, Wired, 28 April 2009; Rhys Blakely, *Facebook debut has California dreaming*, The Australian, 19 May 2012)
- the choice of title by eminent physicist **Stephen Hawking** (*The Dreams That Stuff Is Made Of: the most astounding papers of quantum physics -- and how they shook the scientific world*, 2011)
- the much-cited speech by **Martin Luther King** (*I Have a Dream*, 1963) which can indeed be said to have "shook the world".

Hawking's title is inadvertently significant in that it is a reminder that even for the hardest sciences the nature of matter, as conventionally conceived, is to a high degree a perceptual illusion -- since at the atomic level it is imagined to be primarily composed of "empty space" -- whatever that may be. There is a profound irony to the sense in which such sciences, as with the *2052 Report*, stress the importance of imagination in any approach to facts. Yet, as with the deprecated scientific quest for the human soul, it might be best understood in terms of the "empty space" within which facts are embedded.

What possibilities does the future hold for re-imagining human identity, so readily held to be an illusion, as noted by **Bruce Hood** (*The Self Illusion: Why There is No 'You' Inside Your Head*, 2012). The *2052 Report* offers a concluding section on *What Should You Do?* -- but without considering that the illusory "you" may wish to reframe itself, and may need to, as separately suggested (*Emergence of Cyclical Psycho-social Identity: sustainability as "psychically" defined*, 2007; *Strategic Complexity 8 Attracting Consensus Klein is beautiful 8 Sustaining identity in time*, 2011).

Worldmaking: Following the early framing offered by **Nelson Goodman** (*Ways of Worldmaking*, 1978), the explosion of creative initiatives in elaborating "worlds" can be variously recognized in:

- the continuing tradition of science fiction
- the invention of engaging board games (*Dungeons and Dragons*, etc)
- the representation of imagined worlds by the media, with the striking appeal they offer (*Avatar*, 2009; etc)
- the elaboration of **virtual worlds** in which people engage imaginatively through avatars of their own invention, possibly involving the **emergence of virtual institutions** (*Second Life*, etc)
- following a long tradition, the establishment of **intentional communities** based on unconventional philosophies and rules, as separately discussed (*Renaissance Zones: experimenting with the intentional significance of the Damanhur community*, 2003)
- the increasing establishment of **gated residential communities**, possibly with exceptional security rules and philosophies

Imaginal education: These variously characterize what might be understood as imaginal education, as separately discussed (*Imaginal Education: game playing, science fiction, language, art and world-making*, 2003). With respect to issues of governance indicated by the *2052 Report*, so-called "intelligent games" (peace games, educational games) are indicative of future possibilities of online gaming (*Playfully Changing the Prevailing Climate of Opinion: climate change as focal metaphor of effective global governance*, 2005;

International Journal of Intelligent Games and Simulation). The *2052 Report* specifically notes the importance of such games through a "glimpse" ([Sarah Severn](#), *Peak Youth Gaming for the Public Good*). Missing however is any reflection on an international decision-making game which would integrate the problematic insights of [Yes Minister](#) (1980-84), as valued by Margaret Thatcher, as a reflection of the reality of governance -- and engagement with the *irresolutive*.

More questionable is the recognition that the broadcast media, and associated forms, imaginatively prefigure on a daily basis more than the *2052 Report* foresees in terms of problematic dynamics. People are potentially enabled thereby, or become habituated to them as a source of appropriate stimulus. It is to be expected that the call for ever more imaginative entertainment will be a primary characteristic of the future -- as with the circuses of ancient Rome -- effectively "delinking" from the rationality of arguments, such as those of the *2052 Report*. This is already evident in the major importance of drugs and alcohol -- at every level of society -- as a means of reframing the experience of an unsatisfactory "factual" daily reality and the depression it engenders.

Imaginary consensus: The *2052 Report* assumes that policy-makers will come to their senses in response to the longer-term issues. This reflects a failure to recognize the degree to which the desired consensus, in fact any consensus -- whether democratic or otherwise -- is itself to an important degree imaginary, if not an illusion in its own right, as separately argued ([The Consensus Delusion: mysterious attractor undermining global civilization as currently imagined](#), 2011). To what extent is the "international community" an illusion -- despite the many appeals made to it in the expectation of action? Curiously again, as noted with respect to the climate change debate, science is unable to apply its methodology to the elusive nature of "consensus", or to reach consensus on how this might be done.

Reframing the 2052 Report through imaginative inquiry

Engagement with the Report: Given the preceding arguments, how is it appropriate to engage with the *2052 Report*? Of particular relevance is the affirmation above of Akhtar Badshah ([Reimagining the World: we are at the Center of Information Flow](#), *Microsoft Corporate Citizenship*, 18 April 2011):

We are no longer at the end of the information flow pipe as consumers of information rather we are at the center of information flow. We are both creators and consumers of information and actively adding to the body of knowledge.

For recipients, is the engagement only a passive one, within the conventional framework within which the *2052 Report* was presented -- at the end of an "information pipeline" organized by the Club of Rome? Or is it appropriate to make of that *2052 Report* whatever enables a greater capacity to engage with the future -- however it can be creatively and fruitfully imagined? How can it be "activated" as a catalyst, as previously argued ([In Quest of Mnemonic Catalysts -- for comprehension of complex psychosocial dynamics](#), 2007)?

Reframing the Report through metaphor: One approach is that of [Gareth Morgan](#) ([Images of Organization](#), 1986/2007) who focused on organizations as variously machines, organisms, brains, cultures, political systems, psychic prisons, as well as in terms of flux. The *2052 Report*, and the world it foresees, could be explored through these various metaphorical lenses.

Some would readily see the report as a psychic prison -- especially with the constructional implications of "forecast".

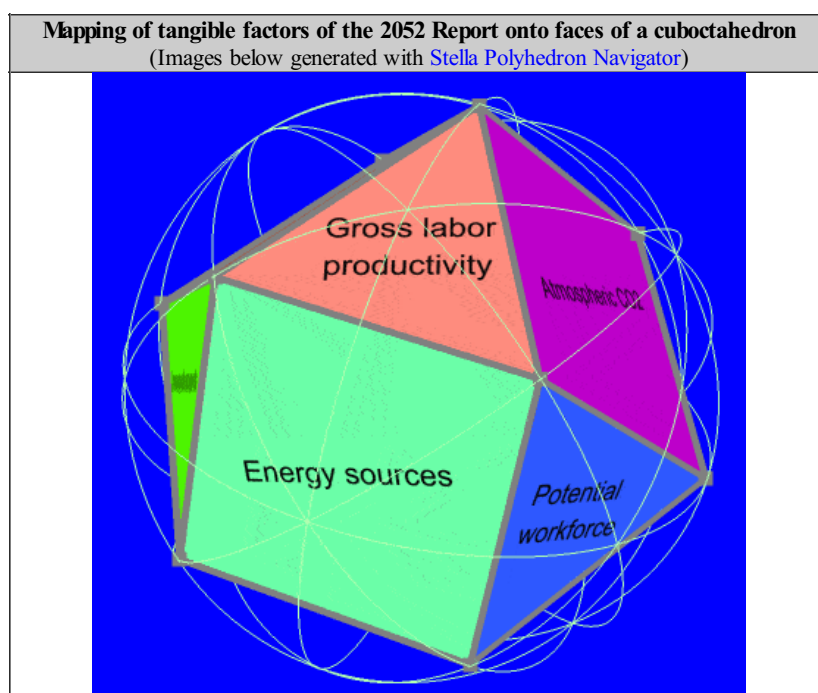
Metaphoric templates from the Report: Another approach is to use the dimensions it highlights as metaphoric templates to re-imagine the emerging world -- also to be recognized as a global knowledge society, much characterized by [dematerialisation](#). In this sense the tangibles, on which the *2052 Report* focuses in measuring the measurable, need to be seen as implying intangibles -- of which the tangibles may only be a particular manifestation. This goes beyond the section of the report on *The Nonmaterial Future to 2052* which limits its concern to: Milder push against global limits, Slower growth in productivity, Tensions from declining consumption, Prevalence of short-termism, Stronger government, Forced redistribution, Megacity environment, Internalization of the environment, Omnipresent Internet, Disappearing charms (for tourism), Better health, Armed forces fighting new threats.

Systemic isomorphism between tangibles and intangibles? The core of the report (Chapters 4, 5, and 6) focuses on the systemic relationships between a set of tangibles using adaptations of the approach developed for *Limits to Growth* and its updates (1992, 2004). That approach is elaborated in terms of the parameters in the left-hand column of the following table. In the spirit of the argument above, these have been tentatively "translated" (into the right-hand column) according to the tentative approach previously used more specifically with respect to the original world dynamics parameters ([Terms in psychological systems corresponding to those used in the model of the world system](#), 1971).

Tangibles in a global limited-to-growth economy focused on material goods and welfare (as articulated in Chapters 4, 5 and 6 of the <i>2052 Report</i>)	Intangibles in a global knowledge-based society focused on immaterial goods and well-being (using the <i>2052 Report</i> as a metaphoric template)
1. Global population	1. Total population of identities, whether attributed to physical people, groups, virtual entities, robots, pets, or cultural artefacts
2. Potential workforce	2. Entities potentially employed in work cycles, whether for their own benefit or for those of others in different space-time frameworks
3. Gross labor productivity	3. Creativity of entities in augmenting the collective wealth of society, including creativity for its own sake or for appreciation in other contexts
4. Annual production (i.e., GDP)	4. Creativity in a given cycle, including that contributing to intangible benefits (such as Gross Domestic Happiness)
5. Investment	5. Intellectual and emotional energy invested in long-term activities; commitment to "rationalized" behaviour patterns.
6. Consumption	6. Utilization of creativity of other entities (such as to engender waste, requiring recycling)
7. Consumption per person	7. Utilization of creativity per entity

8. Energy use	8. Psychosocial energy usage (such as to constitute a drain on collective resources, requiring regeneration)
9. Variety of energy sources	9. Variety of sources of psychosocial energy (and the relative dependence on each such resource)
10. CO2 emissions	10. Emissions of information (requiring absorption to avoid overheating of the global psychosocial system)
11. Concentration of CO2 in the atmosphere	11. Concentration of emissions polluting the noosphere
12. Food production	12. Production of nourishment within the global psychosocial system
13. Net climate effect on food production	13. Effect of overheating of the psychosocial system on global production of nourishment
14. Unused biocapacity	14. Unused capacity of the psychosocial system and the noosphere (allowing for preservation of the psychosocial wilderness areas)

These 14 parameters could be mapped onto a suitable polyhedron as a means of configuring them to highlight the coherence of the system they represent. This approach follows from arguments developed separately (*Towards Polyhedral Global Governance: complexifying oversimplistic strategic metaphors*, 2008; *Polyhedral Pattern Language: software facilitation of emergence, representation and transformation of psycho-social organization*, 2008).



A similar approach was used with respect to the strategic dilemmas apparent on the occasion of the [United Nations Conference on Environment and Development](#) (Rio de Janeiro, 1992), as described separately (*Configuring Globally and Contending Locally: shaping the global network of local bargains by decoding and mapping Earth Summit inter-sectoral issues*, 1992). The issues were mapped onto an icosidodecahedral net.

Insights from the "glimpses" for a knowledge-based society: The left-hand column of the above table corresponds to the core framework of the *2052 Report* -- its socio-economic centre of gravity as widely publicised. However the "glimpses" interspersed throughout the report can (in many instances) be understood as the "glimpses of humanity" which are not integrated into that systemic framework.

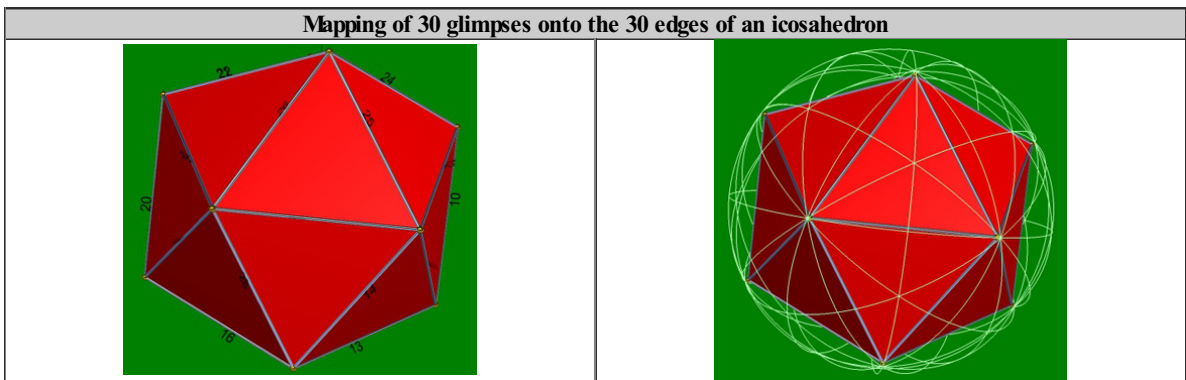
A similar approach to that in the table above can then be adopted with respect to a "transposition" from the more tangible societal focus, as elaborated in the report, to an intangible focus -- implying a fundamental shift in collective cognitive centre of gravity. This corresponds to an exploration of the biblical sense that: *Man shall not live by bread alone* (*Deuteronomy 8: 2-3; Matthew 4:4; Luke 4:4*).

The 34 glimpses in the left-hand column are "imaginatively" transformed into corresponding glimpses of relevance to a knowledge-based society in the right-hand column -- one in which dematerialisation in the economic sense is a significant factor. For the purposes of the exercise which follows, in the light of the cybernetic methodology of Stafford Beer (as mentioned above), the number of glimpses is collapsed from 34 to 30.

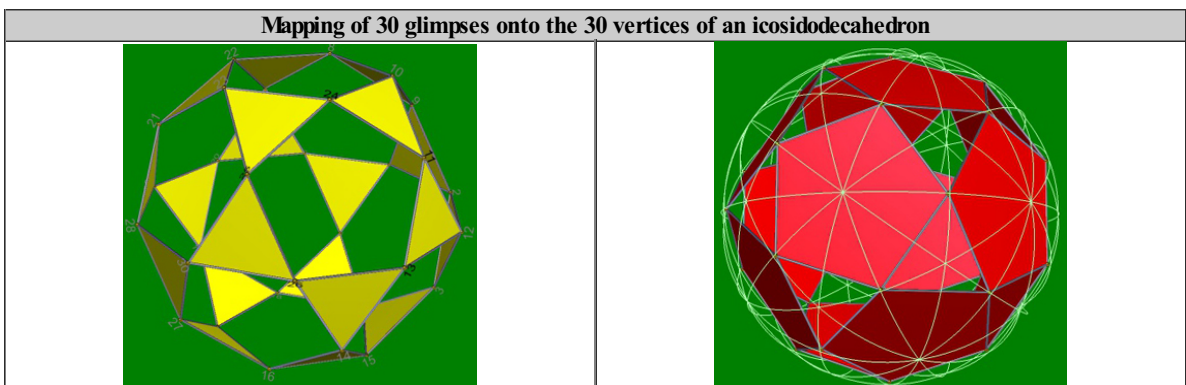
34 Glimpses by eminent specialists as offered by the <i>2052 Report</i>	30 Glimpses imaginatively reframed (tentatively) as fundamental to dematerialisation in a knowledge-society
1. The Dark Decades by Carlos Joly	1. Engaging with endarkenment and humanity's shadow
2. Constraining Asian Consumption by Chandran Nair	2. Constraining information consumption and information overload
3. Shuffling toward Sustainability by Paul Hohnen	3. Dancing with the psychological significance of sustainability
4. Intergenerational War for Equity by Karl Wagner	4. "Re-cognition" of equality and exploring fruitful distinctions
5. Extreme Weather in 2052 by Robert W. Corell	5. Psychosocial turbulence and its navigation
6. The End of Uneconomic Growth by Herman Daly	6. Transition to psychosocial growth based on dematerialisation

7. Light Green Growth by Thorvald Moe	7. Conscious embodiment of cognitive metabolic pathways
8. The Road to PV by Terje Osmundsen	8. Direct derivation of psychosocial energy
9. The Death of Nuclear by Jonathon Porritt	9. Emergence of cognitive fusion
10. Troubled Arctic Waters by Dag O. Hessen	10. Collective cognitive embodiment of great ocean conveyor
11. The Flight to the City by Thomas N. Gladwin	11. Flocking, swarm intelligence and gated conceptual communities
12. Expensive Oil = Expensive Food by Erling Moxnes	12. > 13
13. The Limits to Protein by David Butcher	13. "Re-cognition" of new forms of nourishment
14. The Race to Lose Last by Mathis Wackernagel	14. Aesthetic challenge of greater voluntary simplicity
15. Urban Mining of Metals by Chris Tuppen	15. Technomimicry as primary source of cognitive innovation
16. Nature Limited to Parks by Stephan Harding	16. Psychosocial recreation of natural ecosystems -- psycommunities
17. Megacity Living and Externalization of the Mind	17. Dwelling globally through embodiment of the environment
18. Individual Health from Public Care by Harald Siem	18. "Re-cognition" of dynamics of health in a systemic context
19. The Future of War and the Rise of Robots by Ugo Bardi	19. Aesthetic warfare -- Global Glass Bead Gaming
20. Military for Sustainability by John Elkington	20. Aesthetic martial arts for the encounter with otherness
21. Scotland Joins New Europe by Catherine Cameron	21. Transcendence of binary contractual constraints
22. The End of Mediterranean Disparity by Thymio Papayannis	22. "Re-cognition" of disparity
23. Slum Urbanism in Africa by Edgar Pieterse	23. Musical empowerment of the existentially constrained
24. Valuing the Whole by Peter Willis	24. Valuing the whole through its embodiment in new forms
25. Systemic CSR, or CSR 2.0 by Wayne Visser	25. "Re-cognition" of human responsibilities
26. Harnessing the Wisdom of the Crowd by Elisabeth Laville	26. Crowd-sourcing of collective wisdom
27. Peak Youth Gaming for the Public Good by Sarah Severn	27. > 19
28. Sudden Rush to Solar by Paul Gilding	28. > 30
29. Financing the Future	29. "Re-cognition" of systems of confidence-based "finance"
30. Bright Solar Future by William W. Behrens	30. "Re-cognition" of symbolic significance of the Sun
31. China-the New Hegemon by Rasmus Reinvang and	31. Ecosystemic integration of alternative cultural metaphors
32. Rich on Biofuels by Jens Ulltveit-Moe	32. Eliciting psychosocial energy from natural processes
33. The Fifth Cultural Step by Dag Andersen	33. > 34
34. The Third Flowering of the Tree of Life by Jonathan Loh	34. Emergence of Homo conjungens

As above, the 30 "glimpses" may be variously mapped onto polyhedra -- much as different **projections** are used to map the surface of the globe. Of relevance to the above-mentioned choice of paradigm in developing a global model, such map projections involve a process of **choosing a model for the shape of the Earth**. Among the many projections, an interesting bridge between the two considerations is the **Dymaxion polyhedral map** of R. Buckminster Fuller -- especially in the light of his exploration of the implications of the transformation between the cuboctahedron above and the icosahedron below, as separately discussed (*Vector Equilibrium and its Transformation Pathways*, 1980). In the first instance below, following Stafford Beer (as mentioned above), the glimpses are mapped onto an icosahedron -- one edge per glimpse. Circumferential circles can be introduced to suggest the nature of the glimpses as phases in "songlines".



In the following images, the 30 "glimpses" are mapped onto the vertices of an icosidodecahedron, one glimpse per vertex -- with selected faces rendered transparent in the two examples. In relation to the songline metaphor, the relative prominence of the glimpses so mapped allows them to be understood as "sacred sights".



Perchance to Dream	
in anticipation of collapse of global civilizational life as it is currently known ("To be or not to be" is the well-known phrase of a soliloquy in William Shakespeare's play <i>Hamlet</i> .)	
<p>To be, or not to be, that is the question: Whether 'tis Nobler in the mind to suffer The Slings and Arrows of outrageous Fortune, Or to take Arms against a Sea of troubles, And by opposing end them: to die, to sleep No more; and by a sleep, to say we end The heart-ache, and the thousand Natural shocks That Flesh is heir to? 'Tis a consummation Devoutly to be wished. To die to sleep, To sleep, perchance to Dream; Ay, there's the rub, For in that sleep of death, what dreams may come, When we have shuffled off this mortal coil, Must give us pause. There's the respect That makes Calamity of so long life:</p>	<p>For who would bear the Whips and Scorns of time, The Oppressor's wrong, the proud man's Contumely, The pangs of despised Love, the Law's delay, The insolence of Office, and the Spurns That patient merit of the unworthy takes, When he himself might his Quietus make With a bare Bodkin? Who would Fardels bear, To grunt and sweat under a weary life, But that the dread of something after death, The undiscovered Country, from whose bourn No Traveller returns, Puzzles the will, And makes us rather Bear those ills we have, Than fly to others that we know not of.</p>

Re-imagining the future through the present: re-engaging Dreamtime

Dreams the future is made of: Reference was made above to the choice of title by eminent physicist [Stephen Hawking](#) (*The Dreams That Stuff Is Made Of: the most astounding papers of quantum physics -- and how they shook the scientific world*, 2011). What is astounding is the curious juxtaposition of dreaming and quantum physics from a perspective that has demonstrated not the slightest capacity to give credence to dreams, other than as subjective illusions of the most dubious "existence".

And yet it is indeed through dreaming that people give coherence to their lives -- even strategic coherence -- in engaging across time and with the future (cf. *Engaging Macrohistory through the Present Moment*, 2004). As mentioned above, the much-cited phrase of Martin Luther King, *I Have a Dream*, has been one such inspiration to millions. In a recent report summarizing the insights of the laureates of the [Blue Planet Prize](#), the "problem" faced echoes such a dream:

We have a dream -- a world without poverty -- a world that is equitable -- a world that respects human rights -- a world with increased and improved ethical behavior regarding poverty and natural resources - a world that is environmentally, socially and economically sustainable, and where economic growth is accomplished within the constraints of realising social objectives of poverty eradication and social equity and within the constraints of nature's life support carrying capacity, and a world where the challenges such as climate change, loss of biodiversity and social inequity have been successfully addressed. This is an achievable dream, but the system is broken and our current pathway will not realise it. (*Environment and Development Challenges: The Imperative to Act 20*, The Asahi Glass Foundation, February 2012)

Missing however is reflection on the cognitive connectivity between dreaming and articulation, as implied by the case of quantum physics -- whose theories could well be described as dreams of the most elusive kind.

The question is how does "dreaming" work in engendering the future? This is a process familiar to every creative artist and inventor? It is central to Arthur Koestler's *The Act of Creation* (1964). How is the "dreamtime" of the past period of cheap credit -- so widely appreciated, exploited and promoted -- to be distinguished from that suggested here, or from the [Dreamtime](#) as understood by Australian Aborigines? Could it be usefully argued, adapting Martin Luther King, that the leaders of the global financial community "*have had a dream*" -- a bad dream, from which they have yet to awake?

Dreaming vs. Forecasting -- stepping into the mirror: The "forecast" of the *2052 Report*, through its use of "cast", offers the image of the kind of journey for which the "die is cast". It effectively precludes the interference effects of the multiple dreams by which the future will be made. As extensively explored in the seminal work with respect to other such terms by [George Lakoff](#) and [Mark Johnson](#) (*Metaphors We Live By*, 1980), "cast" offers a degree of foregone conclusion. The eminent author of the report is sure that he is "right" in the light of his extensive study (p. xvi). The term "cast" has unfruitful associations to [precast concrete](#) -- consistent with use of metaphors such as "building the future" (especially using prefabricated elements from the past).

By contrast, dreaming opens a multiplicity of possibilities -- many of which will necessarily emerge over the next forty years. The very process of dreaming challenges the boundaries of "forecasting" -- as carefully delineated in the trend lines of the *2052 Report*. As stressed above, it may call into question the very nature of identity -- as has quantum physics, notably in its implications for consciousness.

An alternative metaphor is offered by "mirror", which has a long tradition in relation to "speculation" regarding the future -- predating that of forecasting. It may be used to reframe events such as the forthcoming [United Nations Conference on Sustainable Development](#) (Rio de Janeiro, 2012), as it was for its predecessor (*My Reflecting Mirror World: making my World Summit on Sustainable Development (Johannesburg, 2002) worthwhile*, 2002). The mirror also figures in many ways in dreaming -- if only in reflection on personal identity (*Looking in the Mirror -- at Josef Fritzl ? Global conditions on reflection*, 2009). The traditional fascination with "magically" entering the mirror suggests other strategic understandings, separately explored (*Stepping into, or through, the Mirror: embodying alternative scenario patterns*, 2008).

Exploring the songlines of the noosphere: The suggestion was briefly made above that the "glimpses" of the *2052 Report* could

fruitfully be understood as the "songs" of different "voices" -- potentially together forming a "choir". They can also be understood as the dreams of individuals reflecting those of particular constituencies. The report would emphasize their consistency with trend lines -- the "tracks" by which many may feel they are being currently "railroaded" into the future, or "trained" for it.

This understanding can be challenged and reframed in the intangible subtleties of a global knowledge society. The explosion and interweaving of hyperlinks across cyberspace offer a sense of linkage through a hyperspace which can be compared with intuitions regarding the nature of a [noosphere](#) whose "metaphysics" and "dimensionality" remain to be understood. The sense of "track" can therefore be reframed, as discussed separately (*From Information Highways to Songlines of the Noosphere: global configuration of hypertext pathways as a prerequisite for meaningful collective transformation*, 1996). To the Australian Aborigines these are also known as Dreaming tracks. The trend lines can be reframed as "[songlines](#)" along which people variously travel -- each with their appropriate guardians.

Engendering possibilities through re-imagining: The forecast of the *2052 Report* is necessarily based on statistical probabilities. The language of probability offers the notion of [confidence intervals](#) with which are associated confidence levels. Behaviourally these might well be understood in terms of so-called [comfort zones](#).

A probabilistic vision of the world has been integrated into aesthetic and religious considerations by the statistician-philosopher [Vasily Nalimov](#) (*Realms of the Unconscious: the enchanted frontier*, 1982). This offers a remarkable synthesis, drawing on the entire range of knowledge (including elements of semantics, natural and social sciences, mysticism, and the arts) in an effort to understand how the human mind perceives the world. The methodology is borrowed largely from physics (as capable of tolerating paradoxes within its own theories), with considerable attention to the role of metaphor and the function of human imagination in capturing manifestations of consciousness and unconsciousness.

Playful exploration of probabilities: The *2052 Report*, as noted above, highlights the role of online gaming as a means of exploring probable futures. Whilst this may be the essence of simulation, it is the cognitive engagement with play that calls for attention, as stressed by [Johan Huizinga](#) (*Homo Ludens: a study of the play element in culture*, 1955). The future may well discover profound significance to the daily fascination with board games, the passing patterns of ball games, and other sports -- and with gambling (*Understanding Sustainable Dialogue: the secret within Bucky's Ball?* 1996).

Structured otherwise, the *2052 Report* could have been promoted as embodying secret codes to inspire the questing curiosity aroused by *The Da Vinci Code* (2003). Are there such secrets embodied within it -- if only to enable the hidden agenda of the Club of Rome, as hypothesized by conspiracy theorists? What of the various sets of numbers by which it is organized? (cf *Representation, Comprehension and Communication of Sets: the Role of Number*, 1978).

Other than the use of management games by corporations, of special interest is their use within intentional communities, as with the *Transformation Game* of the Findhorn Foundation, or the *Game of Life* of the Damanhur federation of communities (with a computer-based variant known as Super Risk, or *Risiko*).

These recall, and are presumably inspired, by the game described so elusively by Nobel Laureate [Hermann Hesse](#) (*The Glass Bead Game*, 1943), itself inspired by the forgotten chess-like game *Rithmomachia* ("The Battle of Numbers"). This combined the pleasures of gaming with mathematical study and moral education. Intellectuals of the medieval and Renaissance periods who played this game were not only seeking to master the principles of [Boethian mathematics](#) but were striving to improve their own understanding of the secrets of the cosmos (Ann E. Moyer, *In The Philosophers' Game*, 2001). Given its dependence on simulation, can the *2052 Report* be "re-constructed" as a game -- playing with probabilities?

Imagining the future through marriage as archetypal metaphor: The nature, quality and duration of relationships -- much challenged at the present time -- embody implicitly many issues highlighted by the *2052 Report*. In the dream of durable marriage, that of long-term consensus is evident in contrast to deprecated short-termism. As forming the archetypal household, it is the primary locus of the level of consumption challenged by the report.

The tragic dynamics of adultery and divorce are suggestively indicative of marriage to a rejected past, undermining emergence of a desired future -- a problematic relation to time. It is more than ironic that "adultery" should be a characteristic of "adult" maturity and a primary cause of divorce. Analogues are to be found in collective initiatives and their schismatic tendencies -- as a characteristic of the *irresolutique*. Is the *2052 Report* to be considered a plea for "divorce" from the past -- or at least some form of "adulterous" engagement with sustainable alternatives -- in anticipation of engagement with the future?

Despite its role as an archetypal metaphor, the *2052 Report* accords little attention to the evolving form of relationships as reflecting the emerging understanding of possible future consensual and contractual relationships separately discussed (*Transcending Simplistic Binary Contractual Relationships What is hindering their exploration?* 2012). Despite its extreme importance to many, mention of "love" in the report is limited to that for games and the wilderness.

It could therefore be argued that there is a case for revisiting the transformative role of [courtly love](#), as catalyzed by the [troubadours](#). Some such transformation could compensate for the "fucking propensities" characteristic of modern courts of diplomacy and their scandals, as mentioned in the review of the Royal Society report. These are consistent with what amounts to a tendency to "fuck the present" through "one-night stands".

Conclusion

Emphasis has been given in this "review" to the role of the Club of Rome in endorsing yet another report by an individual, whilst being seemingly incapable of elaborating the systemic picture emerging from the set of reports it has elicited over forty years. It has been argued that both that failure, and the limited diversity of perspectives represented in the *2052 Report*, are cybernetically inadequate -- if

the intention is to enable the "take off" and "flying capacity" of what has been termed [Spaceship Earth](#). Given the insights previously offered by the 50 other reports to the Club of Rome into requirements for its "flying capacity", what do their authors now think of each other's reports -- and of the *2052 Report* and its future? What insight does this offer into their possible uptake?

It is strange that the *2052 Report* avoids offering any imagery or metaphor as a vehicle for the insights it offers -- to enable the advocated strategy to "fly". This is consistent with the "scientific" tradition of the Club of Rome, despite its intimate relationship with the World Academy of Art and Science. As previously argued, there is no recognition of the need to enable imaginative thinking through an integration of the arts and sciences ([Designing the 21st Century through integration of the arts and sciences](#), 1995).

This is an indication of inability to recognize the role of the "*imaginatique*" as central to the belief systems which variously support or oppose policy proposals. The failure of the report to integrate political dynamics systemically bodes ill, suggesting a failure to consider the much-challenged delivery capacity of governance, both now and in the future. The associated game-playing has been termed the "*irresolutique*" -- as fundamental to the non-decision-making deprecated by the *2052 Report*.

Given the report's mention of values, spirituality and questions, could these dimensions be fruitfully considered in future in terms of an "*axiologique*", a "*noetique*" and "*quaeretique*" -- as variously considered in the [Encyclopedia of World Problems and Human Potential](#) (cf. [Generating a Million Questions from UIA Databases Problems, Strategies, Values](#), 2006)? In the light of the first of the Club of Rome's goals ([Shaping the future: Six Global Goals](#)), an "*axiologique*" would seem to be a necessity -- one goal for each "*-ique*", and one for luck?

The *2052 Report* makes no recommendations as such, focusing (in despair) on *What Global Society Ideally Should Have Done*. In that since it deliberately disassociates itself from action. The author refers readers to the list of actions in the report of the UN Secretary-General's Special Commission on Sustainability ([Resilient People, Resilient Planet: a future worth choosing](#), 2012) -- "if you are irritated by my high-handed description of the situation". These are intended as a supplement to the well-established eight UN [Millennium Development Goals](#) agreed in 2000, with their own problematic uptake. As with *2052 Report* however, no attention is given to the systemic barriers to their achievement.

The report concludes with a set of 12 "shoulds" indicative of what individuals should do. This contrasts with its recognition of increasing intergenerational tensions -- of which rejection of "shoulds" is liable to be a prime characteristic. The author has explicitly given himself confidence, but now calmly expects to be able to export that confidence to others. Curiously the preferred metaphor of the report for eliciting action is the "kick" -- notably in frustration with stupidity:

- I will try to make a forecast of what will happen over the next forty years. This is partly to satisfy my own curiosity and partly an attempt to kick society into action. (p. xv)
- Hopefully my global forecast will act as an external enemy and kick humanity -- or at least a few dedicated individuals -- into action. (p. 10)
- The agreement to act will arise, sooner or later, but it will come late in the day, and the resulting solution even later.... Forward-looking political leadership could kick-start the societal response but may be kept from doing so by the democratic majority of voters with a short-term perspective. (p. 225)
- Will the world really be stupid enough not to do what is perfectly doable...? I am sad to say that my answer is yes, I believe the world will be sufficiently stupid to postpone meaningful action. (p. 236)

There is however a case for exploring whether -- as in the relation between man and woman -- the future will only be fruitfully engendered by new forms of elegant courtship of the "other" ([Beyond Harassment of Reality and Grasping Future Possibilities: learnings from sexual harassment as a metaphor](#), 1996). Kicking and accusations of stupidity are not enough. It is a more sensitive engagement with the present that is required to "engender" a future in 2052. Why were "stupidity" and "intelligence" not a feature of the model used -- notably in relation to the elits?

It is in this context that the Club of Rome acts as a curious interface between another "Moses" -- descending from a mountain of analysis ([Mount Analogue](#)) with a set of "commandments" embodying truth -- and worship of the "[Golden Calf](#)", which associates of the Club of Rome are so anxious to preserve. Ironically such [bull worship](#), common to many traditions, can now be fruitfully challenged in the light of its recognition in slang ([Viable Global Governance through Bullfighting: challenge of transcendence](#), 2009).

In this context, the major strategic opportunity for individuals is to live imaginatively "between" such worlds, as previously argued ([Living as an Imaginal Bridge between Worlds: global implications of "betwixt and between" and liminality](#), 2011). The moral of the above, as a "story" in its own right, may well be: *Don't "believe" a word of it*. Feel free to re-imagine your own future (cf [Reinventing Your Metaphoric Habitat](#), 1992). Don't hang about in the "reality-based community" of the neocons -- or else you will be "targetted". Astronomers have discovered that planets hang about predictably; stars have long moved on from where they appear to be. Be a star -- or maybe a stargate ([People as Stargates: an alternative perspective on human relationships in space-time](#), 1996).

In developing the approach of "my story", as applied to the *2052 Report*, further indications are offered separately ([Alternative Approaches to Security: towards well-being and psychological dimensions of sustainability](#), 2004; [Engaging with the Inexplicable, the Incomprehensible and the Unexpected](#), 2010; [Towards the Dynamic Art of Partial Comprehension](#), 2012; [Relevance of Mythopoeic Insights to Global Challenges: cognitive integration implied by the Lord of the Rings](#), 2009; [A Singable Earth Charter, EU Constitution or Global Ethic?](#) 2006)

Intel Futurist on Why We Should Not Fear the Future

The world's largest computer chipmaker employs a corporate futurist, [Brian David Johnson](#)
Interviewed by Larry Greenemeier, *Scientific American*, May 2012

What is the greatest misconception that people have about the future? So many people think the

future is something that is set. They say: *You're a futurist. Make a prediction.* The future is much more complicated than that. The future is completely in motion -- it isn't this fixed point out there that we're all sort of running for and can't do anything about. The future is made every day by the actions of people. Because of that, people need to be active participants in that future. The biggest way you can affect the future is to talk about it with your family, your friends, your government.

This review would not have been possible without the ever-timely information from [Heiner Benking](#) and the proactive response of the publishers of the *2052 Report* ([Chelsea Green](#), and especially their European distributor [Green Books](#), from whom the book is available in June 2012). However for the primary stimulus, my deepest gratitude goes to [Peter Harper](#), and his colleagues, for alerting me on their return from the symposium on *The Place of Value in a World of Fact* (Stockholm, 1969) -- in the formative period of the Club of Rome initiative.

References

- Dag Andersen. *The 5th Step: The Way to a New Society*. Kolofon, 2007
- Joseph Bailey. Metaphor and Imaginative Consciousness: translating the contents of higher consciousness into abstract mental pictures. *RoSE (Research in Steiner Education)*, 2, December 2001, 2, pp. 121-131 [[text](#)]
- Frank J Barrett and David L Cooperrider. Generative Metaphor Intervention: a new approach for working with systems divided by conflict and caught in defensive perception. *Journal of Applied Behavioral Science*, 1990, 26, 2, pp. 219-239 [[text](#)]
- Richard Barbrook. *Imaginary Futures: from thinking machines to the global village*. Pluto Press, 2007
- Thomas A. Bass. *Reinventing the Future: conversations with the world's leading scientists*. Addison-Wesley, 1994
- Frank Barron, Alfonso Montuori and Anthea Barron (Eds.). *Creators on Creating: awakening and cultivating the imaginative mind*. Tarcher, 1997
- Mary Catherine Bateson. *Our Own Metaphor: a personal account of a conference on the effects of conscious purpose on human adaptation*. Knopf, 1972
- Kenneth C. Bausch. *Problematique and the Club of Rome*. Institute for 21st Century Agoras [[text](#)]
- Kenneth C. Bausch, Alexander N. Christakis and K. B. Bausch. *How People Harness Their Collective Wisdom And Power to Construct the Future*. Information Age Publishing, 2006
- Stafford Beer. *Beyond Dispute: the invention of team synteegrity*. Wiley, 1994
- Morris Berman. *The Reenchantment of the World*. Cornell University Press, 1981
- James W. Botkin, Mahdi Elmandjra and Mircea Maltiza. *No Limits to Learning: Bridging the Human Gap -- a Report to the Club of Rome*. Pergamon, 1980
- Kenneth E. Boulding. *The Economics of the Coming Spaceship Earth*. 1966 [[text](#)]
- Alexander N. Christakis. The Club of Rome revisited. *General Systems*, 31, 1988, pp. 35-38
- Cam Clayton. The Psychological Analogon in Sartre's Theory of the Imagination. *Sartre Studies International*, 17, 2, Jan 2011, pp. 16-27 [[text](#)]
- Henry Corbin. *Mundus Imaginalis, or the Imaginary and the Imaginal*. Hakim Bey and Ontological Anarchy, 1964 [[text](#)]
- Thomas J. Csordas. Global Religion and the Re-enchantment of the World: the case of the Catholic Charismatic Renewal. *Anthropological Theory*, 7, September 2007, 3, pp. 295-314 [[abstract](#)]
- Lindsay Cunningham-Cross. Re-imagining the World through Chinese Eyes: the search for a "Chinese School" of international relations theory. BISA, 2012 [[text](#)]
- Terrence W. Deacon:
- *Incomplete Nature: how mind emerged from matter*. W. W. Norton, 2011
 - The Importance of What is Missing. *New Scientist*, 26 November 2011 [[text](#)]
 - What's Missing from Theories of Information? In: Paul Davies and Niels Henrik Gregersen (Eds.), *Information and the Nature of Reality: From Physics to Metaphysics*. Cambridge University Press, 2010, pp. 146-169 [[text](#)]
- Dee Dickinson (Ed.). *Creating the Future*. New Horizons for Learning, 1991 [[summary](#)]
- Hubert Dreyfus and Sean Dorrence Kelly. *All Things Shining: reading the Western Classics to find meaning in a secular age*. Free Press, 2011 [[review](#)]
- Yehezkel Dror. *The Capacity to Govern: a Report to the Club of Rome*. Routledge, 2001
- John L. Farrands. *Challenge of Overpopulation*. In: *Don't Panic, Panic: the use and abuse of science to create fear*. Melbourne, Text Publishing, 1993 [[text](#)]

Thomas R. Flynn. The Role of the Image in Sartre's Aesthetic. *The Journal of Aesthetics and Art Criticism*, 33, 4, 1975, pp. 431-442 [text]

Jay Forrester. *World Dynamics*. Wright-Allen Press, 1971

Edward Friedman. Einstein and Mao: metaphors of revolution. *The China Quarterly*, 93, March 1983, pp. 51-75 [abstract]

R. Buckminster Fuller. *Operating Manual for Spaceship Earth*. Dutton, 1968 [text]

Kate Gearity. *Revolution of the Imagination: the quest of André Breton*. State University of New York, 1999

Petr Gibas. Globalised Aestheticisation of Urban Decay. In: *Beyond Globalisation: Exploring the Limits of Globalisation in the Regional Context*. University of Ostrava, 2010, pp. 155-161 [text]

J. K. Gibson-Graham. "Place-Based Globalism": A New Imaginary of Revolution. *Rethinking Marxism*, 20, 2008, 4, pp. 659- 664

Nelson Goodman. *Ways of Worldmaking*. Hackett, 1978

Susantha Goonatilake. *Toward a Global Science: mining civilizational knowledge*. Indiana University Press, 1999

William Gosling. *Realising Dreams: strategy for deep design*. Exposure, 2007

Kyriaki Goudeli. In Quest of a Possible Re-Enchantment of the World: reflections on Schelling's study on the deities of Samothrace. *European Journal of Social Theory*, 4, August 2001, 3, pp. 295-310 [abstract]

Gordon Graham. The Re-enchantment of the World: art versus religion. *Mind*, 118, 2009, 472, pp. 1135-1138 [text]

Richard Grigg. *To Re-Enchant the World: a philosophy of Unitarian Universalism*. Xlibris, 2004

Stephen Hawking. *The Dreams That Stuff Is Made Of: the most astounding papers of quantum physics -- and how they shook the scientific world*. Running Press, 2011

J. Martin Hays:

- Mapping wisdom as a complex adaptive system. *Management and Marketing*, 5, 2010, 2, 2. [text]
- The Ecology of Wisdom. *Management and Marketing*, 5, 2010, 1, 5. [text]
- Dynamics of organisational wisdom. *The Business Renaissance Quarterly*, 2, 2007, 1, 4, pp. 77-122 [text]

James Hillman. *An Inquiry into Image*. Spring, 1977, pp. 62-88.

Johan Huizinga. *Homo Ludens: a study of the play element in culture*. Beacon Press, 1955

F. Hirsch. *Social Limits to Growth*. Harvard University Press, 1976

Bruce Hood. *The Self Illusion: Why There is No 'You' Inside Your Head*. Constable and Robinson, 2012

Robert Jackall. Re-enchanting the World: some reflections on postmodernism. *International Journal of Politics, Culture, and Society*, 8, 1, 1994, pp. 183-192 [abstract]

M. C. Jackson. Beyond Problem Structuring Methods: reinventing the future of OR/MS. *The Journal of the Operational Research Society*, 57, 7, July 2006, pp. 868-878 [abstract]

N. Jackson. Imagining a Different World. In: N. Jackson, M. Oliver, M. Shaw and J. Wisdom (Eds.). *Developing Creativity in Higher Education: an imaginative curriculum*. Routledge, 2006, pp. 1-11.

Ross Jackson. *Occupy World Street: a global roadmap for radical economic and political reform*. Chelsea Green, 2011

G. Harry Jamieson. *Communication and Persuasion*. Routledge, 1985

Rushworth Kidder. *Reinventing the Future: global goals for the 21st Century*. MIT Press, 1989

Alexander King and Bertrand Schneider (Eds.). *The First Global Revolution: a report by the Council of the Club of Rome*. Simon and Schuster, 1992

Mark Jordan Landau. *The Poetry of Everyday Life: toward a metaphor-enriched social cognition*. University of Arizona, 2007 [text]

Joshua Landy and Michael Saler (Eds.). *The Re-Enchantment of the World: secular magic in a rational age*. Stanford University Press, 2009 [summary]

David Earl Lane. *Radically Reframing Environmental problems: the "Salmon 2100" case study*. Oregon State University, 2010 [text]

Ervin Laszlo:

- *Goals for Mankind: Report to the Club of Rome on the New Horizons of Global Community*. Hutchinson, 1977
- *Inner Limits of Mankind: Heretical Reflections on Today's Values, Culture and Politics*. Oneworld, 1989

Jonah Lehrer. *Imagine: how creativity works*. Canongate, 2012

Kathleen Lennon. Re-enchanting the World: the role of imagination in perception. *Philosophy*, 2010 [abstract]

Bruce H. Lipton and S. Bhaerman. *Spontaneous Evolution: Our Positive Future and a Way to Get There from Here*. Hay House, 2011

Dennis Meadows, Donella Meadows and Jorgen Randers:

- Limits to Growth: the 30-Year update. Chelsea Green, 2004
- The Limits to Growth. Universe Books, 1972
- Beyond the Limits: confronting global collapse, envisioning a sustainable future. Chelsea Green Publishing, 1993

Donella H. Meadows, John M. Richardson and Gerhart Bruckmann. *Groping in the Dark: The First Decade of Global Modelling*. Wiley, 1982

Sarah Moskoff. *The Imaginative Consciousness*. Lake Forest College, 1989

Vasily Nalimov. *Realms of the Unconscious: the enchanted frontier*. ISI Press, 1982

Hasan Ozbekhan:

- The Predicament of Mankind. In: C. West Churchman and Richard O. Mason, eds., *World Modelling: A Dialogue*, North-Holland, 1976
- Towards a general theory of planning. In E. Jantsch (Ed.), *Perspectives of Planning*. OECD Publications, 1969

Aurelio Peccei. *The Chasm Ahead*. Macmillan, 1969

Fred L. Polak and Elise Boulding. *The Image of the Future: enlightening the past, orientating the present, forecasting the future* (Vol. 1: The Promise Land, Source of Living Culture; Vol. 2: Iconoclasm of the Images of the Future, Demolition of Culture). Oceana Publications, 1961

Robert Puckett. Re-enchanting the World: a weberian analysis of wiccan charisma. *Handbook of Contemporary Paganism*, Brill, 2009, pp. 121-152

Albert J. Raboteau. Re-Enchanting The World: education, wisdom and imagination. *Cross Currents*, [text]

Isabel Ramos and João Alvaro Carvalho. Reinventing the Future: a study of the organizational mind. 19th IFIP World Computer Congress, 2006 [text]

Jorgen Randers. *2052: A Global Forecast for the Next Forty Years*. Chelsea Green, 2012

Bernard Brandon Scott. *Re-Imagine the World: an introduction to the parables of Jesus*. Polebridge Press, 2001

Jean-Paul Sartre. *The Psychology of Imagination*. Washington Square Press, 1968

M. Seidman. *The Imaginary Revolution: Parisian Students and Workers in 1968*. Berghahn Books, 2004

Ilene Serlin. The Relevance of Bachelard's Dynamic Imagination for Movement Art Psychotherapy. *The Arts in Psychotherapy*, 19, 1992, pp. 187-191 [text]

Donald Schon:

- Beyond the Stable State. Harmondsworth. Norton, 1973
- Frame Reflection: toward the resolution of intractable policy controversies. Basic Books, 1994

James K. A. Smith (Ed.). *After Modernity? Secularity, Globalization, and the Re-enchantment of the World*. Baylor University Press, 2008 [review]

David Spangler and William Irwin Thompson. *Reimagination of the World: a critique of the New Age, Science, and Popular Culture*. Bear, 1991

Manfred B. Steger. *The Rise of the Global Imaginary: political ideologies from the French Revolution to the Global War on Terror*. Oxford University Press, 2009

Bernard Stiegler. *The Re-Enchantment of the World: the value of the human spirit vs industrial populism*. Continuum, 2013 [summary]

David Suzuki. Reinventing the Future: protecting the Earth from ourselves. *Impact*, February/March 2005 [text]

Charles Taylor. *A Secular Age*. Harvard University Press, 2007

William Irwin Thompson. *Self and Society: studies in the evolution of culture*. Imprint Academic, 2009

Graham Turner. *A Comparison of the Limits to Growth with Thirty Years of Reality*. CSIRO, 2007). [text]

UNESCO:

- Young Scientists: population and the environmental crisis (Paris, 2-4 May 1972). UNESCO, ED-72/Conf. Young Scientists/3, June 1972 [text]
- Towards Knowledge Societies. 2005 [text]

UN Secretary-General's High-Level Panel on Sustainability. *Resilient People, Resilient Planet: a future worth choosing*. 2012 [text]

Siegfried Wiessner. Re-enchanting the World: indigenous peoples' rights as essential parts of a holistic human rights regime. *UCLA Journal of International Law and Foreign Affairs*, Spring, 2010 [abstract]

Helmut Willke. *Smart Governance: Governing the Global Knowledge Society*. Campus Verlag, 2007 [review]

Colin Wilson. *The Strength to Dream: literature and the imagination*. Abacus, 1976

Maurice Yolles:

- Knowledge Cybernetics: a metaphor for post-normal science. In: Steve Wallis (Ed), *Cybernetics and Systems Theory in Management: Tools, Views and Advancements*, IGI Global, Hershey, 2010
- Understanding Corruption and Sociopathology. *Journal of Organizational Change*, 22, 2009, 6, pp. 692-727 [[abstract](#)]
- Organisations as Complex Systems: an introduction to knowledge cybernetics. Information Age Publishing Inc, 2006 [[summary](#)]

Maurice Yolles, B.R. Frieden and G. Kemp. Toward a formal theory of socioculture: a yin-yang information-based theory of social change. *Kybernetes*, 37, 2008, 7, pp. 850 - 909 [[abstract](#)]

Avihu Zakai. Jonathan Edwards's Philosophy of Nature: the re-enchantment of the world in the age of scientific reasoning. T and T Clark, 2010 [[review](#)]



This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](#).

For further updates on this site, [subscribe here](#)