

INTEGRAL SCENARIOS: RE-FRAMING THEORY, BUILDING FROM PRACTICE

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May 16th 2006

Published in Futures 40 (2008) 160–172

ABSTRACT

Australian futurists have been working with a range of integral theories over the past decade to inform new approaches to scenarios. Chief among the integral theories explored is Ken Wilber's AQAL meta-theory. This emerging and diverse set of scenario methods, falling under the term 'integral scenarios' as reviewed in this paper, have mostly been developed in practice and to date, have not been represented in futures journals. This paper contextualises integral scenarios with a summary of the theoretical background to their development before arriving at a generic scenario generation process together with a set of utility and quality criteria. This generic framework and criteria are then used to situate a range of case studies of integral scenarios, outlining their features, benefits and limitations. Finally, the areas of potential for further development are highlighted – for both refined and wholly new types of integral scenario methods.

INTRODUCTION

Over the past decade a disparate community of futurists from Australia has been influenced by integral theories, most notably Ken Wilber's AQAL meta-theory (All Quadrant, All Level, All Lines, All States, All Types).[32] Various approaches to the inclusion of AQAL in scenarios have been made over the past five years. These have ranged from overt theory inclusions that restructure the whole scenario generation process to more subtle 'AQAL informed' navigation of the application of existing methods. As with most futures work all instances have been necessarily explorative, rich in lessons learned, and have delivered a wide range of valuable outcomes.

These 'valuable outcomes' are based on an implicit view held within the community of practice that integral scenario methods are generally better methods because they can achieve higher quality outcomes than previous methods. To make this view explicit, and thus open to critique by the international futurist's community, this paper will take one of many possible routes to review the theoretical and methodological territory covered by the community of practice. The review will identify what utility and quality criteria previous scenario methods met, and thus what would need to be included or transcended in new types of scenario generation methods to be considered 'better.'

To identify these quality criteria, existing typologies and literature are first reviewed for insights in this regard. An integral theory of worldviews is then used to reflect on the evolution of scenario methods and identify the various utility functions they fulfil. Reviewing an integral theory known as AQAL meta-theory, a new approach to scenarios is outlined. Finally, a generic scenario generation process is presented that, combined with the utility and quality criteria, are applied to evaluate a selection of integral scenario case studies: identifying their overall benefits, value, strengths, weaknesses and the potential for the further development of integral scenario methods.

It is hoped that this review and case study analysis will be of value to those interested in further developing their various scenario methodologies, and perhaps engaging in integral scenarios. It may also serve as a point of reflection for Australian futurists who are part of the AQAL informed community of practice.

MINIMUM QUALITY CRITERIA FOR SCENARIOS

Given the diversity of methods in practice, creating an overview of scenario methods continues to prove problematic. Despite scenarios being regarded by some as future studies' "foundational method" [12] and providing "methodological unity to futures studies" [1] scenarios are considered by others to be in a "methodological chaos" [13] with no consistent definition appropriate or accurate across the breadth of their practice. Recognising this definitional difficulty with scenarios, van Notten et al used the following working definition for their scenarios typology: "scenarios are descriptions of possible futures that reflect different perspectives on the past, present and future." [26] This definition is, unfortunately, very broad and is characteristic of the field of futures studies as a whole.

Van Notten et al have offered a significant update to existing scenario typologies, providing a robust, flexible and more comprehensive grasp of the differences and similarities of scenario practice. While this typology can help futurists to sort apples from oranges amongst scenarios, the typology begs an implicit question: which one is best? This question leads to our first quality criteria for scenarios: relevance. The scenario type employed needs to be relevant to its originating context and purpose.

From early in the practice of alternative (or decision) scenarios it was recognised that one common purpose they needed to serve was accessing and opening up, and possibly changing, the

worldviews of the people the scenarios were created by and for. Pierre Wack contends "the single most important aim of scenario planning is to challenge the assumptions of decision makers about how the world works and compel them to change their image of reality – sometimes resulting in revolutionary transformation." [30] At the very least, the consideration of alternative possibilities that scenarios inherently require means that participants need to be open/ed to worldview differences rather than closed to them. In addition, approaching scenarios with worldviews in mind is a useful way to grasp some of the types and degrees of change often involved in scenarios.

Building on Wack's argument, and the futures literature's common inclusion of Ashby's Law of Requisite Variety [2], a second quality criteria for scenario methods can be recognised: diversity of worldviews. The scenario method applied needs to include a diversity of worldviews to be useful, and thus the greater the degree of difference in the worldviews incorporated the better in terms of accessing the different change potentials of the issue the scenarios are addressing. The difficulty, of course, is presenting the differences in worldviews in an accessible and relevant way for both the scenario participants and their audience.

There are, however, some big question marks underlying the term 'worldview.' Just what is meant by worldview? How different, or how open, does one's worldview need to be? Just how different are the worldviews that exist or might exist? And, therefore, how many worldviews do, indeed can, scenarios practically incorporate?

Within futures studies worldviews have traditionally focused on the different *perspectives* and/or *discourses* that various actors in a scenario may use to interpret it and thus inform their reactions. These have served to highlight important differences in assumptions, causal relationships and the dynamics of change held by various actors in scenarios, and often result in altogether different scenarios. [27] This type of difference, however, is seen by integrally informed futurists as significantly limited.

In light of critical reasoning, the 'social construction of reality,' and informed by integral theories of worldviews, Voros, for example, implies that these differences are limited in comparison to the diversity of worldviews that are actually held by people [29]. Further, Slaughter observes that scenarios, as commonly conceived, focus almost exclusively on external and empirically based observations of reality that take the worldview of the observer, and actors within them, for granted. These characteristics can be taken as evidence of a particular, often unexamined, worldview itself: 'rational-instrumentality.' [18] This worldview carries forward, from the days when forecasting was ascendant, a noble regard for the self-neutrality of objectivism and, in essence, is a positivistic enslavement to the myth of the given. As a result, many potential futures that may be valuably conceived within scenario development processes are excluded, and the quality of the scenarios is demonstrably diminished.

This prompts the question: what does a different worldview mean to the worldview of 'rational-instrumentality'? What kinds of definitions are required to distinguish between this meaning and the one implied by Slaughter's critique?

One approach suggested by AQAL meta-theory, and implicit in Slaughter's critique, is between horizontal and vertical conceptions of worldview differences, or simply breadth and depth. [19] The key insight here is that the commonly conceived differences in worldview are like shifting between different discourses, and/or perspectives, at only one level: that is, within one worldview. The common worldview differences become only the breadth of a single worldview. A depth of worldviews involves recognising qualitatively different levels of reality, or distinct phenomenological spaces, within which the breadth differences are reconceived.

A depth approach to worldviews reveals more dramatic differences than breadth approaches. Given this distinction, it is more accurate to identify a breadth in 'mind-sets' as different discourses and/or perspectives, and the depth of 'mind-sets' as layers of distinct worldviews. For example, the differences between how an economist and sociological commentator might view the consequences of a scenario's logic for those below the poverty line would be important. They

might both have, however, a common acceptance of the need to address the issue of people living below the poverty line, whereas someone from a different depth of worldview might regard the hardship of others as the 'Divine's will' – something they should not be moved to change.

The quality criteria involving diversity of worldviews would therefore need to account for the degrees of relevant depth of worldviews *and* breadth of discourses relevant to the scenarios.

The two quality criteria identified so far are by no means the only ones that apply to scenario methods. They are, however, two crucial deductions required to cover the theoretical territory behind the development of integral scenarios. To both further explore what including a 'depth' of worldviews in scenario methods might mean, and to position this approach within the historical development of scenario methods, an analysis of different scenario worldviews is covered next.

SCENARIO WORLDVIEWS

A depth conception of worldviews invites an immediate question about scenario methods themselves: how would different worldviews approach the development of scenarios? Are these differences useful? And what sort of worldviews are there in a depth approach in the first place?

One approach to conceiving different worldviews, and their relationship to foresight, has been recently proposed. Drawing on the insights provided by Jean Gebser's integral theory analysis of the 'structures of consciousness' Peter Hayward has identified eight different 'worldviews of foresight.'^[8] For each, Hayward outlines their developmental relationship to other worldviews, their conceptions of time, and the complexity and style of reasoning evidenced in their engagement with forward views. Of the eight, five seem to have some relevance to scenario methods to date. The exclusion of the first three Hayward identifies is based on a feature of the character of thinking required to perceive and use a scenario approach to engage with the forward view. It is only with the 'progressive foresight' worldview that a rational, often scientific approach to identifying consequences and alternative possibilities emerges. This recognition of alternatives appears central to the scenario conception and all its methods of development.

Worldview	Origin	Characteristics
Progressive Foresight	The Western Enlightenment	<ul style="list-style-type: none"> ▪ Consequence assessment based on scientific principles; ▪ Strategy based on the lessons of history; ▪ Positivistic, instrumentalist; and, ▪ Normative, utopian, and naïvely optimistic, believing in the inevitable 'progress' of humanity.
Political Foresight	Beginning around World War Two	<ul style="list-style-type: none"> ▪ Social structural and functional changes correlated with technical/scientific change; ▪ World-centric, or global outlook with strategic focus on national planning and action for the controlled management of economic progress, political/military power, and social stability; and, ▪ Recognition of dystopian futures lends more pragmatism to optimism in normative conceptions of progress through instrumental change.
Critical Foresight	Emerging over the past three decades	<ul style="list-style-type: none"> ▪ Questions, or dualistically opposes, the assumptions of scientifically based progress and control of the Political Foresight worldview; ▪ Replaces the forecasting and naïvely value neutral forward views with participatory action learning; ▪ Normative scenarios are used to justify alternative preferable futures, where progress is about recovery of meaning rather than technical change per-se; and, ▪ Strategy is based on critique and reformulation of social-political discourse to enable renewal and forward options based on meaning, inspiration and hope.
Consensus Foresight	Emerging over the past decade	<ul style="list-style-type: none"> ▪ Focus on relational connections, based on a search for, and championing of, commonalities between people, communities and nations; ▪ Strategy is based on what serves the collective good, both instrumental and meaning based, of humanity and its many different groups; and,

		<ul style="list-style-type: none"> Normative scenarios are used to empower collectives towards coordinated action for creating positive, not utopian, futures.
Integral Foresight	Emerging with the 21 st Century	<ul style="list-style-type: none"> An intensification of consciousness resulting in an awareness of, and impulse to balance, the previous constituent worldviews (including those preceding the one's outlined here); and, The use of this transparency of worldviews to facilitate their integration, and as a consequence, the emergence of new characteristics of competence – yet to be fully discovered.

Figure 1: Summary presentation of Hayward's worldviews of foresight.[9]

A key feature of the worldviews of foresight conception is its developmental nature. Here, development equates to increasing degrees of environmental complexity that are perceived, and therefore able to be actively engaged with, and thus evidences a corresponding degree of 'complexity competence' in thinking. While cast in western language, and using a western notion of development, Gebser's original research was cross-cultural.[4] It is likely, therefore, that while there are many other approaches to classifying worldviews, the deep structural approach taken by Gebser and Hayward will hold some value when approaching, and in particular comparing, many cultures' foresight efforts.

This developmental aspect is reinforced by the observation that with the emergence of each new worldview of foresight much is retained, while excess or limitation is often transcended by characteristics of the succeeding worldview. Thus in Figure 1 above, many of the features of, say, the 'progressive foresight worldview' have been incorporated within the 'political foresight worldview' unless explicitly countered, limited or altered by its new characteristics.

Given the quite distinct differences between how each worldview of foresight approaches the forward view, and hence any method used for engaging it, it is not surprising that there have been many developments in scenario methods over the past half-century. A lot of the diversity of scenario methods, however, can be seen as a breadth of difference within a particular worldview and thus is of a categorically lower degree of variation than those separated by the depth of worldview conceiving them. An application of the worldviews of foresight interpretative framework to the development of scenario methods is outlined in Figure 2.

Scenario Worldviews	Scenario Characteristics				
	Habermas' Interest	Content Focus	Signature Strength	Signature Weakness	Example
Progressive Foresight Scenarios	Technical	External trends and behaviours	Progress forecasting and prediction	Single point extrapolation with limited view of causality, excluding anything that can't be quantified	See S.P. Schnaars' "Megamistakes: Forecasting and the Myth of Rapid Technological Change" [16]
Political Foresight Scenarios	Technical	External systems and structures	Decision support within a systems based view of operating environment	Worldview assumptions such as those relating to power, and positivist progress and control are opaque	Both Michel Godet's "Creating Futures: Scenario Planning as a Strategic Management Tool" [5] and Peter Schwartz's "The Art of The Long View" [17]
Critical Foresight Scenarios	Emancipatory	Internal structures of meaning and power	Social discourse renewal	Becoming trapped in idealistic normative conceptions and failing to acknowledge practical empirical realities	Sohail Inayatullah's Casual Layered Analysis & scenario process [10]
Consensus Foresight	Pragmatic	Collective relations	Participatory action	Extreme relativism resulting in action	Jay Ogilvy's "Creating Better Futures" [15]

Scenarios			learning	paralysis, or nihilistic and/or narcissistic normative outcomes	
Integral Foresight Scenarios	Combined based on context and purpose	Based on context and purpose	Integration of, and easier access to, qualitative and quantitative complexity?	Forced abstraction?	See case studies below

Figure 2: Scenario method worldviews. [23]

A key insight emerging from this analysis of scenario methods is that each of the worldviews-based approaches to developing and applying scenarios holds some value: they are useful and appropriate given the complexity of the context – as it is, or to the extent of what is perceived. It is this insight which, according to Hayward's analysis, marks the emergence of the 'integral worldview' of foresight. The ability to recognise the signature strengths, or utility functions, of each of the worldviews outlined in Figure 2 above is a defining difference of the integral foresight worldview.

The upshot of a depth approach to worldviews, and the development of scenario methods, is that integral scenario approaches would add the following detail to the two quality criteria identified:

- Include the strengths and avoid the weaknesses of different scenario methods developed by the different worldviews; and,
- Only include the different worldview approaches that are relevant to the originating context and purpose of the scenarios.

The key utility functions of each worldviews' approaches to scenario methods and the two quality criteria of relevance and diversity are by no means the only ones available to the integral foresight worldview and worth considering for inclusion in a scenario process. They are, however, one summary of the development of scenarios that can situate the difference of an integral approach to scenarios.

AN INTEGRAL THEORY – KEN WILBER'S AQAL

The core competencies emerging with each worldview of scenarios and the quality criteria so far identified are, for this author, the minimum ingredients for any integral scenario approach. As Stephen Millett contends "the next generation of scenario tools should not only combine previous methods, but also actually blend them into a more comprehensive methodology." [14] Millett highlights the two requirements of any integral scenario methodology. First the inclusion of previous competencies, and second the transcendence, or jettisoning, of their limitations through an emergent reformulation of the method itself. This is a call to move to integral scenario methods. While Hayward's 'consensus foresight worldview' is the first likely to want to achieve these outcomes, it is the 'integral foresight worldview' that first evidences the integrative capacities required to achieve them.

One integral theory that can example this is Ken Wilber's AQAL meta-theory. While not the only integral theory, it is a useful one because it allows for the interfacing and classification of many other approaches from both integral and other worldviews. In addition, the introduction of AQAL to the futures discourse has already begun.[21] Accordingly, a summary of the key elements covered in the futures discourse to date are presented in Figure 3.

Element	Description
Quadrants	Four fundamental perspectives on any human occasion: individual-internal, individual-external,

	collective-internal, collective-external.
Levels	Levels, waves or worldviews of consciousness. Different developmental stages in the evolution of different streams of activity and/or competence.
Lines	Focus on one line or stream of activity and/or competence that identifies its developmental levels – development being assessed by increasing integrative capacity.
States	Different states of consciousness, commonly waking, dreaming, sleeping, and including things such as highly imaginative states, non-ordinary states, and peak experiences of different stages of consciousness.
Types	Different types of emphasis, like masculine and feminine, personality types, and other variations within a line and level of subject focus.
Principle of Practice 1: Non-Exclusion	To consciously remain open to the inclusion of relevant differences in worldview, and other relevant aspects of any given subject of study.
Principle of Practice 2: Unfoldment	To appreciate and identify the developmental sequences involved in the evolution of aspects of the subject of focus.
Principle of Practice 3: Enactment	To understand and appropriately investigate the nature of all knowledge as contextually bound and co-created by the act of human engagement.
Principle of Practice 4: Uncomfort	Uncomfort in achieving higher order integrations is unavoidable. The aim is to eliminate unnecessary discomfort, distortions and inconsistencies, and also reduce as far as possible, any that seem unavoidable.
Integral Methodological Pluralism (IMP)	IMP represents an approach to using the AQAL meta-theory to provide rigour to the selection of appropriate discipline based methods of enquiry and activity given the subject of focus.

Figure 3: Elements of an Integral Operating System, or AQAL meta-theory in a praxis framework.[24]

The integral foresight worldview offers several developmental advantages over previous worldviews of foresight, and thus approaches to developing scenario methods. AQAL explicitly makes room for the diversity of the depth of worldviews identified by Hayward through the inclusion of levels. The integral worldview can claim this because it is itself the emergent outgrowth of the preceding successes of each worldview, and it is, quite distinctly, conscious of this observation. It accommodates the breadth of discourses through a summary of lines of development.

The breadth of perspectives is incorporated via the four fundamental perspectives on any occasion, the quadrants. The principles of practice (POP) guide the assessment of relevance of a scenario method by drawing on the required transparency of ideological interests and content focuses that an AQAL approach prompts, described as 'integral methodological pluralism.' [33] Finally, the empirical developmental grounding of transcendence and inclusion, with modification through critique, provides the guiding logic for the healthy and balanced integration of each previous worldview of foresight and scenarios competencies.

In short, the integral worldview holds the promise, with approaches such as AQAL meta-theory, to transcend more of the limitations and also include more of the benefits of previous approaches to scenarios than any preceding worldview of foresight.

AQAL AND A GENERIC SCENARIO METHOD

So theoretically at least, AQAL appears to live up to the demands of a whole new foresight worldview and approach to scenario method development. The question becomes next, how would this be realised in practice? To be fair, it is yet to be seen on any significant scale. But case studies from integrally informed futurists in Australia are emerging. What is needed then is a framework for reviewing them. Acknowledging that there are as many scenario methods as there are practitioners, and that an integral scenario method has never been formally proposed before, it

would seem prudent to review the possible integral scenario methods at a level of general principles, or generic stages.[28]

Building on Slaughter's "Integral cycle of FS knowledge creation," his initial applied analysis of AQAL to the scenario development process, and incorporating references to the POP outlined above, a generic scenario development process is outlined in Figure 4. [20]

<p><i>Internal Individual</i></p> <p>Step 2: Analysis POP: Unfoldment <i>Action:</i> Analyse the data to determine driving forces, their casual chains, critical uncertainties etc and the scenario type to best accommodate the requirements and inputs of the scenarios.</p>	<p><i>External Individual</i></p> <p>Step 1: Input POP: Non-exclusion <i>Action:</i> Use appropriate methodologies to gather information from, and about, the contextual environments relevant to the focus of the scenarios.</p>
<p>Step 3: Interpretations POP: Enactment <i>Action:</i> Investigate different interpretations and relationships between the key variables within each scenario developing the most significant internally consistent descriptions/stories.</p> <p><i>Internal Collective</i></p>	<p>Step 4: Applications POP: Uncomfort <i>Action:</i> Communicate scenarios and their implications to relevant parties for application, eg informing strategy development, monitoring signposts and so on. The relevance of scenarios for concerned parties is assessed.</p> <p><i>External Collective</i></p>

Figure 4: A generic scenario method.[22]

INTEGRAL SCENARIOS CASE STUDIES

The following case studies present the general context of the scenarios process, describe the method used, highlight the generic stage at which a particular AQAL element or combination thereof was used, and identify the benefits and lessons learned. The case studies are organised according to the AQAL element included: levels, lines, states, types and comprehensive.

LEVELS

In 2004 a whole-of-organisation scenarios project was conducted for Land and Water Australia, a key government funding body.[7] Following a more traditional interview and situational analysis input stage, an integral analysis revealed two core dimensions of tension within the organisation and its stakeholders. One of the drivers reflected a difference between two levels of worldviews, similar to the difference between the political and consensus foresight worldviews. The second driver was a discourse difference that covered both of the worldview levels. The discourse was polarised between two main competing positions. Combined in a two-driver scenario construction, the resulting four scenarios were a rich reflection space that surfaced the key aspects of the strategic conversation as it was already experienced in a competitive frame within the organisation. It has contributed significantly to a 'self' understanding of the different perspectives within the organisation, and the common differences in those of their stakeholders.

LINES

In a 2005 social-environment scenario project for a major financial services company in Australia, a lines analysis was applied. Key trends and events in other markets in other countries, and in Australian sub-sectors relevant to product positioning, were identified and cast as wildcard 'trend points,' noting that quantifying sequential trend changes would require substantially more research

than time allowed. The trend points were then analysed from the perspective of 'value-line based markets.' Using Spiral Dynamics [6], a values base worldview development scheme summarised from the work of Clare W Graves [35], the trend points were interpreted from three or four values based worldviews resulting in a spectrum of likely customer responses. The trend points resulting in the most uncertain and high impact consequences for the company were investigated in a range of highly circumscribed scenarios. The results led to a substantial revision of the company's strategic visioning process that was underway, and has been earmarked for further application in the market analysis and product strategy development processes in the coming years.

STATES

The simple approach of surfacing alternative visions to frame a strategic conversation was adopted for a daylong strategy workshop at the National Centre for Sustainability in Australia.[36] A 'deep visioning approach,' which uses processes for encouraging changes of states in consciousness was applied.[25] The various visions for the centre were converged through discussion to identify coherent scenario logics that would combine and reduce the number of visions. Backcasting from these scenarios a range of strategy alternatives were identified. The process surfaced visions that surprised most of the participants, and was the grounds for a rich and continuing strategic dialogue. The state shift was a sufficiently different experience for most of the participants in that it underpinned the removal of covert contention in the strategy formulation process by creating a common new-experience basis from where the differences and similarities in vision could be more openly explored.

QUADRANTS

A 2004 scenario process conducted for the Victorian State Government Environmental Protection Agency on The Future of Alternative Transport Fuels and Technologies, covertly used a quadrants approach.[37] An expanded and redefined STEEP framework was applied to guide the research, analysis and trend identification process steps. The change to STEEP was made to explicitly incorporate both the qualitative (psychological and cultural) and quantitative (behavioural and systemic) quadrants. As a result, the integrally informed team were able to highlight the contrast between the high impact uncertainties of a cultural and systemic trend/issue. The contrast was between a values shift and degree of oil price volatility. The resulting scenarios were successfully used to generate a range of quite distinct policy options for the government, which accommodated both physical systemic changes and likely cultural responses. The scenarios presented a scope of integration and depth of complexity that had not previously been understood by the policy makers and was shown to be relevant to the topic in focus.

COMPREHENSIVE

A more detailed application of the AQAL framework has been in operation over the past couple of years at the Swinburne University's Foresight Planning and Review (FPR) unit, in Melbourne Australia.[3] FPR have implemented Voros' AQAL environmental scanning framework as an input method.[29] Managed primarily by one person it has been attributed to an increased quality, in terms of relevance, breadth, and depth, and in identifying more weak signals than previous approaches. The results allow for a greater requisite variety of inputs into the unit's other activities, such as tailored business unit/faculty scenarios used for strategic planning. It has also been of significance in identifying external clients and being able to offer a differentiated and uniquely high quality product with little additional effort.

FUTURE POSSIBILITIES

While the proceeding case studies were informed by, and occasionally explicitly used AQAL, they may not be seen as representing a qualified renewal of the scenarios method beyond the variation that already exists in practice. The value of these approaches seems, at a minimum, to be in the solid theoretical grounding that made the scenarios process more efficient, deeply congruent to the context and thus relevant, and allowed a structured approach to incorporating as much difference as useful. On reflection, the two most significant features from these diverse approaches appear to be:

1. Worldview frameworks are powerful interpretation schemes that allow for clear differentiation of scenarios and/or the interpretations of consequences by various actors within a scenario that can result in clear, accessible descriptions that are rich spaces for strategy development and assessment; and
2. Structured prompts for the integration of both qualitative and quantitative perspectives within a scenarios development process results in more divergent scenarios and more congruence with real-life dynamics within a particular scenario.

Beyond these case studies there are several other approaches to integral scenarios that have been explored in theory, but not yet in practice. They are long term or macrohistorical integral scenarios and a three dimensional or diamond scenario development space.

LONG TERM / MACROHISTORICAL

Long-term AQAL scenarios are about using the deep structural elements of AQAL theory to guide the identification and analysis of the emergent, innovation and regressive potentials of human activities. The key value of this approach is the sturdiness of the long-term reach possible with AQAL meta-theory. This does not mean that all surface changes will be understood or even potentially envisaged. Rather, it is about highlighting the deep structural dynamics and potentials that human futures are most likely to be subject to. Long-term AQAL scenarios are arguably the main strength of an integral approach to scenarios, when it is understood as a theory of macrohistory.

Andrew Wynberg, in providing an integral review of macrohistories, notes that macrohistory informs all steps in the generic foresight and scenarios process, but is most notably a third step interpretation method.[34] Spanning but not belonging to either the theory or method side of futures studies, Wynberg observes that macrohistory is most useful as a depth technology that can serve to critique and inform new worldview conceptions of what is and what might be. Due to a range of factors, Wynberg, following Sohail Inayatullah, situates macrohistory approaches to creating forward views as more plausible than most other approaches currently used in futures studies.[11] This observation lends an AQAL integral approach to scenarios considerable validity. This is because AQAL meta-theory is essentially a developmental macrohistory of humanity – one covering everything from the origins of life right through to its highest, open-ended, spiritual potentials. Based on extensive cross-cultural research, it is also arguably the most comprehensive macrohistory theory available to date.[31]

AQAL 3D SCENARIOS

The closest correlation to the AQAL 3D scenario space is the Harman scenario fan.[38] The key difference is twofold. First, this approach adds a depth perspective to the breadth of scenarios. Second, the scenario selection is based on the deep structural developmental analysis provided by AQAL, and is hence more likely to generate plausible scenarios. The four key aspects of the AQAL 3D, or diamond shaped, scenario development space are:

1. Quadrants framing the breadth uncertainties;
2. Levels framing the height or depth uncertainties;
3. Lines and possibly levels measuring out the length of the diamond; and,
4. Normative conceptions framing the end point of the diamond.

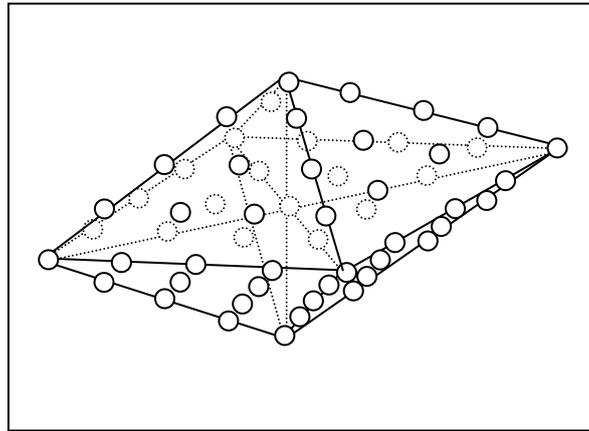


Figure 5: An example AQAL 3D scenario diamond.

The diamond scenario development space, depicted in Figure 5 above, would be a natural accommodation of the deep structural developmental variation implied by a macrohistorical application of AQAL.

There are likely numerous ways to construct the 3D scenario diamond. Importantly, the approach also lends itself equally to simple, rapid scenario generation, as well as to extremely detailed efforts. While the method may be valuably used as a once off, its greatest value arguably lays in the continual updating and monitoring of its scenarios.

One approach to constructing the diamond of scenarios is to identify the relevant high impact uncertainties in each quadrant, at several levels of worldview (or using a similar, relevant levels technology), with detail for key lines, and where of value, incorporating other elements as well. This broad collection of possible drivers, instead of being whittled down to the possibly most significant, can then be used to generate the breadth, depth and length of the diamond. Grouping the left-hand and right-hand quadrants and lines, correlated against a common levels analysis, they are split by significance and probability, with the more likely and most immediate change eventualities becoming the first circumference of scenarios around the notionally normative centre line.

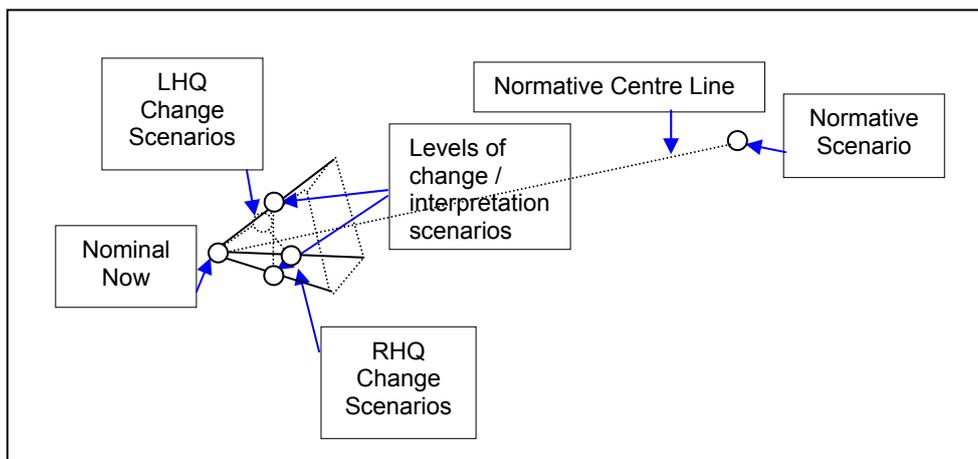


Figure 6: Using AQAL to shape the scenario generation process.

Further iterations of change form the next and expanded range of scenario possibilities. Each new iteration can also be used to map out lines and or levels changes. Here the normative centre line at the one level of the diamond may involve probable levels changes. This allows especially for longer-term scenario conceptions to incorporate realistic levels changes into the normative conception. For most uses however, the normative level of the diamond is more likely to valuably

reflect incremental, or surface lines changes. The Diamond may also be conceived as on only two dimensional, with the third dimension, depth of level interpretations built into each scenario at the same level of the diamond depiction.

The degree of time being considered in the total diamond scenario space, might ideally reach half way at the widest point of the diamond, with the remaining time space used for plotting similar developmental scenario eventualities that can guide the direction towards a nominally normative scenario. It would be prudent when using this method to map a strategic decision space to reformulate the scenario diamond at or before the mid point is reached in actuality.

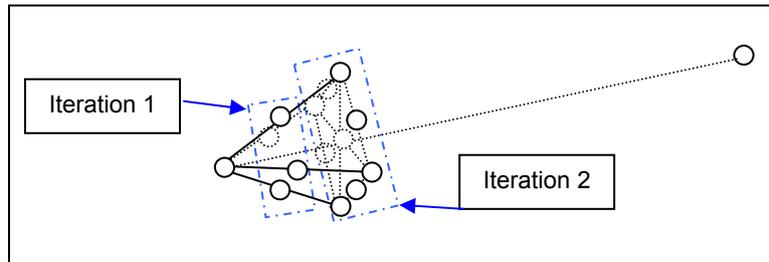


Figure 7: Iterations in the 3D diamond scenario space.

Each scenario in this approach then comes to represent a key developmental change of relevance to the subject of focus. It may be a simple abstract statement, or a detailed exploration of what that change, taken as the leading change of significance, may imply for a full AQAL conception of the scenario's logic.

The idea behind the 3D scenario space is not that any of the scenarios in themselves will actually occur (although you never know), but instead that an organisation may plot its position relative to influences of the abstracted significant change points. It is more likely that a feature of one of the scenarios will indicate, like a lighthouse, that the operating environment has shifted towards that particular developmental change based scenario. In effect, it will be like navigating an organisation through the spaces within the scenario diamond, with several possible pathways available at any one point in time, depending on the desired route towards the nominally normative scenario. Used in this manner, a 3D scenario space may be able to stay relevant for decades at a time, and indeed, may well be applied in a macrohistorical sense for long term futures, be they underpinning the strategy of nations, imaginations of science fiction writers, or the big picture, long-now curiosity common to futurists.

Beyond these creative suggestions of macrohistorical and 3D diamond scenarios, it seems that integral theories such as AQAL hold significant scope for further novel applications and, importantly, evolutions in the core scenario generation method.

CONCLUSION

While the exploration and development of integral scenarios is only just beginning, it seems likely they will be able to make a significant contribution to the practice of scenarios. While there are many other integral level theories than AQAL, and likely many different paths to an integral approach than the one outlined in this paper, the synthesis of both qualitative and quantitative dimensions of any human situation, and a simplified access to engaging complex environmental dynamics, might be the distinguishing features common to all integral scenario processes. It is hoped that other futurists will explore the possibilities of integral scenarios and develop the approach to understanding them and applying them beyond any limitations in historical positioning and explorative practice evidenced in this initial, creative effort.

ACKNOWLEDGEMENTS

This paper has been significantly enhanced by the contributions of two highly experienced and generous individuals working with AQAL theory in their professional practices: Dr Richard D Hames, Founder and President of the Hames Group, and Allen J Stewart, Director, Emergent Insights Consultancy. In addition, thanks goes to Australian integral futures practitioners who have contributed either directly or indirectly through their work and their discussions with the author about integral scenarios and integral futures practice in general.

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