

Roads Less Travelled: Different Methods, Different Futures

Andrew Curry
The Futures Company
United Kingdom

Wendy Schultz
Infinite Futures
United Kingdom

Abstract

This exploratory project emerged from the question, "do different scenario building methods generate distinctively different outputs?" Using base data from a completed scenario project, the authors and volunteer participants re-processed the raw and filtered drivers and interview data through four different scenario building methods: the 2x2 matrix approach; causal layered analysis; the Manoa approach; and the scenario archetypes approach. We retained the issue question from the original project ("what are possible futures for civil society?") as our focus. This exploratory comparison confirmed that different scenario generation methods yield not only different narratives and insights, but qualitatively different participant experiences.

Keywords: scenarios, scenario building, scenario planning, futures methods, foresight

Introduction

Proponents of different scenarios methods often make claims for the value and the benefits of their preferred approach. This can be a sterile debate, influenced more by practice and routines than by research. There is little in the literature which attempts to evaluate the different types of futures insight which emerge when different scenarios methods are used, the way in which choice of method might influence the types of conversations which are enabled by different scenarios processes, or the benefits and risks in using one approach over another.

This paper seeks to address this gap by using a set of drivers from a specific project, which is in the public domain, as a platform for evaluating different scenarios outcomes based on different sce-

nario-building methods. We test four methods, representing a range of different approaches: the 2X2 deductive approach, causal layered analysis, the Manoa method, and scenario archetypes.

The main goal of this project was to explore scenario methods from a practitioner's perspective in order to draw comparative conclusions about outcomes.

The set of drivers used as a platform for the research was developed for the Carnegie UK Trust's project on the future of civil society in Britain and Ireland, which is published as 'The Shape of Civil Society To Come' (Carnegie UK, 2007a).

What Are Scenarios?

A basic tenet of futures studies is that images of the future inform the decisions people make and how they act. The notion that human purpose can affect the course of events to create futures that are significant transformations of the present underlies all of futures research. Academic pursuits related to this assumption include identifying existing and historical images of the future within a society and analysing their structures and content (Polak, 1961). The action research equivalent is creating images of alternative futures to provide an intellectual fulcrum from which to critique the present and present-day operating assumptions.

The term "scenarios", now in common use, has come to denote stories or narratives of alternative possible futures. Herman Kahn (Kahn & Wiener, 1967) provided perhaps the earliest formal definition of scenarios as a term of futures art, "...a hypothetical sequence of events constructed for the purpose of focusing attention on causal events and decision points." More recently, van Notten, Rotmans, van Asselt, and Rothman (2003) offer the more encompassing definition of scenarios as "...descriptions of possible futures that reflect different perspectives on the past, present, and future." Bishop, Hines, and Collins (2007) note that while a more precise definition of scenario would focus solely on alternative futures depicted as stories, that is, descriptions with a narrative structure, the broader definition has prevailed in practice: scenarios describe alternative futures, no matter how they are communicated (ie, as stories, as vivid images, as physical artifacts, as theatrical improvisation, as systems modelling output).

Furthermore, the field as a whole agrees that these depictions are not predictions: while based on probabilistic forecasts, their primary purpose is to guide exploration of possible future states. Their goal is to "disturb the present," in Gaston Berger's words (1967). The best scenarios do so by describing alternative future outcomes that diverge significantly from the present. Often they diverge due to the transformation of deep structures, whether long-established political or economic paradigms, or long-held beliefs about the nature of humanity and our relationship to ourselves, our bodies, the environment, or God (s or goddesses). Thus the notions of difference and depth underpin our curiosity about how distinctive the output might be from our chosen scenario methods.

In addition to degrees of difference and depth in creating multiple future worlds, we are also interested in two other dimensions of scenario building: first, do these methods assist in creating a clear narrative of how each scenario emerged? As men-

tioned above, Kahn conceptualised scenarios as encompassing the "chain of events" and "decision points" that unfold to create any given alternative future. Michaels (1987) suggested that "shared thoughts about the future ought to be accompanied by an explicit theory about the processes of social change sufficiently detailed so that the futures described can be derived from it." Dennis List (2004) has also proposed that more robust scenarios offer not merely simple "chain" paths explaining how a divergent future arises from present conditions, but "network" scenarios, arising from a variety of precursors to any one event. His critique of existing scenario output is that too much of it consists of "snapshot" scenarios, which merely describe the future conditions without explaining how they evolved. So how well does each method help create the story of how the futures developed?

Second, how participatory is the process, and what is the quality of engagement? To some extent, any scenario method can be completed as a desk-top research exercise. But creating scenario processes that effectively create change means creating participatory processes: scenarios create new behaviour only insofar as they create new patterns of thinking across a significant population within an organisation. So how engaging is each method, and what kind of thinking, conversation, and energy does each method produce in participants?

Key Related Literature

In the last ten years, articles and books on scenario thinking and scenario planning have proliferated in the foresight literature. The great majority have focussed on presenting one particular approach, eg, *Scenarios: The art of strategic conversation* (van der Heijden, 1996) or *The Causal Layered Analysis (CLA) Reader* (Inayatullah, 2004). For purposes of this research exercise, we are more interested in comparative work. Gill Ringland (1998) provided one of the most complete early comparisons of multiple approaches to scenario building in her book *Scenario Planning*, offering process overviews and case studies of expert scenarios, morphological approaches, cross-impact and trend analysis approaches, intuitive logics approaches, and others. While useful in clarifying the distinguishing characteristics of each approach and its results when applied in a particular case, Ringland's work lacks cross-method analysis. The Millennium Project compiled a CD of foresight methods, *Futures Research Methodology* (Glenn & Gordon, 2003), that provides over two dozen foresight methods, all of which contribute to scenario building and over half of which are dedicated scenario generation tools, from the quantitative (statistical modelling) to the post-structural participatory (causal layered analysis). This compilation is unique because the editors invited the originators of each method to write the essay describing and explaining its use. But it also fails to offer an integrated, cross-technique comparison.

Two recent articles offered more integrated perspectives in comparing a variety of scenario approaches. The first, by van Notten, Rotmans, van Asselt, and Rothman (2003), focussed on categorising scenarios as content, creating a typology of three "themes"—why?—the project goal; how?—the process design; and what?—the scenario content. Within that schema they defined 14 specific characteristics to classify scenario output. While this did address method, it focused much more on content. van

Notten et al. acknowledged that the project goal affects the process design, which then affects the content, which in turn affects—or transforms—the project goal. But the specific categories they chose to characterise process design—nature of the data, method of data collection, nature of the resources, and nature of the institutional conditions only touched upon the actual differences in method in which we were most interested.

Bishop, Hines, and Collins (2007) inventoried 23 different techniques that contribute to scenario building, organising them into eight categories: judgment, baseline, elaboration of fixed scenarios, event sequences, backcasting, dimensions of uncertainty, cross-impact analysis, and systems modelling. They compared the starting points, process, and products of the methods in each category, as well as their basic attributes, and offered a brief cross-category assessment of the advantages and disadvantages of the 23 methods they had identified. But the very breadth of their inventory militated against detailed comparisons of any one method against another, as each method was summarised rather abstractly: case studies were cited, but not described.

Despite the excellent work represented by these samples from the literature, we felt that unexamined territory still existed where specific processes met practice. In particular, valuable insights might be gleaned not from case studies of multiple methods applied to multiple data-sets and focus questions (as useful as those are), but from applying multiple methods to one data-set in search of insights regarding one particular question. This approach we felt would produce the starkest and most informative comparison of several scenario methods.

Introduction to the Carnegie Work and A Summary of the Drivers Data

The data for this research project, including the drivers of change and the stakeholder interviews, have been taken from a futures project carried out for the Carnegie UK Trust's Democracy and Civil Society Programme, on the future of civil society in Britain and Ireland to 2025. Carnegie is a non-profit organisation, and the work was designed to inform a Commission of Inquiry which it funded in 2007.

A number of reasons suggested this project as the platform for our comparative scenarios methods research. The main one was that the output of the drivers analysis phase of the project has been published in a reasonably substantial report, *The Shape of Civil Society To Come* (Carnegie UK, 2007a) which is now available online. We thought it valuable that others could go back and check our findings for themselves against this original material.

There were other reasons as well. Both authors of this article were centrally involved in the project; unpublished background material was available to us (which turned out to be important for at least one of the scenarios methods, as we will discover later); and the client was sympathetic to such a use of the material.

In addition, we were also attracted by the fact that civil society is a domain which all but the most sociopathic have some experience of, as members or participants or volunteers. And while in all domains there is clearly professional knowledge and professional expertise, and civil society is no exception, there is little specific technical knowledge that needs to be mastered before an understanding of futures in the sector

can be gained. This seemed to us to be a valuable attribute in the context of a small research project, and one designed for a broad futures audience, such as this.

Dimensions of Civil Society

The notion of civil society is a broad one. To create a focus for the project, the Carnegie UK Trust used a tri-partite definition of civil society drawn from the work of Michael Edwards (2004 & 2005), who was an international adviser to the Commission of Inquiry. This posits that civil society operates at three levels. The first is 'civil society as associational life', defined as the 'space' of organised activity not undertaken by either the government or for-private-profit business. This covers much of the sector, from choirs to sports clubs to churches. The second is 'civil society as the good life', a normative position about the type of society we want to live in. The third is 'civil society as an arena for deliberation', the public space in which societal differences, social problems, public policy, government action and matters of community and cultural identity are developed and debated. Space doesn't permit elaboration here, but further discussion can be found in the report, online at Infed (2005), and in Edwards' (2004) book *Civil Society*.

It is worth noting that while it is often assumed that civil society is a good thing, this is not necessarily true. Civil society associations can help strengthen democracy, and they can also undermine human rights and preach intolerance and violence. The Carnegie project had a normative intent, in that it was interested in civil society and its associations "as a means through which values and outcomes such as non-violence, non-discrimination, democracy, mutuality and social justice are nurtured and achieved; and as a means through which public policy dilemmas are resolved in ways that are just, effective and democratic" (Carnegie UK, 2007a).

'Britain and Ireland'

If 'civil society' has its complexities, so too does the notion of 'Britain and Ireland'. That Carnegie's work covers both is a legacy of when it was set up, before Ireland gained its independence. But even the notion of 'Britain' is problematic in such a context. The Republic of Ireland has been independent of the United Kingdom for 80 years, but shares much history and a language. Wales and Northern Ireland both have their own assemblies, with some budget-setting and law-making powers; they remain linguistically and culturally distinctive, despite hundreds of years of rule from London. Scotland meanwhile, because of the particular circumstances of its Union with England three hundred years ago, retains its own legal, education, and banking system, to which it has in the last decade added a Parliament and a Government, albeit with limited powers. Futurists should own their perspectives, and for the purposes of disclosure Wendy Schultz is an American who has lived in England for 15 years, while Andrew Curry is English, albeit from a border region and partly educated in Scotland.

From a comparative research perspective, such cultural diversity was of interest to us; enough richness to make interpretation an issue, without being so broad geographically that blandness was the outcome.

The research process which generated the original drivers will be familiar to most futures practitioners (Carnegie UK, 2007a). There were structured interviews with a range of civil society professionals and observers, across all of the jurisdictions; an initial drivers assessment workshop with members of the Commission, who represented a reasonable cross-section by age, gender, and ethnic and cultural identity; followed by drivers' prioritisation workshops in each of England, Scotland, Wales, Northern Ireland and the Republic of Ireland; and finally further analysis of the relationships between the prioritised drivers through a matrix process to identify both context-setting drivers and uncertain ones. In addition, the uncertain drivers were clustered on the basis of their stronger connections with each other.

For clarity it should be noted that in the original project we went on to use causal layered analysis in large group workshops to develop a set of scenarios for the future of civil society (Carnegie UK, 2007b). For the present research we chose to discount that output so that the approach to using all of the methods was broadly comparable in terms of group size and membership, and time available.

Research Design

The research was designed as an exploration to establish whether different scenario development methods produced different scenarios, and/or different types of futures or strategic conversation, and therefore had the capability of generating different types of insight into a question.

To recap, the methods we selected for this pilot were the 2x2 'double uncertainty' method, causal layered analysis, Manoa, and futures archetypes. We also did initial preparation for a set of morphological scenarios (also known as FAR, or 'field anomaly relaxation'), and established that we had the necessary base data, but it did not prove possible to complete the analysis in the time available, which is perhaps a finding in itself (we hope to complete a follow-up study using morphological analysis at a later date).

The choice of these methods was not unproblematic. The 'double uncertainty' method chose itself, in effect, because of its dominance in the northern hemisphere and because of its prevalence in the world of business-oriented futures. Causal layered analysis was identified as a more integrative approach, located within critical futures studies, which at least in part was developed as a critique of the limitations of the 'double uncertainty' approach. It was also of interest to us because much of its development as a futures technique has been in Australia and Asia, and it has been relatively little used in the north. We were interested in testing whether its claims to produce a different type of scenario, and a different type of futures conversation, were substantiable.

The Manoa method was initially developed by Wendy Schultz at the Hawai'i Research Center for Futures Studies for use in a project with the Office of State Planning, in a subsequent project with the Hawai'i Community Services Council (Schultz, 1994), and in a wide variety of graduate foresight seminars, conferences, and workshops since (eg, Schultz, 2005 & 2006). Although little known, it was selected because of its emphasis on 'maximising difference' through a focus on emerging issues rather than on drivers of change. As a method, this separated it out from the others.

Finally, the fourth method, futures archetypes, was chosen out of curiosity. The authors had used it successfully in a recent client project, yet there is widespread scepticism in the futures community of the value of using archetypes as a frame for scenario development. This is despite its role as a foundation of valuable futures techniques such as incasting, and – if an important function of scenarios is to challenge present thinking – there is, on the face of it, no reason why archetypes should not do this as effectively as other techniques. Obviously there are other methods, apart from FAR, which have been left out; for example, we would not have had the experience or technical expertise to use 'prospective' methods. However, we consider that the four methods chosen represent a cross-section. To the extent that all futures work can be thought of as a combination of making the future strange and making it manageable, each of the four methods appeared to us to represent a different mix of these aspirations.

The research design for this pathfinding piece of research, then, was broadly straightforward. Using material from the drivers research from a project for Carnegie UK Trust, which is explained in more detail below, we ran a pair of workshops at The Futures Company. Participants included Futures Company colleagues and some external guests.

With the exception of Wendy Schultz and Andrew Curry, those attending had not been involved in the original project for Carnegie. During each of the workshops, we explored two methods; initially the 2x2 double uncertainty method, followed by Manoa, followed in the second workshop by causal layered analysis and futures archetypes.

The scenario development was done relatively quickly, over the course of the two workshops. The background material, including the Carnegie drivers' report and summaries of the interviews, was sent to participants beforehand. Some managed to attend both workshops, some just one.

It is possible that both the speed of the overall process, and the relatively constrained time for the workshops, has influenced the outcomes. Looking at the output from each scenarios method, it does not appear that such issues have had a material effect on the outcomes. The sequencing of the techniques may have had some effect, although the most significant impact appears to have been that the time available for Manoa and archetypes was squeezed because they had to follow discussion of the other two methods.

Obviously with more time, and more resources, it would be possible to improve on the design. However, reviewing the output against the research question, it would appear that for this exploratory project, the design was fit for present purposes.

It should also be noted that the emphasis of the work has been on understanding the relationship between the drivers, and the initial research, and the scenarios which evolve from this through the application of different scenarios methods. Clearly in terms of a credible and robust futures project, this would represent only the first half of the work; after the scenarios, one would expect to move on to understanding the implications, making choices about preferred courses of action, then implementing them (Curry, 2007; Schultz, 1997).

For the purpose of the present project, this was out of our scope, although it may have implications for future development of research in the area of comparative methods.

Applying Four Scenario Generation Methods to Carnegie UK Data

The following paragraphs describe the basic research activities and output. We report each method—2x2 matrix; causal layered analysis; Manoa; and scenario archetypes—in turn. Each report offers a brief description of the method's origin, a summary of the instructions, and a precis of the resulting scenarios.

Method 1: 2x2 matrix 'double uncertainty'

The 2x2 scenarios matrix method, also known as the 'double uncertainty' method, is probably the most widely used scenarios development technique in the United States, the United Kingdom, and Western Europe. In their paper, "The current state of scenario development: an overview of techniques", Peter Bishop, Andy Hines, and Terry Collins (2007) quote Millett (2003, p.18) in calling it the "gold standard of corporate scenario generation".

The model is, at least on the face of it, a simple one. Through analysis of "driving forces", one is able to identify "critical uncertainties" which frame a futures landscape. Through exploring the outcomes when each of the uncertainties combine, scenarios are developed.

Why has it become such a dominant method? It has some advantages. The method appears to need less interpretation by a skilled facilitator; there can be a clear 'audit trail' constructed from the drivers to the axes of uncertainty, and thence to the scenarios. The sense that the four scenarios represent an overall futures space can also be comforting, if not entirely true. In addition, the method has been well-promoted. The single best-known scenarios book in print, Peter Schwartz's *The Art of the Long View* (1991), is based on this method, and it is well-represented in Gill Ringland's *Scenario Planning* textbook (1998).

But it also has its critics. The best known, Richard Slaughter (2004), follows Ken Wilber in describing the approach as creating what he calls "flatland"; a set of future worlds in which "current ideologies ... were insufficiently problematized and seen as natural".

The 2x2 matrix 'double uncertainty' scenarios

The core of the 2x2 double uncertainty method is that the two axes represent the most significant uncertainties of the overall system under scrutiny (the system is defined by the project question). The scenarios are then created by combining uncertainties. There are further criteria in developing the axes: the axes should not influence each other; and they should represent the most important and uncertain drivers, which will have been identified in the analysis process. In addition, the scenarios created by the combination of the axes should generate challenging strategic questions for the organisation, sector, or domain.

For the purpose of this research, we asked two colleagues who had not been involved in the original research, but who had been involved in other futures projects, to develop axes from the Carnegie drivers impact matrix (part of the project resource).

Their axes were tested and further refined in the working session. They were, respectively, about the relationships between individuals and institutions ("top down" vs "bottom up"), and the nature of identity and social cohesion ("my identity" vs "our identity"). This is summarised in Figure 1. The scenarios which emerged were as follows:

A: (top left): A fragile state which 'others' outsiders and (sometimes) minorities to maintain its position, in which civil society is tolerated if it is seen to further national goals (there is much emphasis on the importance of 'associational life', but little on the other dimensions of civil society). Legitimacy is maintained by frequent referenda; minorities and dissidents are marginalised, or worse.

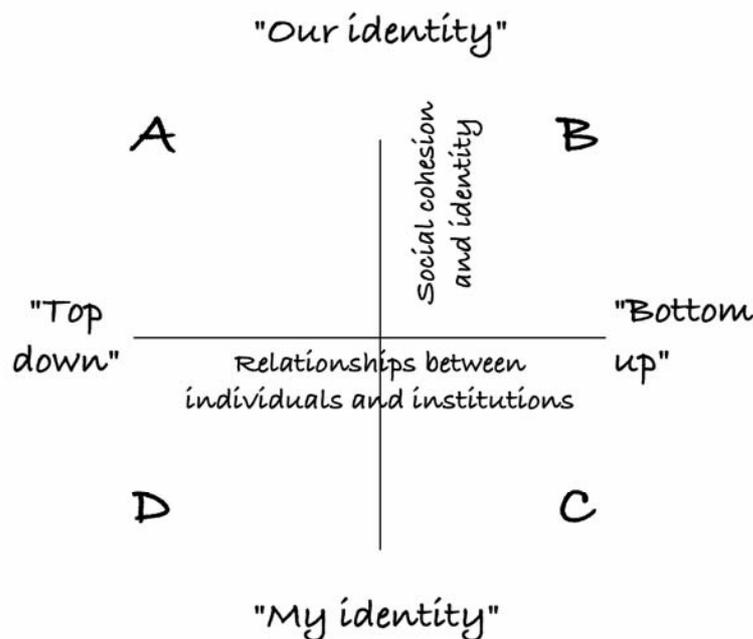


Figure 1. 2x2 matrix resulting scenario logic

B: (top right): social networks create social momentum around popular issues, if these are sometime inconsistent. Companies embrace volunteering and social engagement because it enhances their recruitment and reputation. Everything is negotiated, sometimes slowly, and there are very strong public spaces. There are national stories, which are told and retold; some are subverted. But there are strong spatial disparities.

C: (bottom right): A coffee house culture, with a weak centre, in which civil society acts as a bridge between different ethnic and cultural groups. There is much negotiation between different groups, and coalition building. Identity extends beyond place to extended cultural communities: diasporas are influential. People can stretch

between identities; the losers are those who are strongly attached to one identity and find it hard to connect beyond this.

D: (bottom left): There is a strong sense of national identity but it is negotiated between the state and different ethnic and religious groups – to the point of being formally constructed within public institutions and organisations. Civil society organisations act as forums and as a way to articulate identity to the state. There are penalties for disengagement, and the boundaries of those who are included, and those who are not, can shift over time – those who feel excluded can tend towards violence.

Method 2: Causal layered analysis

Causal layered analysis (CLA) was developed by the futurist Sohail Inayatullah (2004) as a way of integrating different futures perspectives – the empirical, the interpretive, and the critical – within one approach. The purpose of so doing is to ensure that "the research and discovery process is open to different ways of knowing" (Inayatullah, 2003). CLA translates these different ways of knowing into four layers: "litany" (the way in which trends and issues are presented in the public domain); "systems" (causal and institutional-based understanding); "worldview"; and "metaphor".

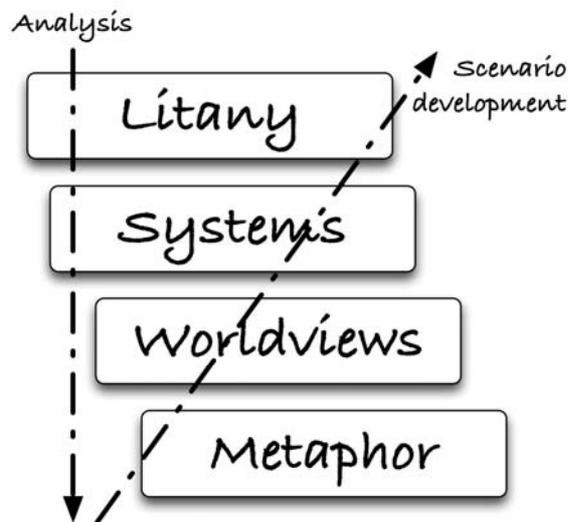


Figure 2. Causal layered analysis process schematic

The layers represent different ways of perceiving the world, and arguably different timeframes, but Inayatullah (2004) takes care to say that no layer is privileged, and that the perspectives on the future emerge from interaction between the layers. In doing so, one of the objectives is to create 'distance' from the present. In practice, the method is not yet widely known, certainly outside of the southern hemisphere. Although there is a developing literature, it has not been explored as much as the "double uncertainty" method.

The scenarios are developed in two stages. An analysis phase works through the layers to worldview and metaphor, then these are 'inflected', and the scenario is developed by reinterpreting the layers through the lens of the inflection. Using the CLA approach requires some preparation, typically in understanding of shared images of the present and of the future, and of both possible drivers of change and of emerging issues, as well as some exploration of different cultural perspectives of the issues. In the workshop process for this paper, the litanies clustered, eventually, around three themes, and thence to three scenarios. The types of litany statements which were offered, to take some (from around 25 which were generated): 'By 2025 no-one will be volunteering for anything'; 'globalisation will erode all of the local colour in our organisations'; 'civil society will have to meet the needs which the government can't or won't'; 'by 2025 we'll all be collecting money on the internet', and; 'civil society is the only defence against the state'.

The three themes which emerged for analysis were:

- Global civil society struggles to face global problems;
- The collapse of the local; and
- The bulwark against political and commercial interests.

1. Global civil society

The first is a future dominated by large scale systemic problems (climate change, resource shortages, economics) which people seek to address at this scale, aided by technology, social networks, and patterns of migration. International institutions, however, are too cumbersome to address these issues effectively. The dominant ideology is about economic growth. There are competing worldviews, between commons and enclosure, self-interest and holistic views of the planet.

Inflecting this for the scenarios development process, the emerging scenario is of "civil society as the guardian of the future" – both future generations, and also the non-human future (biosphere, animals, and plants). This was connected to the Iroquois idea of the 'seven generations'. But this involves civil society organisations participating in political processes rather than critiquing. There are institutional examples already, such as Alternative Kyoto and the Council of Elders.

2. What happens locally

The analysis and exploration of this theme starts from a fragmented world in which no-one has time; and much of what there is, is spent online. Local organisations are weaker, partly because of economic concentration and people's sense of place has declined. The worldviews which underpin this are that "my world" is more important than "our world", that breadth is better than depth, and that – to borrow from Jane Jacobs (1993) – "traders" are more important than "guardians".

Building the scenarios from the alternative worldviews which might emerge, we see civil engagement emerging through social engagement (for example following the model of the Grameen Bank), with wider connections enabled through the internet and other social technologies. These technologies also help people to re-build local communities, and to re-assert the importance of place.

3. Bulwark against strong interests

In the litany for this theme, civil society is a separate sphere which protects us against powerful interests which can not be presumed to have our best interests at heart. It is protected by laws about freedom of speech and freedom of assembly, and it speaks for the marginalised. This creates a space in which governments and other institutions interact with civil society organisations. The worldview that underpins this is drawn from the European "enlightenment tradition", represented, for example, by philosophers such as Locke and Rousseau.

This worldview could be challenged by different cultural perspectives, such as Confucianism or Buddhism, and this opened up an interesting discourse on Chinese Mandarinism and the British civil service's use of 'Mandarin' as a metaphor. The scenario which emerged was one in which rights were earned, and in which civil society organisations had to earn their right to contribute through the quality of their evidence and their thinking, before the mandarin class is willing to engage with them.

Method 3: Manoa scenario building

If we think of the 2x2 approach as 'binary' in posing two axes of uncertainty against each other to generate scenarios, then the Manoa approach is conceptually nearer to a complex adaptive system's response to chaos (change turbulence). It is closer in nature to List's (2004) "network scenarios" than the other three methods explored here. Rather than generating four scenarios from only two uncertain and orthogonal drivers of change, the Manoa approach assumes that actual futures are generated by the turbulent intersection of multiple trends, and the interplay of their cascading impacts. Thus each Manoa scenario requires a base of at least three orthogonal drivers of change, preferably emerging issues or 'weak signals.' The design is best suited to creating scenarios 25+ years out, maximally different from the present: it aims to produce surprising scenarios that shake current working assumptions.

Manoa scenario building was designed in 1991 as part of a project for the State of Hawai'i Office of State Planning undertaken by the Hawai'i Research Center for Futures Studies ('Manoa' is the valley in which the University of Hawai'i, and the Hawai'i Research Center for Futures Studies, are located) (Schultz, 1994). It has since been used in both graduate futures education, and a variety of projects and workshop presentations (eg, Schultz, 2005 & 2006). The initial use of the method for the Office of State Planning resulted in four scenarios; a subsequent project in 1993 for the non-profit Hawai'i Community Services Council created an additional five, also focussed on the future of Hawai'i (Schultz, 1994).

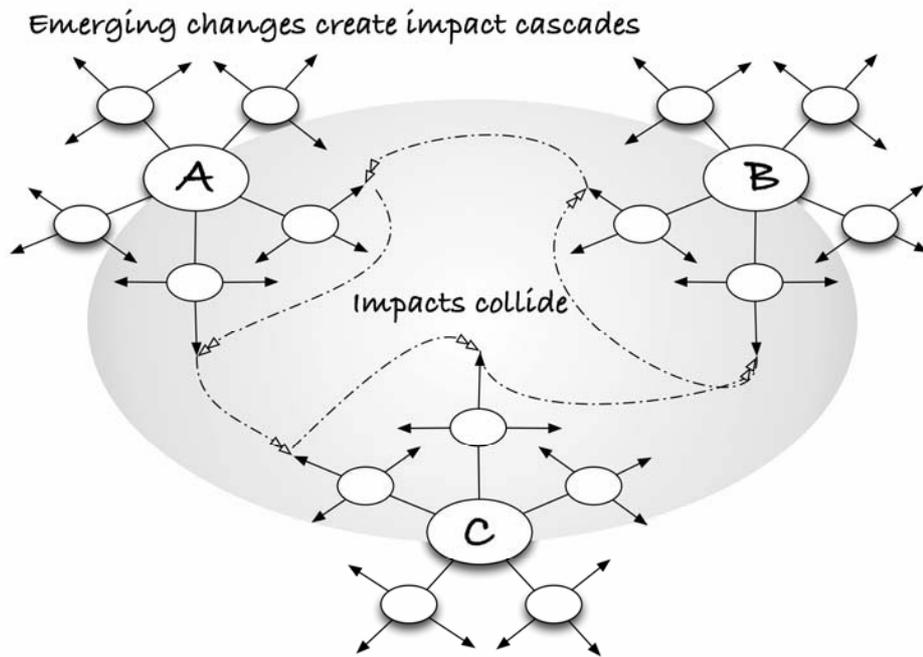


Figure 3. Manoa: cross-impact turbulence creates the scenario

The design criteria for this scenario process stipulated that it had to be participatory; firmly based in data; map the steps by which change diverged from the present; include multiple drivers of change; and depict different surprising outcomes with a time horizon of approximately a generation. The basic process was designed by asking how 'expert analyst' futures researchers devised significant scenarios. This 'expert systems' approach suggested five steps: [1] choose 3-5 significant emerging issues of change ('weak signals'); [2] brainstorm or mindmap the potential impact cascades of each, working one by one; [3] consider the cross-impacts arising from the 3-5 drivers and their impacts working together; [4] doublecheck the depth of detail using an ethnographic inventory; and [5] develop a summary metaphor or title.

The Manoa scenario for civil society

The Manoa approach immediately posed a dilemma: where the other three scenario techniques began effectively with the data at the same point of analysis—after significant drivers had been identified—Manoa instead required starting with weak signals of change. This is a distinction imperfectly understood (as indicated by Bishop *et al.*'s error in describing Manoa as a means to generate "baseline" scenarios from current trends (Bishop *et al.*, 2007)), and unevenly applied: given that Manoa can create divergent, transformative scenarios even from strong current trends, some might argue that the distinction is unnecessary. But with a time horizon of 25-30 years minimum, weak signals offer a more appropriate starting point, given the S-curve life cycle

model of how change emerges, matures, generates new change, and is absorbed or fades: Manoa is designed to explore possible futures at the maturity point of a change that is today a mere twinkle in the public eye.

Thus the Manoa exercise for this project began by reviewing the original list of potential drivers and choosing those that seemed—relatively—the newest to emerge. Out of fourteen candidates, the participants chose to focus on three: "Beyond fundamentalism: neo-Buddhism, or spiritualities of tolerance and acceptance"—this was shortened to 'Multi-polar spirituality'; "Security state: the surveillance society" (seen as new in capability, given the nano-bio-info-cogno (NBIC) technologies convergence); and "Agelessness: long, long, healthy, active life." Finally, Manoa scenario building assumes that you build the scenarios first as general images of possible futures, and then ask how the topic or issue will exist or play out in that environment. Thus this scenario does not explicitly address the notion of civil society, although it certainly exposes changes relevant to civil society concerns.

The vivid details that emerged for this scenario included the following, organised by emerging issue. Bear in mind that the resulting scenario assumes that all these changes are occurring simultaneously and interacting with each other to create the fabric of the emerging future:

- *Multi-polar spirituality*: new spiritual processes, practices, and places would emerge, especially new 'technologies of happiness'—meaning practices more than hardware. This society would approach happiness both as an art and a 'science', seeing it as an essential component of good health. Shamanism would be a growth industry in this age of more relaxed secularism—the relationship between religion and rationalism is less conflictual and more complementary. Ecumenical councils would prevail over internecine and interfaith warfare. One result would be reduced consumption and consumerism, and changed notions of time. Another would be increased respect for other life, animals and plants. Conflict resolution, arbitration, and mediation would be common skills. A growth in rituals, ceremonies, shrines, and spiritual objects would result, with small spiritual celebrations proliferating in daily life.
- *Security state*: on the one hand, communities will be safer, children will play on neighbourhood streets again, and cities will need fewer 'bobbies on the beat.' On the other hand, the nature of crime, evidence, and privacy will undergo significant transformations. Evidence will be gleaned from endless pattern recognition analysis of surveillance feeds—endless and endlessly hacked. The interpretation of that mass of data will depend upon dubious protocols and software. One solution will be hiring more 'watchers' who in the best circumstances offer a counteracting force of better judgement. But this will create new hierarchies of watchers vs. watched. A backlash of social rebellion will result in everything from throwing paint on cameras and hacking to denial of service by retaliatory uploading of tons of false data as camouflage. The value of 'going off the grid' will skyrocket—at least on the black market, and people will practice 'disappearing' by hiding their electronic IDs.
- *Agelessness*: long, long, healthy lives result in greatly extended—or in some cases eradicated – life stages: a life less rushed. For the younger generations,

this means a longer 'carefree' time. One economic impact is that old folks don't retire, and while a boon for knowledge management and the labour market, it means younger workers are promoted less often and the 'glass ceiling' hardens, which generates resentment. This is somewhat counter-balanced by the expanded capacity for people to create 'portfolio careers'. And in fact most of the elderly suffer an 'experience hunger' that pushes them to new careers. It also results in a leisure backlash that embraces extreme experiences as an antidote to 'experience ennui,' an emerging stress malady of old age. Notions of risk are transformed as the human body becomes increasingly repairable. Notions of agelessness themselves become an area of social contention, with 'real' agelessness—a function of biological systems optimisation—preferred over the agelessness of technological augmentation and implants ('cyborg' agelessness), although the boundaries between the two are blurring. The social debate over the resource issues involved lingers, whether agelessness is a right for everyone, or indeed if it is also a responsibility: is it acceptable for otherwise healthy people to kill themselves as a response to radical age-induced ennui?

- *Cross-impacts—the scenario fabric*: New 'grey spiritualism' emerges that encompasses greater conscious choice regarding life stages and death. On a more mundane level, the number of yoga instructors will increase, keeping old joints flexible while engendering spiritual balance. The multi-polar spiritual renaissance will act as a moderating influence in the public discourse regarding the deployment of surveillance, providing a litmus test of a wide range of ethical and moral perspectives. It might create as well a new breed of Buddhist nihilists, not to mention offering an escape from the oppression of watchfulness into 'mu' void consciousness (rather than video games). Agelessness will strain society's carrying capacity (at least until birth rates drop dramatically as a long-term impact), and a surveillance-oriented response may well be population control and eugenics to control resource distribution across generations. Protests against this level of control will generate news headlines about 85-year-old terrorist bombers.

Method 4: Generating scenarios using archetypes

Since the mid-1970s, the Hawai'i Research Centre for Futures Studies, under the direction of Jim Dator, has been using a workshop forecasting technique that Dator named "incasting." In this process, participants are presented with scenarios to explore. The scenarios are deliberately written very generally, and participants are asked to add details to the scenarios, using their creative imaginations and the rule of logical consistency with the described characteristics of each scenario. With organizations, participants may be asked to consider how they would redefine, reinvent, or otherwise transform their mission, activities, services, or products to succeed in the conditions of each scenario. This futures tool is designed to increase the flexibility with which people plan for the future, and to increase their creativity in making use of both opportunities and challenges emerging from change.

The original scenarios were derived from a content analysis of futures research and forecasts available in the seventies. Six general 'families' of images of the future

emerged from this analysis: 'Continued Growth' (sometimes called 'Business as Usual' or 'Present Trends Extended'); 'Ideological Exclusionism' (originally called the 'Disciplined Society'—essentially, variants of conservatism and fundamentalism); 'Environmental Sustainability' (the "Green Politics" scenario); 'High Technology Transformation'; 'Spiritual Transcendence'; and 'Collapse'.

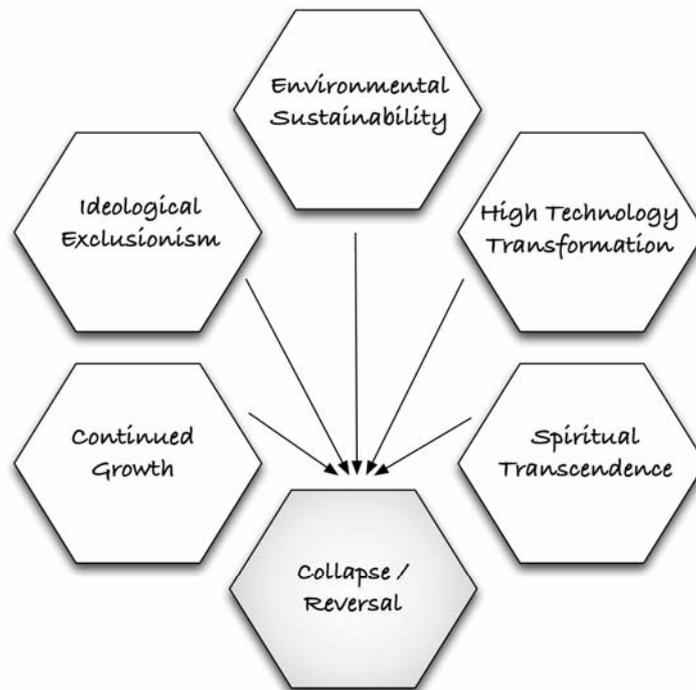


Figure 4. Scenario archetypes

As technology has caught up with both the 'Continued Growth' and 'High Technology Transformation' scenarios, their descriptions have had to be updated. Indeed, all the scenarios require some tweaking as social and economic expectations change. Wendy Schultz also noted (Schultz, in press) that from era to era, the 'collapse du jour (d'annee?)' would shift depending upon the societal fears then current: nuclear holocaust, economic meltdown and depression, environmental disaster. In codifying the underlying logical frameworks of the five primary images—'Continued Growth', 'Environmental Sustainability', 'Ideological Exclusionism', 'High Technology Transformation', and 'Spiritual Transcendence'—she concluded that each implied its own opposite in collapse: growth collapses into depression; environmental sustainability into environmental disaster, high technology into a new dark age, etc. Thus the particular collapse scenario deployed for any particular workshop or client can be tailored to best challenge the dominant worldview. It should be noted, however, that for some people holding the 'continued growth' worldview, 'environmental sustainability' might be as much of a nightmare scenario as an economic crash.

The archetype scenarios

The basic process, which we had already used for a local UK project (The Futures Company, 2009), was to create 'decks' of the feedstock Carnegie data—both the key drivers of change, and the reflective quotes about future possibilities drawn from stakeholder interviews.

Participants in our trial workshop were paired and assigned an archetype. They were asked to identify which of the key drivers from the drivers deck would most likely produce an outcome logically consistent with the archetype framework, and which of the quotes best highlighted their emerging scenario. The participants chose not to explore a separate collapse scenario, due to the press of time.

1. 'Continued Growth'

The continued growth archetype assumes the current global political and economic systems expand into the future in terms of power and wealth. Capitalism reigns, the culture is essentially materialist, major actors work in 'win-lose' dynamics, and research is reductionist. The basic view of change is encouragement of rapid technological innovation as an engine of economic growth, and legally constrained political and social change to assure stability.

In this framework, civil society becomes much more business-like. The role of professional associations would rise as a dwelling place for people in fluid work patterns and to enhance accreditation, corporate accountability, and standards maintenance. Within this worldview any recession or downturn would see accelerated growth in the associational form of civil society. Civil society affiliations would help bring individuals back from the brink of severe consumer-focussed individualism in this future. Civil society would also serve to 'get the best out of pluralism'—managing diversity and some of the negative impacts of this future world.

2. 'Ideological Exclusionism'

The archetype of ideological exclusionism assumes hierarchic political and economic systems, which promote rule of law: a disciplined society. Major actors work in a 'win-exclude' mode, with research constrained by canon. Change is mistrusted and constrained by rule of law to promote the stability of belief systems.

A future rooted in ideological exclusionism would challenge civil society assumptions about cross-community or cross-organisational relations: they could no longer take a bridging role for granted. The role of civil society in this future would be to put care back into society, to look after individuals regardless of affiliation. But that would be difficult unless some organisations were granted neutral status, able to work across both sides of the exclusionary divide. Most civil society organisations would be licensed or formally sanctioned in this future—unofficial organisations would fade into the fringe, or completely underground. Establishing long term trust with the central authority would be essential. The pace of change in this future would be consciously hobbled. On the positive side, within narrow definitions of acceptability this future might well see higher investment in culture and spiritual institutions.

3. *'Environmental Sustainability'*

The 'green' archetype in its purest form assumes new political and economic models that are more communitarian and promote the rights of nature. Dynamics focus on 'win-win' solutions, and organic evolution of systems; research approaches problems holistically. Change—whether technological, political, or economic—should be incremental, with attention paid to consequences on the natural world, which should remain as unaffected as possible by human activities.

Civil society provides both a gathering point and conceptual structures for the debate regarding climate change and long-term sustainability, as governments remain too dependent on constituents' short-term views. In this future, civil society is much more individually driven, and different civil society 'brands' form as a response to different views and stakeholder perspectives. Civil society would also take a more aggressive role in monitoring business practice and guarding against 'greenwashing.' Those civil society organisations not immediately connected to environmental and climate concerns will engage in 'social marketing' to align themselves with sustainability.

4. *'High Technology Transformation'*

What's the concept of change here? Change ROCKS! This archetype suggests open source or anarchic political and economic systems, and promotes the outer journey of maximized individual experience. Major actors engage in win-evolve dynamics based on complexity theory, and research should be transformational and accelerate the evolution of opportunities and change.

In a high tech future, civil society will focus more on issues than place, leveraging social networks into communities of interest. Following the 'evolving complexity' structure of social networks, civil society organisations will be more decentralised and distributed, and less hierarchical. Dynamics will be fluid, with frequent votes of the membership, and individual organisations forming and disappearing quickly (civil society: the flashmob). 'Short, fast, and fluid' will characterise both society as a whole and civil society itself. But technology won't fill all needs, and civil society will retain its traditional role of safety net for those who fall through the cracks. This will see support from the 'high touch' backlash: those people who get tired of relations mediated so completely by technology.

5. *'Spiritual Transcendence'*

The final—and rarest—archetype comprises political, economic, and social systems that might be characterised as 'collegially selfless' (think Bhutan monastery) and a worldview that promotes the inner journey, with 'win-enlighten' dynamics. The focus of research is transcendence: change in the social sphere should support noetic advances, with technological and economic change slowed to de-emphasise the material.

In this future, civil society takes a turn for the intimate, offering an antidote to burnout, and emerging as smaller grass-roots organisations focussed on self-help. It will be a less instrumental society, more focussed on right living than goal-oriented good works. Nonetheless, volunteering is likely to go up, as a means of enacting a gift economy (Hyde, 1983) through trading relationships of support. People accrue value

based on what they create and give away, and the quality of their interactions. This is a Unitarian, Society of Friends, New Economics Foundation, Rastafarian future.

Reviewing the Outcomes

The objective of this pilot research project was a simple one: to use the same set of project data as the basis for a range of different scenarios methods, to find out if this produced different scenarios. The answer to this question is an unequivocal "yes". The scenario stories generated by different methods were very different. In the process we also learned that different methods also produce substantively different types of futures conversations, in terms of the range and type of discussion, and the energy level in the room. As a prelude to comparative analysis, it is worth reviewing specific findings from each method.

2x2 matrix 'double uncertainty' method

For the double uncertainty method – and this is an obvious point, but one which is under-represented in the futures literature – there is almost complete dependency on getting the axes 'right', at a technical level (they don't collapse onto one another), at an analytical level (they do represent the most significant uncertainties), and at a strategic level (they generate strategic insight). If they turn out not to be robust in one of these dimensions, there is little choice but to go back and re-work the axes and then re-develop the scenarios.

The second noticeable feature of the 2x2 matrix model, which came to light when reviewing the output, was the way in which individual axes, though not normally pairs of axes, tend to repeat within the same domain. The "my identity" vs. "our identity" axis, about degrees of social cohesion, was all but identical to an axis that emerged in some recent work (not presently published) which the Futures Company did with a development charity. It is hard to understand what the effect of this might be on the scenarios which emerge, but it has been scarcely touched on in the literature.

Third, the nature of the 2x2 matrix produces a consistency of tone and of perspective across the scenarios. This can be thought of as a strength and a weakness. The strength is that the scenarios emerge as comparable futures worlds, which appear to cover much of the futures space; for example, in this case the axes produced scenarios which largely operated at the level of the nation state. The weakness is that this comparability produces a homogeneity of description and also of language. There was little novelty in the conversations as we filled in the worlds of the 2x2, and few flashes of insight. This is not to say that it was dull. Instead it sometimes had the tone of a group solving a puzzle, as we teased out the coherent and plausible worlds defined by a particular combination of uncertainties. One participant noted to us afterwards, "We looked at these [four] worlds from the outside and did not really attempt to situate ourselves in them, so narratively they are impoverished as a result." It is not clear whether this was a function of shortage of time or of a 'distancing' that the method tends to produce. In addition, the sense of the coverage of a particular futures space is partly an illusion, which can blind participants to disruptive change which might emerge from outside of the world defined by 'important' drivers of change, whether relatively certain or relatively uncertain.

Causal Layered Analysis

Causal layered analysis is a process which is designed to integrate different ways of knowing and understanding the future, and to create spaces for the development of transformative futures (Inayatullah, 2004). Our learning from this project is that it succeeds in this. Compared to the other three methods which we tested, the CLA conversation opened up lines of conversation which were more likely to draw on historical perspectives, philosophical constructs, or cultural (and cross-cultural) references. It also appears that it is the method, and the questions it requires you to ask as you navigate the layers, that generates these perspectives.

The second observation is that coming to the CLA process from other scenario-building approaches, it was sometimes necessary to remind oneself during the analysis phase of the layers that one is deepening one's understanding of a current existing view of the future, and that the scenario development process (and the development of alternative futures) does not begin until after the worldview and/or metaphor layers have been first constructed and then inflected to disrupt the prevailing view.

Some of the specific questions asked while exploring the 'systems layer' during the CLA process, in particular about who is privileged and who is silenced, led to greater clarity about this than the conversation about 'winners and losers' which we had during the 2x2 scenario development phase. In practice, this suggests to us that the quality of output of a typical 2x2 scenarios process would be strengthened by applying some of these questions; perhaps some practitioners already do this.

The third observation is that in practice it did not appear necessary to reach the 'metaphor' layer in any detail, but that the process is sufficiently robust to withstand this weakness on the part of facilitators and group. There was no noticeable difference in the quality of the scenarios where we had developed a good understanding of the prevailing worldview, but had not identified a persuasive metaphor, and those built from both worldview and metaphor. (Which is not to say that the 'metaphor' conversation is without value; it tended to open up new lines of conversation even if it didn't identify metaphors). In practice, the method is resilient. If a scenario seems insubstantial or incoherent, one would work back through the layers which have led to that particular scenario emerging to understand why.

Finally, the range of scenarios which emerged from the process was qualitatively different from the range which emerged from the "double uncertainty" method. Instead of all falling at the level of the nation state, one was an international scenario with national implications, one was clearly national, and one was local and regional. Andy Hines is quoted (Inayatullah, 2003) as suggesting that CLA might work less well in organisational cultures which are homogenous or have a hegemonic worldview. This may be true, although the depth which CLA tends to explore could have a valuable disruptive effect on such cultures. The question raised by the research is whether the range of the scenarios would make it harder for organisations to deduce strategic insight from them. This may also be a function of organisational culture. At this stage, however, this remains a hypothesis, since it was beyond the scope of this research.

Manoa scenario building

This approach was designed to maximize difference from the present, as a means to challenge the present. As a process, it also focusses on helping people understand the dynamics of change rippling through various systems, as drivers create primary, secondary, and further cascades of impacts, which then create cross-impact turbulence. Certainly even in the limited amount of time available to the participants—and without even completing all the steps of the process—it generated a rich array of transformations to current structures and social dynamics and created a quite divergent alternative future.

During the futures wheels step, the instructions urge people not only to brainstorm impacts of change, but also to identify backlash responses and emerging dynamics of acceleration or constraint where cascading impacts collide. As a consequence, this scenario encompassed more detail about contradictions and tensions within the future, adding to its plausibility. What it did not (and does not) do was address the topic—the future of civil society—directly. That perhaps seems odd, but the method assumes users will create a library of possible futures against which to 'incast' or wind tunnel the focus issue: you write the scenarios first, and then ask, in these futures, what does civil society look like? how is it functioning? etc.

In the time available, participants were able only to complete the first three steps of the process: choosing three emerging issues of change; mapping impact cascades for each issue (creating a futures wheel for each); and identifying cross-impacts among the three issues. The lack of time to engage in a discussion based on an ethnographic inventory—which would have ensured an exploration of deep social structures and cultural and belief systems—necessarily handicapped the results insofar as generating as much depth as the process would produce in more ideal circumstances. This step in the process also 'knits together' the rich details produced by the futures wheels, helping engender the 'aha!' moment, the recognition of the core metaphor for the scenario that provides an evocative title. The time limitations also meant that we could not repeat the process the three or four times necessary to produce a suite of scenarios equivalent to the output of the 2x2 matrix or CLA approaches.

Nonetheless, the participants noted that the process itself energised the room, in contrast to the 2x2 matrix work that immediately preceded it. As participants created the futures wheels by standing up around a flipchart-covered table and working simultaneously to draw in their proposed impacts on the futures wheel, the process generated a buzz of energy and cross-talk as people added items, compared ideas, and expanded on each other's insights. It was later described as 'playful.' The energy then diminished as people were asked to hunt for system inter-connections and cross-impacts among the three futures wheels to begin to 'knit' the scenario together. It is unclear how much of that diminution was due to the complexity of that step of the process, and how much due to the late hour and effort expended on other methods.

Generating scenarios using archetypes

The "archetypes" were originally created as simple stories to help people new to foresight imagine very different future environments, and begin to explore them. When stripped back to their basic logical frameworks, they provide useful sorting and

construction scaffolds for organising a large variety of drivers and insights about change, and quickly creating scenario narratives. On the day, this was perhaps the least successful approach: in order to use the archetype frameworks, participants must understand them thoroughly. While they had been distributed in advance, they still required explanation for participants to grasp the gestalt of each sufficiently to pattern match drivers and interview quotes with their assigned archetype. This again was a situation in which time limitations worked against us, as a detailed explanation and discussion of each archetype would have aided the scenario creation considerably. Participants thought the discussion about how to 'sort' the drivers across the archetype frameworks was particularly useful. By noting where drivers smeared across archetype boundaries, the conversation unearthed where drivers were ambiguous or too complex. This suggested points where the data should be disaggregated in order to sort across two (or more) archetypes.

The scenarios that emerged were distinct among themselves, and presented (albeit briefly) quite different outcomes for civil society. They offered few details as to how each particular future might have evolved—they were 'snapshots' rather than causal 'chains' or 'networks' of impact cascades—but did provide launch points for strategic discussions about the role and purpose of civil society. The archetypes generated details found in some of the other scenarios, but what distinguishes the archetypes output from that of the other methods was the tight focus on the changed character of civil society itself, rather than the wider social context in which civil society might be embedded. Some similarity exists, at least in potential, between the archetypes as driven primarily by worldviews and mental models, and CLA, with the distinction that the archetypes take a set of worldviews as a given, and CLA evolves the worldviews via discussion of the specific subject for subsequent use as scenario frameworks. A structured CLA discussion could potentially offer a means to expand the archetype 'library' and evade the sinkhole of wholly Western worldviews.

Difference, depth, detail, development, and process: A comparison

One question underpins our review of each method, namely, "what is it about this method that could generate: (a) difference, and (b) depth—and to what extent is it successful at either?" Participants generally agreed that the 2x2 matrix generated coherent, cohesive scenarios that offered enough difference from the present to generate strategic insights, but were not different enough to startle or provoke: they didn't generate any big questions about transformations in deep structures. In contrast, participants commented on the extent to which CLA dug into and uncovered deep cultural structures while they were in mid-process: it was immediately apparent. People perceived Manoa to be creative and effective at producing vivid, provocative detail and generating difference, but felt the time constraints limited its ability to demonstrate depth in this case. The archetypes were judged to be potentially useful at generating differences (in more favourable working circumstances), but unlikely to generate the depth of the CLA approach.

With regard to patterns of detail, we have noted above that the structure of the 2x2 process pushes output towards symmetry across one level, that is, production of scenarios for the organisation, or the nation, or the community. CLA produced three sce-

narios whose focus of detail varied across the organisational/spatial spectrum: international, national, and local. The Manoa approach generated fairly specific details across many sectors and many scales of organisation, and is designed to do so across repetitions with different initial input, although with limited time we were unable to test that feature. The archetypes produced distinctly different details for civil society itself, but primarily within one scale, national. As the archetypes themselves are scaffolds for futures generally pitched at the national perspective, that is not surprising. With regard to exclusive focus of the raw output of each method on the future of civil society, the methods fall across a continuum. Manoa falls to one end, with the raw output depicting only the future of society, and the archetypes at the other end, with the raw output focussed tightly on changes to civil society itself; the 2x2 matrix and CLA both fall in the middle, with their raw output depicting both some changes to society itself and some to civil society in particular.

The four processes also differed in how explicitly they contributed to developing scenario's 'future world' over time – that is, in creating a 'chain' scenario rather than a 'snapshot' (List, 2004). The 2x2 matrix produces more of a 'snapshot' as live output during the process; narrative arcs illustrating the development of the scenario are usually added during write-up. CLA describes the futures made possible by different worldviews, but does not necessarily address directly how or why worldviews might change over time. Because of Manoa's emphasis on impact cascades, its live output features strong development arcs: a participant commented that it came closest to answering the question of how the futures evolved. The scenario archetypes approach, like CLA, can only generate development arcs if the drivers sorted into each archetype help explain how that archetype's base worldview emerged to prominence.

Finally, a comment on process: the 2x2 approach, as we have already noted, has an intellectual and problem-solving 'feel'. Working around the matrix to fill in the details can sometimes seem a slog. Manoa, in stark contrast, feels like a creativity exercise and can, in fact, be used as one. The futures wheel brainstorm is particularly energising for groups, although the subsequent analytic steps of locating system interconnections and cross-impacts is a more logical process. CLA begins with energy and humour: our participants found generating the 'litany' or buzz of common wisdom and events around an issue easy and at times amusing. The technical or systemic level is more difficult without topic experts in the group. As we worked down the levels to worldview and then myth/metaphor, participants noted that the conversation slowed and the energy grew more thoughtful, but found the resulting output more significant than that produced by the 2x2 or Manoa. The archetypes process design we used here was a pairs game approach, creating one-on-one conversations around worldviews and the drivers that might support their evolution. Time constraints hampered any further insights about process dynamics, but certainly this method would have been more effective if participants had had a deeper understanding of the archetypes.

In Conclusion

Each of these scenario methods appears to have distinguishing strengths. The 2x2 matrix approach produces four scenarios consistently focused on alternative outcomes

for an issue at a specific scale. CLA generates conversations that dig down into the worldviews, mental models and cultural structures that inform how we perceive both issues and possible future outcomes. Manoa creates a diverse array of details across all levels of a possible future. Scenario archetypes guarantee consideration of outcomes across a specified set of worldviews. Yet none by itself is really a 'perfect', all-purpose approach. These differences underline the need for people who commission futures work to understand clearly what they are trying to achieve through scenario building, and to remain open to the methods that are most likely to be effective in reaching the desired outcome.

The primary lesson we have learned from this exercise as active practitioners is the value of mash-ups: combining and layering different techniques to enrich outcomes. The 'flatland' output of many 2x2 matrix exercises in scenario building can be greatly enriched by using CLA or the Ethnographic Futures Framework (Bowman & Schultz, 2005) as probes or provocations during the scenario elaboration process. A colleague commented that he regularly adds both divergence and depth to the 2x2 matrix technique by rigorously adding relevant emerging issues into each of the quadrants, expanded by use of futures wheels, to create more densely detailed story fabrics¹. Our experience, and that of many of our colleagues, is that our practice—and its usefulness to our clients—has been greatly enriched by both the ongoing generation of new techniques, and a recombinant / re-mix approach to using them.

This pilot study has been only an initial step in trying to build greater understanding within the futures community about the processes and outcomes involved in using different comparative methods. In doing this work, we have tried to build on the existing descriptive work which has looked across different futures approaches and classify them according to method and intention. While this research project was of necessity on a small scale, its initial findings appear strong enough to suggest that further enquiry is worthwhile. We look forward to hearing from other researchers and practitioners engaged in similar research.

Acknowledgements: Our thanks are due to Joe Ballantyne and Andy Stubbings of The Futures Company, to Neil MacDonald of Gondwana Development Associates, to Victoria Ward of Sparknow, and the other Futures Company colleagues who participated in the workshops. If you wish to review the detailed process transcripts, please contact Andrew or Wendy at the emails provided. The authors gratefully acknowledge the resources provided by The Futures Company in support of this project.

Correspondence

Andrew Curry
Director, The Futures Company
6 More London Place
Tooley Street
London SE1 2QY
United Kingdom
E-mail: andrew.nextwave@googlemail.com

Wendy Schultz
Director, Infinite Futures
JB Lewis B503
Wolfson College
Oxford OX2 6UD
United Kingdom
E-mail: wendy@infinitefutures.com

Notes

1. Private conversation with Christian Crews, formerly Director of Futures Strategy at Pitney Bowes; currently Director of AndSpaceLabs.

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