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## **Teaching scenario planning: lessons from practice in academe and business.**

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### **Abstract**

In this paper, we engage with O'Brien's (2004) identification of both pitfalls in teaching scenario planning and proposed remedies for these. We consider these remedies in relation to our own experience - based on our practice in both the academic and business arenas - and we highlight further pitfalls and proposed remedies. Finally, we propose the use of "hard" multi-attribute decision analysis as a complement to "soft" scenario planning, in order to allow a more formal method of strategy evaluation against a range of constructed scenarios. This approach is intended to remedy biases that are associated with holistic evaluations – such as lexicographic ranking - where undue attention is paid to particular strategic objectives at the expense of others. From this discussion, we seek to contribute to cumulative refinement of the scenario process.

### **1. Introduction**

O'Brien (2004) categorised scenario planning as part of "soft" operational research, in that it satisfies the characteristics of soft OR described by Rosenhead

and Mingers (2001), and Bennett and Huxham (1982). Specifically, scenario planning (i) aids understanding of a situation, (ii) enhances creativity, (iii) is process-focussed, (iv) requires input from multiple actors, (v) is focussed on perceptions and opinions, and (vi) contains an analytical component that is qualitative. The focus of O'Brien's paper was an analysis of the process and the product of scenario planning teaching at Warwick Business School: "by scanning the product and identifying deficiencies (the paper) aims to improve the process itself" (O'Brien, 2004: 711). O'Brien relates a change in style of delivery – from lectures to facilitated scenario construction – and the addition of extra steps in the scenario construction process to enable more effective scenario development, by her student audience. The changes that she relates reveal the pioneering nature of scenario teaching at Warwick. From analysis of the process and products of 15 years of teaching/facilitating the course and the experiences of over 1,000 participants, she identified five "common" pitfalls emanating from the "early version of the methodology" which was taught to MBA students as a process to produce scenarios.

The pitfalls identified by O'Brien were:

- 1) Predictability of a limited set of factor choices. Here, use of a PEST method by participants tended to regularly emphasise economic factors - such as exchange rates, interest rates, and UK economic activity - as uncertainties that were subsequently given prominence in the scenarios that participants constructed
- 2) Predictability of theme selection. Here, many participants developed either optimistic or pessimistic scenarios

- 3) Focus on current /next/ big issues. Here, recent and current concerns (e.g. of terrorism activities) that had emphasis in the media tended to replicate themselves in the scenarios that participants provided. O'Brien labelled this as "future myopia"
- 4) Typical implicit assumptions. Here, life experiences shared by participants (e.g. of peacetime rather than war) were also replicated by participants in their construction of scenarios
- 5) Unimaginative presentation of scenarios. Here, the completed scenario output tended to be presented with little attention to making an impact on the target audience

O'Brien concluded that the above five pitfalls resulted in "predictable, somewhat narrow and unchallenging scenarios, unlikely to engage their intended audience" (2004: 715). In the final section of her paper, O'Brien addressed three process adaptations as means of overcoming these pitfalls, namely:

1. "Participants: who is using scenario planning?" Here, O'Brien argued that participants' personal world-views and life experiences cannot, in fact, be controlled or influenced and can only be acknowledged as a pre-set anchor in scenario development.

2. "Content: what is the scenario process?" Here, O'Brien argues that lecturers' exhortations to participants to be "more creative" in their scenario development worked reasonably well in that "unchallenging themes appeared less frequently" (2004: 715). However, adding a step where (i) individual participants brainstormed uncertain and predetermined factors and then a step where (ii) groups

of participants clustered (and thereby reduced) this output, produced, she argued, a more diverse and rich set of factors that could shape the future. O'Brien also encouraged participants to "...think beyond the traditional PEST categories and thus to consider additional categories such as 'competition' and 'regulation' "(2004: 716).

The second revision to the earlier version of Warwick's scenario construction method was to encourage participants to consider alternative, higher impact ways to communicate scenario content – beyond tabular summaries. Finally, O'Brien added a step in the Warwick scenario construction process, where strategic options for an organization were tested for robustness across the set of constructed scenarios.

3. "Process: how is the scenario process conveyed to participants?"

Here the focus was, again, on encouraging creativity within the scenario development process and the following possibilities were offered:

- i) using the internet as a resource for reports on issues relevant to future studies
- ii) use of a facilitating mode of delivery rather than a traditional lecture mode
- iii) emphasis that, at an early stage of the scenario teaching, the lecturers' expectation was that the scenario process would produce creative output
- iv) challenging deep-set assumptions in the participants that the future will be like the past. An example O'Brien gave is that of identifying individuals in the audience who know people who cannot read or write. Such an identification process can "challenge pre-conceived ideas about how advanced society has become" (2004: 717)
- v) emphasising the development and use of scenario outcome presentations that promote audience impact – such as TV/radio news broadcasts, newspaper headlines etc. Also advocated was consideration of alternative ways of presenting narratives, written in the past, present or future tenses

In seeking to offer further incremental development and refinement of scenario method, we now turn to our own experience of both teaching on MBA programmes in two UK business schools, and working with top management teams on a range of scenario projects in the business arena. .

Drawing upon illustrative examples from this experience, we reappraise each of O'Brien's pitfalls in turn, presenting our recommendations and then comparing and contrasting these with O'Brien's responses to these pitfalls, outlined earlier. In addition, we point to additional concerns that we have identified, both in O'Brien's approach to scenario planning and from our own experience working with students and organizations. We discuss the implications of these additional pitfalls and propose our own solutions to overcoming them.

## **2. Revisiting O'Brien's 'pitfalls' in scenario development**

### Pitfall 1: Predictability of a limited set of factor choices

Our own method of facilitating the development of a wider range of scenario dimensions aims to overcome the "silo" laundry-listing that can emerge from a simple elicitation of participants' ideas using the categories within PEST (Political, Economic, Societal, and Technological) or its derivatives (STEEP and PESTEL, PESTLED etc) that prompt elicitation of further issues of current concern - such as Law, Ecology and Demographics. Burt et al (in press) have noted that there is a growing recognition in the research literature that the nature of the business environment is best conceptualised as organization-specific (Montgomery *et al* 1989)

– thus recognising the limited applicability of generic, taxonomic approaches such as PEST. Indeed, the business environment can be conceptualised as the outcome of organizational processes, and thus as being socially constructed (Berger and Luckman 1966; Eden 1992; Weick 1979, 1995; Mir and Watson 2000).

Although, as with O'Brien's approach, the initial stage of our scenario method involves identification and recording of areas of interest or concern to the participants about their organization's contextual environment, using the PEST (or its adaptations, such as PESTEL) categories as a generator of ideas, we find that new insights are seldom generated - since what has been listed is frequently presented in fairly general terms, and is already well known to participants. The taxonomic classifications of PEST and its derivatives are, we contend, of limited help to an organization in exploring and understanding its environment because they are too generic, fail to deliver understanding of the inter-relationships and inter-dependences among variables, and do not produce a detailed understanding of the dynamics of change. At this stage, we would highlight our view that, first, the limitations of PEST analysis can be addressed through expansion of the set of involved actors in the process, as in the introduction of 'remarkable people', in order to broaden the field of thinking on the problem in question. Second, we would point out that even a constraining PEST analysis may hold advantages, in that it may force individuals within the group to move beyond their own 'bounded rationality' (March and Simon, 1958) within a particular sphere of, say, the 'technological' or 'economic'.

Whilst some scenario projects develop scenarios that deal with global or regional issues at a very general level – so-called global scenarios - we find that contextualizing scenario construction within a client organization, or in the minds of students, requires that the "business issue" to be addressed should be clearly

defined – so-called decision-focused scenarios. The pitfall of developing non-contextualized, global scenarios, to our minds, is that these can only take account of the PEST factors at a superficial level, whereas scenarios which are built around an issue of concern – often the continuing viability of an organisation’s current success formula or “business idea” (van der Heijden, 1996) – require judgements about the relevance of environmental factors to be made in relation to that issue of concern. We detail the specifics of our decision-focussed scenario construction methodology in the next section of this paper: “Pitfall 2: predictability of theme selection”.

Seeking to expand the boundaries of group thinking within an organization-focused scenario project, there is a need to move beyond simple listings and descriptions of the environment and to help management teams understand their environment – or rather, the ‘multiple realities’ (Beech and Cairns, 2001) of their different world views that are socially-constructed through narratives, dialogue and conversation (Smircich and Stubbart 1985). It is in relation to the facilitation of understanding and interchange between these different world views, in order to open up a ‘strategic conversation’ (van der Heijden, 1996) about the complexity and ambiguity of and exposition of multiple perspectives on organizational problems in the present, that we see the key value of scenario method, rather than in any notion of them presenting different ‘realities’ of what the future might be.

In developing a broader understanding of the world at large, one further pitfall which we identified - whether working with students on a problem with which they are largely unfamiliar, or with an organization in which there is a good depth of understanding of the issue, but from an internal perspective - is a tendency for information drawn from external sources through a PEST analysis to be treated as “knowledge”, in that the veracity of the source is not questioned, or that a single



source is accepted without validation through triangulation. We term this pitfall, the assumed veracity of obtained knowledge. That is to say, that information taken, for example, from Internet sources will often remain unchallenged, by scenario team members, in terms of the veracity of the source of the knowledge. Often there is little evaluation of potential vested interests involved, i.e., little or no consideration of how “knowledge” is socially constructed according to the knowledge-originator’s beliefs, values and rationalities.

Our experience of working with students indicates that this pitfall is more likely to be overcome when building scenarios surrounding an issue which, for most, lies beyond their range of experience and their expectation of the class. For example, when we introduced a project on exploring scenarios for sustainable healthcare and education in Sub-Saharan Africa to MBA students, the initial reaction of many – particularly the most able – was to challenge us on what this had to do with business education. However, because the scenario project dealt with largely unknown territory, the exercise (i) challenged students’ intellects and the socio-economic rationale of their day-to-day thinking, (ii) introduced a moral/ethical dimension to their thinking, and (iii) generated not only a large amount of research, but also critical discussion and consideration of the political and other agendas of sources of information, and analysis of the causal linkages between different factors and the agency of the various involved actors.

In short, we believe that emphasis on analyzing and understanding the environment should shift from mere data-gathering (even from the broadest range of sources) to detailed consideration of how members of the organization (or in a teaching context, members of the participant team) perceive relationships among uncertainties and pre-determined outcomes. Cognitive activity acts to make these

relationships meaningful to involved actors and to help them understand the agency of others. Aiding participants' recognition and understanding of the inter-relatedness and dynamic interaction of such variables and the multiple possibilities for their resolution is, we believe, the key to effective environmental analysis. As an uncertainty in one of the variables within a PEST dimension resolves itself, one way or the other, as an outcome, that outcome will often be perceived to impact other variables (within and between PEST dimensions) and so have a domino-like propagation – as a particular scenario unfolds. The level of sophistication of the students' analysis is, at this stage, dependent upon the breadth of the investigation, in terms of the number of factors identified, and the depth of understanding, in relation to the specificity of the information which informs participants' understandings of a particular issue.

In order to broaden the scope of analysis in both our teaching and in our consultancy approach, the factors generated from the PEST brainstorming exercise are, in our scenario methodology, next collated by participants into clusters of inter-related factors that span the dimensions of PEST. Clustering is the activity of grouping causally related uncertainties with pre-determined elements and capturing, graphically, a group's (emergent) understanding of the linkages and relationships among them. The process is designed not only to help participants to understand linkages of causality and chronology, but also to reduce a wide range of issues and ideas into a smaller number of higher-level concepts - the names of the cluster contents, once clarified. In Figures 1 and 2, we provide an example to illustrate and amplify the process of grouping and labelling inter-related factors. In Figure 1, we illustrate a STEEP-evoked listing of some of the factors identified by students at

considering scenarios for sustainable health and education in Sub-Saharan Africa (here, based upon 81 factors identified by one group of 6 students).

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Insert Figure 1 about here

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Next, we asked participants to look behind the occurrence of specific events (i.e., resolved outcomes of uncertainties or pre-determined elements) and look for patterns and structures that underpin their occurrence. We directed participants to create linkages which would explain the behaviour of variables – and to express these linkages in the form of influence diagrams that represented and clarified such relationships. At this point, we should address two possible critical responses to the process thus far; one philosophical and one content-related. The philosophical question is that of how the notion of social construction that is inherent in the scenario process is reconciled with social construction’s denial of causality, as perceived in positivistic terms, in that investigation of causality is advocated. The answer to the first question is related to that of the second. The investigations of ‘causality’ which are induced in the scenario process advocated here are based upon acceptance that they are mere social constructions. As such, as these causal linkages are discussed within the group process and subjected to multiple interpretations and reinterpretations, new factors are likely to be surfaced and can be incorporated into the process. This incorporation of new elements can happen at any time. In complex scenario projects, with multiple iterations of the process, there will be a cumulative aggregation of factors considered. But, even in simple, single-iteration scenario constructions, the structure of the process should not be seen as

sacrosanct, excluding adaptation and incorporation of new ideas at any stage in order to increase the depth of understanding of the issue under consideration.

Figure 2 documents some of the “cross-disciplinary” links that were formed from the content of a STEEP-evoked listing based upon the exercise illustrated in Figure 1. We present two clusters of cross-disciplinary, linked factors indicating how participants perceive the various factors to interact and influence one another at the particular stage in the project.

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Insert Figure 2 about here  
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We now turn to highlight two key differences between our scenario construction methodology and that of O'Brien (2004). First, in the initial identification of factors, we do not seek pre-judgement of whether they are predetermined or uncertain, for instance, by requiring specification of “a minimum of 40 uncertain factors plus a smaller number of predetermined elements” (2004: 716). Rather, we enable participants to consider the question of certainty/uncertainty as one of emergent relativity between issues, not as categorical dichotomous choice at the outset. Second, the process of reduction to a smaller number of clusters is not one of exclusion or of prioritization, since the content of each cluster is retained, and all individual factor outcomes are considered and placed within one of the four scenario storylines at the end, in order to add richness and diversity to the content. In addition, as highlighted above, additional factors may be introduced at any time during the process, such that process does not take precedence of purpose. We return to the practicalities of this stage of our scenario construction methodology in the next section of this paper: “Pitfall 2: predictability of theme selection”.

By bringing the STEEP variables together in such an exercise, our scenario method enables participants to look behind the obvious, taxonomic nature of STEEP, in order to develop a deeper, inter-connected understanding of the interplay among variables, as well as the causal logic of relationships amongst these variables. In the exercise illustrated in Figure 2, the clusters were generated through a process of participants engaging in a “strategic conversation” (van der Heijden, 1996), in which all of the 81 factors identified were placed on a wall, then manoeuvred into initial clusters, moved again, regrouped numerous times over a period of about one hour, and finally grouped into a set of 8 clusters. The only rule of this stage was that the components of each cluster must be connected by arrows showing cause/effect impact or chronological relatedness - such that each element within a cluster is connected to every other, either directly or indirectly. This form of causal/chronological relationship analysis elicits detailed conversation and consideration of the inter-relatedness of different factors across the STEEP categories, and leads to their breakdown and re-conceptualization in new ways, albeit that the relationships must always be seen to be socially constructed, rather than indicative of some objective ‘truth’.

The next step in our methodology involves naming the clusters, encapsulating every constituent element under an overarching title which identifies a higher-level issue of impact upon the issue of concern. In this case example, the issue of concern was the future viability of a particular, named, organisation involved in the provision of health education in Sub-Saharan Africa. The titles that participants gave to the two illustrative clusters are also shown in Figure 2.

#### Pitfall 2: Predictability of theme selection

In the second stage of our scenario process, we ask participants to write their cluster headings on new post-its and place these post-its on an impact/predictability chart. Our instructions are as follows:

- Post cluster headings on the Impact/Predictability chart (using post-its). Rank, first, in terms of impact on the issue of concern (horizontally), then on predictability (vertically) (Note: here, we clarify that we refer to predictability of the outcome of the issue/event, not of its happening).

- Which of these cluster headings would really make a difference for the case organization when the events, therein, resolve themselves one way or the other?

Figure 3 illustrates the placing of cluster headings on the impact/predictability chart, and identifies the “scenario structuring space” – where cluster headings containing the potential scenario dimension are physically located. Note that our two, illustrative, cluster headings are included on the impact/predictability matrix.

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Insert Figure 3 about here  
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Our next instructions to participants are:

- Consider the “more impact/less predictable” corner and try to identify the 2 most important cluster headings (bottom right quadrant). Each cluster heading is, potentially, the name of a scenario dimension

- Identify two plausible outcomes for each of the two scenario dimensions.

Figure 4 illustrates two plausible outcomes for each of two potential scenario dimensions - based upon the student project on scenarios for Sub-Saharan Africa, outlined above.

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Insert Figure 4 about here

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Our next step is to ask our participants if the outcome combinations A1B1, A2B2, A2B1, and A2B2 are viable pairings of the plausible outcomes that were previously identified. If one or, at most, two of the four pairings are not seen by participants as viable, then this is indicative that the two potential scenario dimensions are not independent of one another and can be collapsed into a single dimension. In such a case, participants are advised to choose another potential dimension from amongst those other cluster headings in the lower right-hand quadrant of the scenario structuring space. In this way, two independent dimensions are elicited from participants. Since these dimensions are a result of the “cross-disciplinary” clustering in Stage 1 of our scenario construction process, the potential pitfall of “predictability of theme selection” is attenuated – the obvious, PEST-derived dimensions are avoided. Also, as a consequence of our process, the construction of optimistic and pessimistic futures is avoided – since the plausible outcomes will,

necessarily, contain a mix of positive and negative factors that interact in the causal chains, both within and between clusters.

### Pitfall 3: Focus on current / next big/ issues

O' Brien identified the dominance of recent and current concerns of participants in their scenario development and called it "future myopia". In behavioural decision research, "future myopia" can be viewed as an "availability bias" and/or "anchoring-and-insufficient-adjustment bias" (see Tversky and Kahneman, 1974, for a review). A more general conceptualisation of "future myopia" is that of a "framing bias" – a term which refers to an inappropriate conceptualisation of a decision context. In our view, this potential pitfall in scenario development will not necessarily be overcome through the participation of in-organization "experts" in scenario construction process. Even with in-depth analysis through processes of structured interviews with key actors, and research carried out over time both inside the organization and in relation to external factors, we consider it necessary to challenge the framing of organisational participants - and their (what may be) partial view on the nature of the future - by introducing the input of "remarkable people" (van der Heijden et al., 2002; Schwartz, 1991) drawn from relevant external sources. This challenge to thinking is most easily achieved in practice rather than in student learning. The reason for this is that the inclusion of "remarkable people" into a scenario process, in order to attenuate framing bias, is likely to be a costly exercise. By remarkable people, we do not necessarily refer to those who are 'more expert' than the involved actors, since we acknowledge that organizational participants will indeed be the experts in relation to their own context. In addition, as Cairns et al (2004) argued, the term "remarkable



person” is not necessarily best applied to those who are expert in the field of investigation. Experts can be so narrowly focused on current best practice that they are embedded in business-as-usual thinking. Rather, we refer to those with knowledge that can challenge and extend the inherent knowledge of participants – and perhaps change participants’ perceptions of, what are seen to be, high-impact uncertainties into perceptions of pre-determined, lower-impact, elements. Alternatively, their insights might turn perceptions of, what were previously seen as, predetermined elements into uncertainties.

The role of the remarkable person in the conversation is to challenge the thinking of the scenario team and their preconceptions of a situation. In other words, the process encourages individuals to critically engage with their own cultural programming. In seeking appropriately creative and challenging thinkers, it is possible to look both to those at the leading edge of knowledge development in the specific problem context, and among those leading the field in a different context. It is also possible to find remarkable people in related fields that are, perhaps, at a higher level of development. For instance, if we were seeking a remarkable person’s input into conversations on potential futures in low-cost air travel in Europe, we would consider including individuals who have knowledge concerned with futures in high-speed rail travel, governance in the European Union, the changing political environment, and the effects of international terrorism.

Obviously, the choice of remarkable people is dependent, to a large extent, on budget and availability, but one lesson from practice is the importance providing a challenge to the mindsets of scenario participants in the scenario team. The most effective ‘remarkable person’ is not the one who merely adds detail to what participants already know, but who causes them to challenge the very foundations of

their knowledge and to test its robustness in the context of different social constructions. Even in the academic arena, we have found students to be extremely resourceful in finding access to remarkable people, drawing upon their networks of family, friends, business colleagues, and even through “cold calling” upon suitable candidates at long-range using Internet resources. In short, any activity to generate and challenge pre-existent framing is, we believe, a valuable exercise.

The short case description that follows next illustrates the use of remarkable people in scenario practice with organizations, here in the field of local government. Cairns et al (2004) explored e-government futures within a scenario intervention that included representatives from multiple agencies – including local councils, police authorities, education authorities, the UK Benefits Agency, and the charity Age Concern. In the intervention, we sought to bring into the conversation examples of leading-edge, future-oriented thinking from the arenas of information and communication technology (ICT), from those tasked with turning ideas from seeming science fiction for most of us into practical propositions for business in the next decade. In addition, we involved critical thinkers on the role of governance in society, and on the relationships between governments, businesses and communities. Finally, we sought to expose the group to the implementation of e-government initiatives in other countries, from the USA to Singapore and Australia – countries where current technologies were being pushed to their limits or where boundaries of public/private were being challenged. These inputs were not intended to show solutions to the problem at hand by copying from these other arenas. Rather, they were intended to open up members’ thinking to a wider range of ‘limits of the possible’ – what might be plausible and feasible in their own context, both now and in the future.

As outlined in the previous section, we consider that analysis of the role and agency of different actors is an essential part of the scenario process. In our approach, this is further supported by the use of “stakeholder analysis” (van der Heijden et al. 2002), in which the widest possible range of individuals and organizations who can affect or be affected by the issue under consideration are identified, and their relative degrees of power over, and interest in, the outcomes of a particular scenario as it unfolds are considered. As such, the actions of powerful, interested, stakeholders will serve to preserve and enhance their own interests and these actions should be added, as a final ingredient, into the scenario storylines. Stakeholder analysis is a dynamic process used, first, to help develop the scenarios, and, second, as part of the testing of options generated from the scenario process. Discussion of the power/interest matrix can be a powerful tool for uncovering biases in thinking within groups. For example, in considering scenarios for education and healthcare in Sub-Saharan Africa, there was an initial tendency for participants to put “children in Africa” at the centre of their thinking, and to consider them as having a major impact on the issue. Through consideration of the matrix, it was recognised that this approach was based upon emotional, rather than rational criteria. The powerlessness of key actors was identified here. In other examples, groups identified high power groups who had little or no interest in the current situation, but whose interest might be awakened at some point as a particular scenario unfolds – and who would then act. Similarly, groups with high interest and little power were identified, and consideration given to how they might seek to form political alliances with these high-power groups within the storylines of particular scenarios. In short, both the use of remarkable people and the use of stakeholder analyses enable the development

of scenarios that give a clearer, non-myopic, view of the nature of the future as it unfolds in a particular scenario storyline.

Powell and Swart (2005) and Swart and Powell (2006) detail a method that presents a traceable, qualitative, scenario generation process which accesses participants' subjective understanding of the dynamics of the transition process between possible future scenarios. Their method builds on prior work by Rhyne (eg 1974) and represents the participants' views of the use of knowledge by human actors in fulfilling their specific roles within an interacting system. This conceptualisation can extend stakeholder analysis. However, by caution, note that Liebl (2002) views complex societal problems as in principle, not amenable to decomposition into cause-effect linkages – the consequences arising from a set of actions can be indeterminate or unpredictable in highly politicised situations when there are conflicts between stakeholders.

#### Pitfall 4: Typical implicit assumptions

By broadening out of the field of investigation, introducing the processes of clustering and naming, involving remarkable people, and applying stakeholder analysis to both scenario storyline development and option analysis, we consider that O'Brien's fourth pitfall; typical implicit assumptions; may be addressed, in that participants are challenged to surface and share their individual value-rationalities, and are introduced to perspectives from outside their immediate context of day-to-day activities. In addition, as Schwartz (1991) points out, information may be both

enhanced and filtered through engagement with a broad range of published sources that can offer valued insights into the issue in question. In teaching, we frequently bring to the classroom a selection of that week's quality newspapers and journals such as *The Economist* or *Time*, pointing out that there will be a range of reports of relevance to practically any complex organizational problem.

The role of the facilitator is also key to overcoming the constraints of implicit assumptions. In our practice, we adopt the approach of using "round robin" elicitation of issues linked to the scenario agenda at the outset, whereby each participant in turn is required to raise one issue at a time, until all ideas are exhausted. As ideas are presented, only questions of clarification are permitted, and no idea can be challenged and excluded at this stage. The establishment of an unthreatening environment in which any and every idea can be aired is crucial. Whilst O'Brien (2004: 717) stresses the need for "reminding participants that they should expect to produce creative work", we believe that there is nothing more likely to stifle creativity than the negative reaction of peers or, in particular, superiors within the organization. By utilising the round-robin approach to idea generation, we attempt, in our scenario practice, to provide "airtime" for each of the participants' viewpoints on issues related to the scenario agenda

#### Pitfall 5: Unimaginative presentation of scenarios

O'Brien stresses the importance of attracting audience attention with the final scenario presentation, and places emphasis on the selection of media by encouraging creative use of ideas such as mock newspaper or television reports. O'Brien notes that some students preferred not to write narratives, whilst others

would construct causally-related – but uninspiring – storylines. Whilst we would agree that the impact of the scenarios (on an audience outside of those who have constructed the scenarios) relies upon first gaining attention, we note that a media-rich, PowerPoint presentation can, sometimes, hide a lack of in-depth analysis of the causal patterns underlying events. In our work on e-government, we found that an audience's attention was sharply focused when a presented scenario was (i) seen to be grounded in common perceptions of the present, and (ii) unfolded, logically, from the perceived present into a rich picture of a future via a believable progression. From our consultancy practice, we observe that the greatest impact upon organizational thinking came from those scenarios in which causally-unfolding storylines were both plausible and discomfiting – revealing that the future might not represent a comfortable continuum from the past and transition from the present. We have termed this experience the “organisational jolt” (van der Heijden et al, 2002). Our goal, in scenario construction, is to provide enabling conditions to challenge current thinking and evoke a strategic conversation within an organisation (or within a student team). Such a challenge to thinking prompts renewed scrutiny of both (i) the organisation and its current success formula and (ii) the organisation's current strategies - the viability of which is to be tested against the organisationally-focused scenarios in the final stage of our scenario methodology. We detail this final stage of our scenario methodology in Section 3: “assessing the robustness of strategies”.

With the best student groups, also, we found that a focus, in scenario development, on the plausibility and coherence of the developed storylines, illustrated by reference to ‘real’ events and their implications, attracted greater attention and a more thoughtful response, not only from us as tutors and markers, but from their peers as well. In the project to study Sub-Saharan Africa, writing over

3 years ago, one student group attracted the attention of their audience by reference to how “even the one positive of the Mugabe period, an excellent primary education system as a result of one of the highest levels of spending on education in Africa, has dwindled due to lack of investment and shortage of teachers”. Looking further into the future, the student group posited that investment “from 2008 onwards was increasingly looked upon as being concerned only with the ‘rape’ of dwindling natural resources and the lining of the pockets of a number of authoritarian leaders”.

Figure 5 contains extracts from the four scenarios that were developed from the two scenario dimensions identified in Figure 4.

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Insert Figure 5 about here  
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Thus, we would concur that the effectiveness of scenario planning is, in part, a function of the medium of presentation, but would argue that a sophisticated and critical audience will look beyond the surface veneer of the media employed, to seek out the evidence of comprehensive, in-depth research and logical analysis, which underpins the perceived plausibility of the constructed scenarios.

### **3. Assessing the robustness of strategies**

O'Brien's final revision to her original scenario development process involved the inclusion of a step which made explicit the impact of the scenarios on the organisation (using a TOWS matrix to stimulate debate). In explaining this step she also refers to: “one final test – explicitly check each option under each scenario to

see if it is robust". We believe that use of the TOWS matrix – and linking this analysis to other methods for generating, evaluating, and selecting strategic options is a strong contribution to emerging practice. However, assessing the implications of strategies and their robustness is likely to be a difficult task for unaided participants in many scenario planning exercises. Many organisations will have a plurality of objectives to consider in their planning processes (for example objectives relating to financial return, the environment and employee welfare). This means that if there are  $m$  strategies that need to be evaluated against  $n$  objectives under  $p$  scenarios then  $m \times n \times p$  evaluations will need to be performed. However, these evaluations would not only require i) an assessment of the performance of each strategy under each objective and scenario, they would also involve: ii) the need to make trade-offs between the objectives and iii) the need to assess the robustness of the multi-attributed outcomes across the scenarios. The evidence of psychological research is that decision makers are severely restricted in their ability to make these types of assessments (e.g. Tversky, 1969, Tversky, 1972, Fishburn 1991). Human beings have limited information processing capacity (Hogarth, 1987) and, when they are faced with such complexity, they resort to simplified mental strategies known as heuristics. The heuristics have been demonstrated to severely constrain decision making ability even when the extra dimension created by multiple scenarios is not present. For example, when an unaided decision maker who has multiple objectives is required to choose a course of action from a restricted set of alternatives, he or she is likely simply to consider the performance on the most important objective and ignore how well the options perform in relation to the other objectives (the heuristic employed here is known as lexicographic ranking (Tversky, 1969)). Even more sophisticated heuristics, such as elimination by aspects (Tversky, 1972) fail to



address the problem of trade-offs so that the relatively poor performance of a course of action on one objective is not compensated, in the decision maker's assessment, by good performance on other objectives.

O'Brien argues that scenario planning can be classed as a 'soft' OR approach because it has characteristics such as a qualitative analytical component and a tendency not to rely on hard data. She argues that such approaches can foster the understanding of situations and engender new perspectives of a problem. While we agree with these assertions we also see little within scenario planning that can support participants in their assessment of the performance and robustness of strategies.

Decision analysis (Goodwin and Wright, 2004), *is* designed to provide such support. Although there is no universal agreement about what constitutes a soft or hard OR, and the techniques relating to each approach are best viewed as being on a continuum between soft and hard extremes (Brown et al., 2006), decision analysis is much closer to the hard end of the spectrum than scenario planning. Unlike softer approaches, it is designed to produce tangible recommendations for action, it has 'taken for granted' views of what is meant by rationality in option choice and it has a prescribed approach to analysis. It also views quantification as being both possible and desirable.

However, decision analysis also has some aspects that are usually associated with soft methods (see Brown et al., 2006, table 1). Its data is usually based on judgment and opinion, and it aims to foster shared perceptions amongst groups of decision makers and to support action and learning. Also, its approach to validity is congruent with that of softer methods. In hard OR a model will, as far as possible, be validated by comparing its predictions to the real world (for example, a simulation

model of a bank's customer queuing system will be validated if it predicts the behaviour of the real system with reasonable accuracy). In decision analysis, where there is unlikely to be an external analogue to allow real world comparison, validation is obtained by applying tests such as logical consistency and model credibility. This validation can take the form of requisite modelling (Phillips, 1984) where:

“the modeling process uses the sense of unease among the problem owners about the results of the current model as a signal that further modeling may be needed, or that intuition may be wrong. If exploration of the discrepancy between holistic judgment and model results shows the model to be at fault, then the model is not requisite – it is not yet sufficient to solve the problem. The model can be considered requisite only when no new intuitions emerge about the problem”

Despite the argument that soft and hard OR are underpinned by fundamentally different ontologies (theories and assumption about the world, (Checkland, 1981)) we believe that 'softer' scenario planning and 'harder' multi attribute decision analysis can bring complementary benefits to the strategic planning process. The former can provide the stimulus to “future focussed thinking” (Wright and Goodwin, 1999) and the latter can enable a thorough appraisal of the strategic options. It can achieve this by providing a collection of formal, logical, axiom-based procedures for appraising options. Its approach enables complex problems to be decomposed into separate parts so that the decision maker's judgment can be focussed, in turn, on each relatively simple part. These decomposed judgments are then aggregated, consistent with the axioms of decision analysis, so that an overall comparison can be made between the options. This approach has been referred to as a 'divide and conquer' orientation of decision analysis (Keeney, 1982).

The notion of combining hard and soft OR approaches is not new. For example, Mingers and Gill (1997) argue that “using two or more management science methodologies [multimethodology] in the same intervention is likely to produce a richer picture for "seeing and understanding the complex web of relationships and interconnectivities" which is likely to lead to better decision taking by managers and workers.” They argue this while still acknowledging the different philosophical underpinning of the various methodologies. More recently, Brown et al., (2006)) describe the complementary application of hard and soft methods in a review of the British personal taxation system. The authors, who used the soft and hard OR in parallel, reported that the interaction between the approaches led to a synergy which enhanced the understanding and validation of outcomes.

How can we exploit the complementary strengths of scenario planning and decision analysis? While the parallel application of hard and soft methods brought benefits in Brown et al's (2006) study, we believe that in the strategic planning context the soft and hard approaches should be used sequentially with the soft preceding the hard. There are a number of reasons for this. The focus of 'conventional' decision analysis is on comparing alternative courses of actions that are drawn from a restricted set of alternatives, by evaluating outcomes that are predicated on these alternatives, Thus the effect of using decision analysis too early in the planning process might be to constrain: i) the diversity of possible futures that can be envisaged (e.g. see, Fischhoff *et al.s'* (1978) 'out of sight, out of mind' phenomenon) and ii) the design of novel courses of action that may be superior to those originally considered. Such an approach is likely to reinforce the existing view of the world. Indeed, as a more detailed decision model is developed during the analyst/decision maker interaction, misplaced confidence in this worldview may be

increased (Tversky and Kahneman, 1983). In contrast, as we have seen, the prior use of scenario planning should promote alternative views about the nature of the future and stimulate the subsequent creation of enhanced decision options. The subsequent use of multi-attribute decision analysis should then enable insightful evaluation of strategic options taking into account the full set of identified objectives and scenarios (see Goodwin and Wright, 2001, for an example of how this decision analytic approach can be used to complement scenario planning).

Of course, there will be limitations to the decision analysis approach in some contexts. The process of quantitatively evaluating options across different scenarios will be time consuming, especially when the model is revised as managers learn more about the decision problem. Some managers may also have an aversion to use of numbers to measure the performance of options on objectives which are qualitative in nature. Also, the method is likely to require the input of weights to reflect the relative importance of the objectives to the decision and some managers may find that assessing the weights is a demanding task. Models are likely to be more acceptable when they are transparent and relatively simple, but such simplicity can usually be only be obtained by approximating the real problem. For example, the simplest models assume that an option's performance across the objectives can be measured by using a linear additive scoring rule. Such a rule would preclude interactions between an option's performances on different objectives. Nevertheless, we emphasise that we propose decision analysis as a method to *support* strategic decision makers, not to replace them. Its aim is not to produce 'optimal' decisions but to foster understanding, insights and creativity and to challenge intuition. This can be

often be achieved by using simple models with known approximations and limitations.

#### **4. Conclusion**

In this paper, we have reprised O' Brien's identification of pitfalls in teaching student groups how to develop scenarios and her remedies to overcome these pitfalls. The pitfalls that she identified were (i) predictability of factor choices, (ii) predictability of theme selections (iii) focus on current/high profile issues, (iv) typical implicit assumptions, and (v) unimaginative presentation. In addressing these pitfalls, O'Brien called for three process adaptations, related to: first, critical engagement with the centrality of participants' world-views, second, explicit exhortation to be 'more creative' and , third, offer of supporting mechanisms to enhance creativity. In considering both O'Brien's pitfalls and remedies, we have outlined further issues and proposed solutions based upon our own experience in teaching and practice. Specifically, we consider that O'Brien's (2004: 716) attempt to move thinking beyond the myopic and the consideration of the immediate by calling upon participants to identify "a minimum of 40 uncertain factors plus a smaller number of predetermined elements" is constraining upon the very creativity that she advocates. In order to elicit the widest possible range of factors, whilst enabling them to be considered in relation to one another without selection and exclusion, we offer enhancement of the scenario process framework. In our paper, we have documented the development of decision-focused, rather than global scenarios, and have argued that such a contextualisation will tend to result in the generation of

scenarios that do not simply anchor on the basic PEST or STEEP dimensions. Additionally, the identification of “cross-disciplinary clusters” and causal linkages between cluster elements helps to provide a basis for scenario storyline development. A subsequent step in our scenario development methodology was to identify high-impact and low-predictability in the cross-disciplinary cluster headings. We also advocate the use of “remarkable people” and stakeholder analysis to enhance scenario development. Also, round-robin elicitation of ideas from members of the scenario team aids the creation of scenario storylines. At the same time, “knowledge” gained from internet resources should be viewed and interpreted with thoughtfulness and vigilance. Whilst accepting O’Brien’s call for greater creativity and expansion of the boundaries of thinking in development of scenario stories, we consider that creativity in the story presentation is not, in itself, sufficient, but that scenario stories must be seen to be both engaging and plausible, and challenging of yet set within the boundaries of possibility. The overall focus of our approach to scenario building is thus to create plausible, causally-related storylines that can provoke an “organisation jolt”.

Finally, we suggest that it is psychologically difficult to evaluate the robustness of strategy against constructed scenarios in an holistic way. We do not see scenario method as a means of developing and offering stories of what the future will necessarily be. Rather, we see it as a means of better understanding the nature of the present and for offering multiple perspectives on complex organizational problems. For this reason, we advocate the use of multi-attribute value analysis at this, final, stage of scenario development. Such a combination of “soft” and “hard” approaches to decision making in the face of uncertainty provides a useful alternative to the conventional application of decision analysis.

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Our aim in this paper has been to build upon the contribution of O'Brien's (2004) paper on scenario method and to offer some additional insights into both the pitfalls of the approach and ways in which they might be addressed both in teaching and practice.

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## References

- Bennett P.G, Huxham C.S, Hypergames and what they do: A 'soft OR approach'.  
Journal of the Operational Research Society 1982; 33 (1); 41-50
- Beech N, Cairns G. Coping with change: the role of postdichotomous ontologies. Human Relations 2001; 55; 999-819.
- Berger P.L, Luckmann T. *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*. New York: Anchor Books-Doubleday; 1966
- Brown J, Cooper C, Pidd M. A taxing problem: the complementary use of hard and soft OR in the public sector. European Journal of Operational Research. 2006; 172; 666-679.
- Burt G, Wright G, Bradfield B, Cairns G, and van der Heijden K. The role of scenario planning in exploring the environment in view of the limitations of PEST and its derivatives. International Studies of Management and Organization, in press
- Cairns G, Wright G, van der Heijden K, Burt G and Bradfield R, The application of scenario planning to internally-generated e-government futures. Technological Forecasting and Social Change 2004; 71; 217-238
- Checkland PB. Systems thinking, systems practice. Wiley: Chichester;1981
- Eden, C. Strategic Management as a Social Process. Journal of Management Studies 1992; 29; 799-811.
- Fischhoff B, Slovic P, Lichtenstein, S. Fault Trees: sensitivity of estimated failure probabilities to problem representation. Journal of Experimental Psychology: Human Perception and Performance 1978; 4; 330-344

- Fishburn P. Nontransitive preferences in decision theory. *Journal of Risk and Uncertainty* 1991; 4; 113-125
- Goodwin P and Wright G, Enhancing strategy evaluation in scenario planning : A role for decision analysis. *Journal of Management Studies* 2001; 38;1-16
- Goodwin P, Wright G. *Decision analysis for management judgment*, 3<sup>rd</sup> edition. Wiley: Chichester; 2004.
- van der Heijden, K. *Scenarios, the Art of Strategic Conversation*. Chichester, UK: Wiley;1996
- van der Heijden, K., Bradfield, R., Burt, G., Cairns, G. and Wright, G. *The Sixth Sense: Accelerating Organizational Learning with Scenarios*. Chichester, UK: Wiley; 2002
- Hogarth R. *Judgement and choice*, 2<sup>nd</sup> edition. Wiley: Chichester; 1987
- Keeney RL. Decision Analysis: an Overview. *Operations Research* 1982; 30; 803–837
- Liebl F. The anatomy of complex societal problems and its implications for OR. *Journal of the Operational Research Society* 2002; 53;161-184.
- March, J. and Simon, H. *Organization*. New York: John Wiley and Son; 1958
- Mingers J, Gill A. Multimethodology: towards theory and practice for mixing and matching methodologies. Wiley: Chichester; 1997.
- Mir R, Watson A. Strategic Management and the Philosophy of Science: The Case for a Constructionist Methodology. *Strategic Management Journal* 2000, 21(9): 941-953.
- Montgomery C.A., Wernerfelt B., and Balakrishnan S. Strategy content and the research process: a critique and a commentary. *Strategic Management Journal* 1989;10(2); 189-197.
- O'Brien F.A. Scenario planning – lessons for practice from teaching and learning. *European Journal of Operational Research* 152; 2004; 709-722
- Phillips LD. A Theory of Requisite Decision Models. *Acta Psychologica* 1984; 56; 29–48.
- Powell JH, Swart J. This is what the fuss is about: a systemic modelling for organisational knowing. *Journal of Knowledge Management* 2005; 9; 45-58.
- Rosenhead J, Mingers J. *Rational Analysis for a Problematic World Revisited*. Wiley, Chichester; 2001
- Rhyne R. Technological forecasting with alternative whole future projections. *Technological Forecasting and Social Change* 1974; 6; 133-162.
- Smircich, L, Stubbart C. Strategic Management in an Enacted World. *Academy of Management Review* 1985; 10 (4); 724-736



- Schwartz, P. *The Art of the Long View: Planning for the future in an uncertain world*. New York: Currency Doubleday; 1991
- Swart J, Powell JH. Men and measures: capturing knowledge requirements in firms through qualitative system modelling. *Journal of the Operational Research Society* 2006; 57; 10-21
- Tversky A. Intransitivity of preferences. *Psychological Review* 1969; 76; 31-48.
- Tversky A. Elimination by aspects: a theory of choice, *Psychological Review* 1972; 79; 281-299.
- Tversky A, Kahneman D. Judgment under uncertainty: heuristics and biases. *Science* 1974; 185; 1124-1131.
- Tversky A, Kahneman D. Extensional versus intuitive reasoning: the conjunction fallacy in probability judgment. *Psychological Review*. 1983; 90; 293-315.
- Weick, K.E. *The Social Psychology of Organising*. New York: McGraw Hill; 1979
- Weick, K.E. *Sensemaking in Organizations*. London: Sage Publications Ltd; 1995
- Wright G and Goodwin P, Future-focussed thinking: combining decision analysis and scenario planning *Journal of MultiCriteria Decision Analysis* 1999; 8; 311-321.

<b>Social</b>	<ul style="list-style-type: none"> <li>Cultural misconceptions in treating disease</li> <li>Educated classes stay or migrate</li> <li>(Non-)acceptance of AIDS/HIV by political leaders</li> <li>Cultural differences between African peoples</li> <li>Learning and reuse of knowledge in SSA context</li> <li>Multi-nationals involvement in supporting education</li> <li>Age profile of African populace skewed towards younger people</li> <li>Mindset for success or failure</li> <li>Tiered pricing of drugs</li> <li>Education leads to employment opportunity and growth</li> </ul>
<b>Technological</b>	<ul style="list-style-type: none"> <li>Availability of effective treatment for malaria</li> <li>Availability of wireless technologies at reasonable cost</li> <li>Falling cost of IT hardware and infrastructure</li> <li>Exploitation of new and renewable energy sources</li> <li>Commitment of governments to address food shortages</li> <li>ICT infrastructure</li> <li>Access to preferential price strategies on antiviral drugs</li> </ul>
<b>Economic</b>	<ul style="list-style-type: none"> <li>Reliance on aid from 'developed' countries</li> <li>Reduction in debt burden</li> <li>Development of local industries and resources</li> <li>Trade barriers</li> <li>Population migration</li> <li>Monetary policies</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>Compliance with Kyoto agreement</li> <li>Changes in global warming</li> <li>Water management strategies</li> <li>Conflict caused by cross-border energy resources</li> <li>Development of bio-mass energy capabilities</li> </ul>
<b>Political</b>	<ul style="list-style-type: none"> <li>Regime legitimacy in Zimbabwe</li> <li>Impact of African Growth and Opportunity Act (AGOA)</li> <li>Involvement of religious organisations</li> <li>Filling void left by years of colonialism</li> <li>Changing access to secondary/tertiary education</li> <li>Transparency of governance systems</li> <li>GDP percentage spent on defence</li> </ul>
<b>Legal</b>	<ul style="list-style-type: none"> <li>Relaxation or tightening regulation of aid provision</li> <li>Tackling corruption through legislation</li> <li>Refugee status</li> <li>Managed access to intellectual property</li> <li>Licensing of software</li> <li>Movement to improvement in judicial practices</li> <li>Dissemination of uniform legal practices</li> <li>Institutional control of market economies</li> </ul>

Figure 1 – Examples from list of 81 factors identified through STEEP-derived analysis.

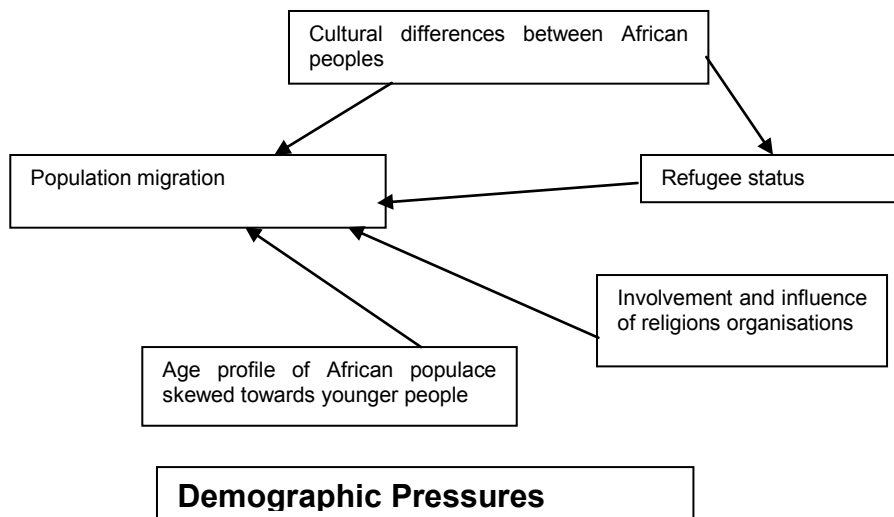
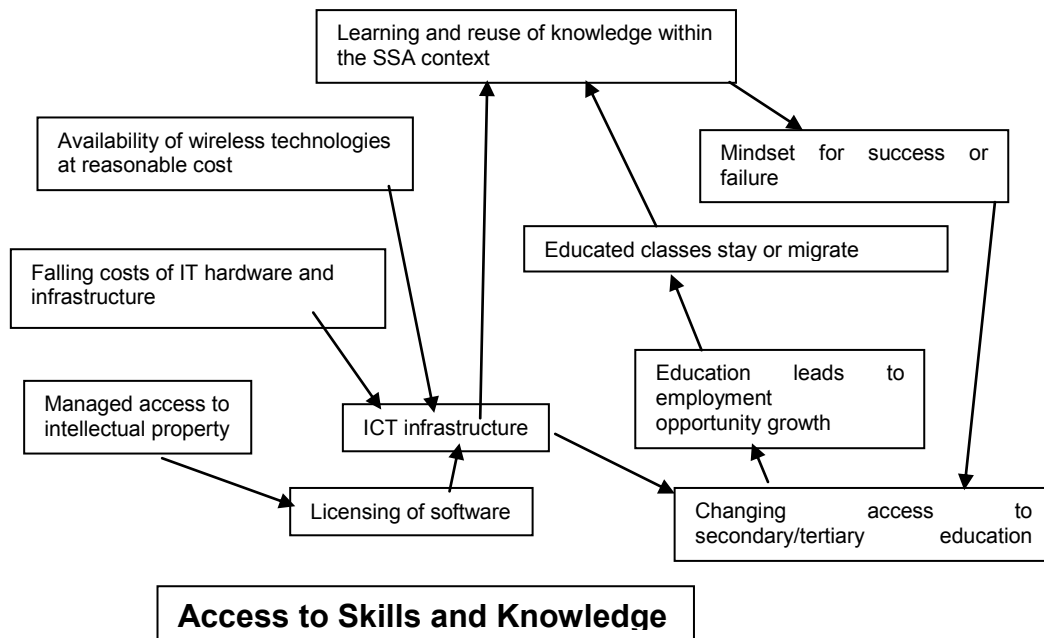


Figure 2 – Examples of clustering of factors beyond PEST listings in Figure 1.

### The scenario approach - (un)certainty

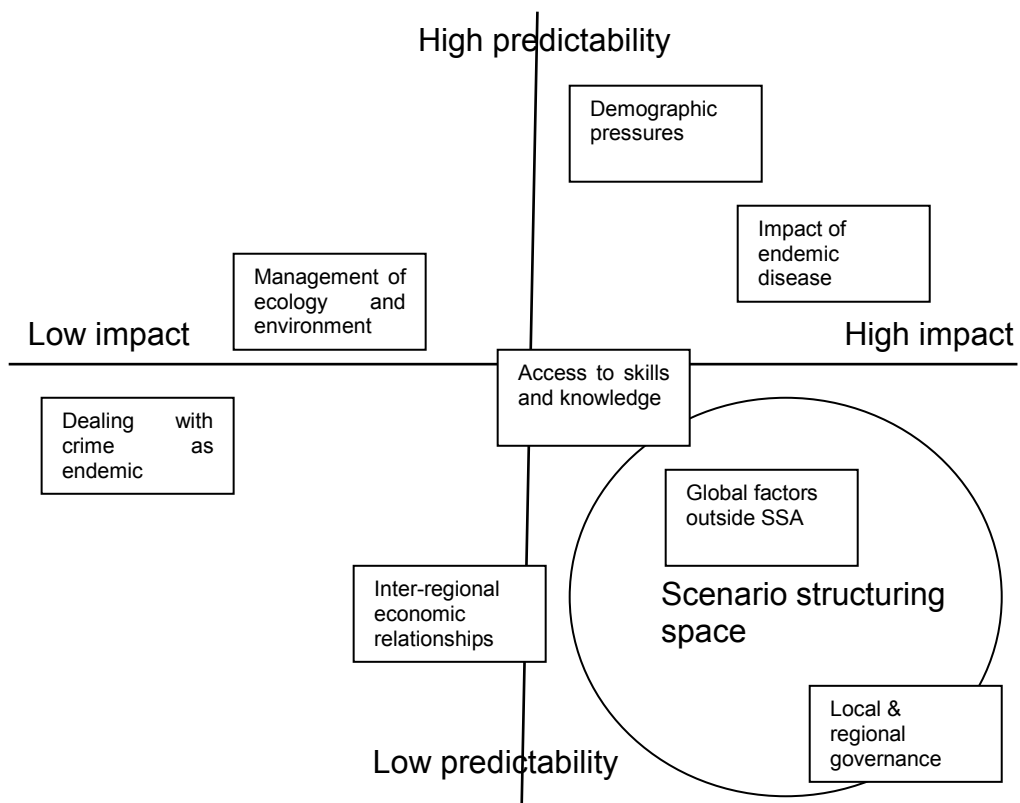


Figure 3 – Impact/predictability matrix and the ‘scenario structuring space’

Plausible outcome	Possible scenario dimension	Plausible outcome
Outcome A1: <i>Wasteful/corrupt</i> <i>Dependent</i> <i>Politically unstable</i> <i>Procrastination</i>	Dimension A: <i>Local and regional governance</i>	Outcome A2: <i>Peaceful collaboration</i> <i>Effective governance</i> <i>Political stability</i> <i>Corruption controlled</i>
Outcome B1: <i>Willingness to help</i> <i>External prosperity and peace</i> <i>Debt relief</i> <i>Fair trade conditions</i>	Dimension B: <i>Impact of global factors outside SSA</i>	Outcome B2: <i>Lack of interest</i> <i>Protectionism</i> <i>Global unrest</i> <i>Economic slowdown</i>

Figure 4 – Plausible outcomes from two identified scenario dimensions

Figure 5: Scenario Extracts\*

## Summary of Scenario A1B2 entitled “ Open Wound”

This scenario shows that over the course of the 10 year period under consideration, the health and education environment has gone from an already poor situation to an almost total breakdown in the majority of countries in the region. The infection rate of AIDS/HIV in the general population has reached 35%, and is exceeding 40% in the worst hit areas. The rate of infection, combined with an increasing ‘brain drain’ has led to acute shortages of education and healthcare professionals. Conflicts which were thought to be close to resolution in 2003 have flared up with renewed vigour, and others have erupted, affecting virtually every country in the region, leading to widespread breakdowns in the education system, and overwhelming what medical facilities still exist.

The move towards the establishment of multi-party democracies across the region in the 1990s has faltered and regressed with increasing levels of conflict and corruption. There is very limited foreign investment, and what does exist is exploitative, with none of the revenue remaining in SSA. Recession in the global economic environment has led to large drops in aid funding, and debt has spiralled. Trade with an increasingly isolationist and protectionist United States has fallen to an all time low, and looks set to fall further.

At the end of the ten year period, there has been fragmentation of virtually all of the multi-national African organisations, and an explosion in conflict. It is difficult to envisage anything other than a further degradation of health and education. AIDS/HIV infection rates have hit all time highs, endemic diseases such as malaria have re-surfaced, and the number of children in education has fallen to an all time low. The region as a whole looks to be entering a period driven by conflict and lawlessness. Most of the major aid agencies have withdrawn after several instances of workers being murdered.

*This summary was followed by a full 2000-word exposition of the scenario storyline, with events, causal relationships, and reference to specific countries, people, etc.*

It should be noted that the full version of this, largely, pessimistic scenario starts with optimistic moves:

- “the introduction of French peace keeping forces in the Democratic Republic of Congo, along with moves towards the establishment of the transnational government headed by Joseph Kabila seemed to provide some hope.....” However, it moves on to discuss “...the first clashes between French peacekeeping forces and local militias in mid June... was a portent of things to come.” Later, “Most of the major aid agencies had long since withdrawn personnel from the region following on from the killings of several International Red Cross workers in May 2007.”

Figure 5: continued

## Summary of Scenario A2B2 entitled “Self Help”

In this scenario, the future is where the region has enjoyed stable governance, despite external global influences not being helpful. The scenario gets its title because it offered SSA hope of steady progress, albeit on its own terms; in a way, relatively independent of the rest of the world. A recurring theme in this scenario is the empowering of the population, and this will have had to happen via several interrelated threads, whereby society develops in a peaceful, self-sustaining way.

Extracts from main storyline:

“Even though SSA is enormous, two key events went a long way to generating a spirit of optimism that allowed real progress to be made across the region over the decade. The first was the resolution of the political unrest in Zimbabwe at the end of 2003, and the bedding in of a new government over the following year. The second... was the cessation of the conflict in the Democratic Republic of Congo... at a time when the UN appeared completely powerless, and bogged down with bitter recriminations between the members of its Security Council over the reconstruction of post-war Iraq.”

“...while the African Union was quietly getting on with the business of getting its own house in order, and re-establishing the rule of law... the developed world was increasingly preoccupied with its fear of international terrorism, the single issue which dominated the run-up to the US Presidential elections of 2008.”

“...particular emphasis was place right away on spending to educate the population in birth control and sexual health. Healthy diets and healthy sexual practices were also effectively and vigorously promoted.”

“Despite the positive, sustainable outcomes that have been outlined so far, it is worth considering how the development could be regarded as quite fragile. Essentially, it has been dependent on the global community having acted in a benign or neutral way to SSA, and it is worth spending some time thinking about what might have happened should there have been global instability and/or continuing global economic decline.”

It should be noted that this scenario provides an interesting mix of internal drivers within SSA , coupled with a dis-interested world beyond.

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\*Extracts from scenarios constructed by Strathclyde MBA students: Janyan Tan, Moira Kennedy, Jim Brown, Derek Henderson, David Bain and Neil Watson.

