

# Scenario planning as a strategy technique

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*Scenario techniques have been available as strategy tools for 30 years. However, despite their ability to help managers distinguish critical signals from general environmental noise, they have failed to become widely adopted in companies' planning processes. This paper will consider some reasons for this failure and will argue for greater use of what is a very relevant tool in business environments that are increasingly complex, changing and global.*



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## Introduction

Scenarios were first developed and used as business planning tools as long ago as the 1960s and 1970s. Since then they have been adopted and permanently embedded in planning cycles and procedures by some long-term believers like Shell (the Anglo/Dutch Global Oil Group), but have not become a widely used technique in businesses generally. Governments, NGOs, countries and think-tanks publish their scenarios, whereas the majority of companies usually do not, making it difficult to judge how widespread their use truly is. A survey in 1979 (Klein and Linneman, 1981) estimated that between 8% and 22% of the Fortune 1000 had made some use of scenarios.

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Another survey in 1983 among European companies (Malaska et al., 1983) showed a higher percentage of users, when it was also noted that the definition of scenarios varied widely as well as the way that scenarios were used.

Consultants and futurists, however, report their frustrations with managers who do not maximise the return they might get from using scenarios more widely in their organisations. Among MBA students and executives, there is a general lack of exposure to scenario thinking compared with the generally well-known 'five forces' model from Michael Porter of Harvard and the ubiquitous PEST framework (i.e. political, economic, social and technological drivers of environmental change). This apparent lack of use of the technique is not due to poor support in books and literature. In fact Michael Porter wrote positively and in some detail about what he called Industry Scenarios at the same time as he was publicising his other strategy models (Porter, 1985), which have become widely adopted and used by management.

Scenario techniques are very flexible. They can be applied to almost any business issue that contains degrees of uncertainty. They are best known for their corporate, high-level, global and long-term use, but the techniques can be used to answer very specific issues of competitive strategy, marketing and organisational capability. The paradox is that this very flexibility and widespread

applicability seems to limit their general acceptance in everyday organisational use. It is a difficult technique to define and describe. There are different schools of thought about what scenarios are for, how scenarios should be built and when they should be used. There are reasons why managers will resist or reject using the technique.

This paper explores the potential of scenario planning as a strategy tool. It highlights the obstacles to its use as well as the benefits of adopting the practice. The aim is to help managers make an informed decision about if and when to include scenario thinking in their strategy process.

## What is scenario planning?

It was Herman Khan and his associates at the US company the Rand Corporation, in the 1950s and 1960s, who first started building scenarios. Their objective was to explore how nuclear war might erupt between the USA and the Soviet Union by describing possible logical paths to different outcomes in the future. Khan pioneered the technique of 'future-now' thinking, aiming through the use of detailed analysis plus imagination, to be able to write a report in the present as if it was being written at some date in the future. The name 'scenario' was given to these stories by the writer Leo Rosten, which he suggested on the basis of Hollywood terminology. Khan was attracted to the term because of its emphasis on creating stories since he was trying to avoid his future reports being seen as a series of forecasts (Ringland, 1998). Into the 1970s the technique was extended, by Khan at Rand Corporation and later at the Hudson Institute (an American think-tank, which Khan set up) for corporate use and for application to thinking about societies in general.

General Electric (the US conglomerate) was one of the first companies to use the technique in the 1960s and 1970s, but it was Pierre Wack at Shell and Peter Schwartz at SRI International (Stanford Research Institute at Stanford University) during the 1970s and 1980s who really introduced scenario planning to management as a strategy tool. Pierre Wack's classic *Harvard Business Review* articles describing Shell's work during this period were published in 1985.

### Intuitive style

The approach taken by Shell and SRI mirrored Khan's philosophy that scenarios were *not* forecasts or predictions about the future, in fact quite the

opposite, they were built from the belief that the future was uncertain and unknowable. As Peter Schwartz (1991) emphasises in his book, 'The end result is not an accurate picture of tomorrow, but better decisions about the future'. The idea was to construct credible pictures of a point in the future that could be used to test the robustness of longer-term strategies. The concept was predicated on the experience these thinkers had of the poor accuracy of forecasts. They argued that forecasts were extensions of past experience and trends which were only reliable in relatively stable environments and that these were increasingly irrelevant in the business world. Also, forecasting had no mechanism for searching for discontinuities or major changes, which were of significant interest to strategists.

Shell and SRI developed Khan's original idea and espoused a specific approach to building scenarios, one that favoured storytelling, creative thinking, imagination, informal methodology and the use of qualitative, subjective information. This 'school' of scenario planning has been described as 'intuitive' (as compared with 'formal') (van Notten et al., 2003). Practitioners and proponents of this school acknowledge that at least part of their scenario process is 'art', as can be witnessed in the titles of their books and papers: *The Art of the Long View* (Schwartz, 1991), *The Art of Strategic Conversation* (van der Heijden, 1996) and 'The gentle art of re-perceiving' (Wack, 1985).

Peter Schwartz defined scenarios as: 'alternative, plausible stories of how the world may develop'. He emphasised that the outcome was not an accurate forecast of future events, but a deep understanding of the forces that might push the future along different paths. As an example he cited Shell's Group Scenarios of 1983, called: Incrementalism and the Greening of Russia. The Greening of Russia scenario told about a virtually unknown man coming to power followed by a massive economic and political restructuring in Russia. It was not that this man, as an individual, would cause the changes. Rather, that his arrival in power would be a symptom of a set of underlying causes and circumstances.

The Greening of Russia story also provides a good example of why Shell revise and renew their scenarios every two to three years. Shell's practice is to share current scenarios with external bodies and when the Greening of Russia was presented to Soviet experts in government agencies, it was almost universally rejected as implausible. The problem that the Soviet experts had with Shell's story was one that is common to managers in

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organisations and people everywhere, which is that views about the world are formed from the present, from the reality of today. Managers make sense of the world by looking at it through eyes which reflect their own mental maps. The world looks different according to the knowledge and experience that they have, according to the thoughts that influence them and the way other people around them think. It is on the basis of this 'selective' reality (i.e. limited information) that strategists derive strategies, marketers make plans and managers allocate resources. Schwartz and Shell proposed that building scenarios enabled management to challenge the implicit assumptions that were held commonly in the organisational mindset and to broaden their views. By building alternative scenarios – different pictures of the future – and challenging strategies for robustness in these different possibilities, managers would have a superior context for developing long-term strategies and for developing shorter-term contingency plans.

#### **Formal style**

Whilst Khan's work evolved into the intuitive approach adopted by Shell and SRI, another style of scenario building was emerging. Two of Khan's colleagues from Rand Corporation developed tools, expert judgement and cross-impact analysis, for use in 'formal' scenario building when they moved to the University of Southern California. This approach to scenario planning emphasised the use of computers, models and processes grounded in analytical rigour. In the 1980s this methodology was adapted by Battelle, the US-based consulting

group. A new process was developed by Battelle plus a software product (now called Interactive Future Simulations) to support it. Analysis and calculation form the basis of this style of scenario methodology which was very different from the more informal, creative, imaginative school practised by Shell and SRI.

Meanwhile, during the 1970s, the Futures Group (a US strategy and policy research firm) developed another approach to scenario planning, based on trend-impact analysis. This evolved further when adapted by consultants Deloitte & Touche, by adding aspects of the Shell/SRI process.

One of the reasons why scenarios are not adopted more widely is this divergent set of methodologies and the different emphases on quantitative or qualitative input. It is difficult for managers to sift through the different approaches and know, with confidence, which one to adopt for which business issue. Also, while the division into 'intuitive' and 'formal' styles helps potential users understand different methodologies, it is also misleading. Shell, for example, while naturally aligned with the intuitive school, would argue that its stories are *credible* and built on formal analysis, trend data and quantitative information as well as subjective ideas, feelings and imagination. The example presented in Ringland's (1998) book to describe the Battelle process shows that managerial judgement is a fundamental part of the input to computed simulations.

Therefore, describing what scenario planning is and choosing a scenario process is not straightforward. To quote Schoemaker (1993): 'The term scenario has many meanings, ranging from movie scripts and loose projections to statistical combinations of uncertainties'.

## **Scenario thinking and scenario planning**

In a review of 70 scenario studies, van Notten et al. (2003) proposed a classification of scenarios along several continuums. One of these was the 'formal' and 'intuitive' classification discussed above. Another addressed the *purpose* behind starting on a scenario planning exercise. Their research revealed a range of reasons why organisations embraced scenario planning, stretching from *exploration* to *decision support*.

At the exploration end of the continuum, the key objective for organisations in engaging in a scenario process is the potential to learn. Living

through the process of: formulating the business question or issue; data collection and gathering; assimilating the information and crafting narratives or generating modelled outcomes, is essentially a learning process. Those involved broaden and deepen their understanding of the forces driving the business, of the trends which might influence the future of the organisation, or gain a better knowledge of some of the uncertainties that could impact the business. When used for this purpose, the process itself becomes very important, at least as important as the scenario outcomes and the implications for future strategies.

#### **Adding probabilities to support decision-making**

The opposite view is that building scenarios is not the primary purpose, rather it is applying the outcomes to strategy making that is important, i.e. using the scenarios to support strategic decisions. When this is the purpose of engaging with a scenario exercise, it is common to find probabilities attached to the various scenario outcomes. For example, four scenarios were developed by Battelle in 1988 for a US IT company which had successful businesses in Europe (Millett, 1992). The CEO of the IT company was interested in how the convergence of the European Community toward a single market after 1992 would affect the European businesses. He was clear that the objective was to develop different possible future market environments within which he and his team could formulate strategic directions and contingency strategies. Of the four scenarios generated, one was described as the 'most likely' and was called 'EC 1992 Works'. This painted a relatively optimistic story of the EC attaining many of its market cohesion goals by the end of 1992. In this scenario, the level of IT market growth was estimated as medium to high. A second scenario was titled 'EC 1992 Disappoints' and painted a picture of a slower evolution toward a single market. In this scenario, moderate IT growth could be anticipated. 'The EC Fails' was the pessimistic story where no real progress was made and consequently IT growth would be poor. Finally, scenario four was called 'The US of Europe' and set the scene for better than expected attainment of all the goals of the Community and where IT market growth would be very high.

As a result of this exercise, the company implemented various strategic moves including: expanding its presence in Europe, especially its marketing and service networks with the aim of maintaining close customer contact; committing to

an office in Brussels; and revising and extending the scenario thinking to 1995.

#### **Reasons to actively avoid adding probabilities**

Purists from the 'scenarios as learning' school argue strongly against adding probabilities to scenarios. The underpinning philosophy they adhere to is to allow the mind to open and 'think the unthinkable', i.e. think outside of the existing organisational paradigm. This is why Shell makes a distinction between Scenario Planning and Scenario Thinking: 'Scenarios ... are stories that are concerned more with strategic thinking than with strategic planning, and more specifically with the quality of the thinking. As we enter these alternative stories, we are guided to practise a flexible approach to the future and to alter our mental maps. Scenarios attempt to look beyond our more limited mind-sets, recognising that possibilities are influenced by a wide range of people and that many views of the world are different from our own' (Davis, 2000).

Proponents of this use of scenarios argue that strategies should be tested for their robustness in *all* the alternative futures that scenario thinking generates. It is not about choosing which one is more probable. Advocates of the learning style argue that adding probabilities turns the scenarios into forecasts. Therefore, when used for learning and for challenging the prevailing organisational mindset, the advice is to avoid probabilities or calculations of 'likeliness', which are typical of the decision support notion. To prevent any chance of this happening, Shell only present two scenarios at each strategy review. Experience has shown that if three scenarios are produced, there is a tendency for the optimistic, pessimistic and compromise 'most likely' stories to be the result. The compromise story is then used as the basis for further strategic planning and the original purpose of stretching minds and challenging assumptions is lost as managers take the 'easy' middle-of-the-road option which is probably very close to the ideas they held – the organisational paradigm – before starting on the scenario exercise. As Porter (1985) pointed out: 'Every plan is based on an industry scenario in one form or another, though the process is frequently an implicit one'. He was an advocate for practising scenario techniques in strategy formulation. He recognised that the assumptions managers used as background to generating their strategies were rarely made explicit or challenged. By acknowledging the uncertainties, he foresaw much improved strategy outcomes.

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Shell's aim in restricting their global strategies to two is to tell alternative stories which will strike a balance between provoking thinking while not being rejected as fanciful escapes from reality (see below for the importance of attaining this balance). The two scenarios they produce are both plausible and credible stories about the future. Managers are asked to construct strategies that will be robust in either world.

## Level of analysis

Scenarios have been developed for countries, for regions, for issues (the future of crime, the future of women) and for institutions. Among those examples developed for organisations, there can be many levels of analysis, from global, external, environmental to focused, internal issues. The length of the time period considered tends to correlate with the scale and scope of the exercise. For example, compare the World Business Council for Sustainable Development scenarios 2000–2050 (Davis, 2000) with Porter's (1985) theoretical example using scenario analysis to develop a competitive strategy for the US chain saw industry in 1973.

### **Global, complex, long-term scenarios**

The World Business Council's scenarios have a fifty-year time horizon and were produced in order to: 'explore sustainability at this juncture in human history and to raise fundamental questions of how humanity defines itself and how each one of us comes to terms with the challenges of the 21st century'. From this objective, three scenarios were built as a result of extensive interviews with opinion leaders and companies from around the world. Each of the three stories described possible worlds in 2050 and were called, FROG!, GEOpolity and Jazz. They are summarised in Table 1.

From these different global, long-term pictures of the world, the researchers concluded different challenges for businesses and prescribed very different strategies. The predominant theme of FROG! is that people, institutions, governments, do not engage with the sustainable environment debate. There is a trust in the power of new technology to deliver solutions and a propensity to leave the problems for others to solve. As a result, the environment gradually deteriorates. In this FROG! world, a strategy of preparedness is prescribed, so that if/when there is a 'shock', companies are ready to deal with it. Taking precautions is another part of the strategic advice and being vigilant, attentive and alert for when companies might have to take action. Whereas in Jazz, a world in which economic growth has embodied environmental values, businesses need to get involved early in working with stakeholders on environmental matters. And in GEOpolity, a world where the environment gains significant importance, business strategies need to focus on contributing to and, where possible, shaping the debate about new institutions. In this world, businesses will do best if they are in a position of influence.

### **Focused, narrow scenarios**

A completely different example is to be found in Porter's classic textbook *Competitive Advantage* (1985). He provided a theoretical example of how to use scenario techniques to formulate a competitive strategy for the chain saw industry in the USA in 1973. Whilst he advocated broad thinking about the external environment, he focused on his industry structure model as a framework within which to construct different competitive scenarios. He tested each of the 'five forces' specific to the US chain saw industry at that time for unknown elements and found four of the forces harboured degrees of uncertainty. (See

**TABLE 1: World Business Council scenarios for 2050**

FROG!	<p>Many people live perfectly fine lives in this world, but at the global level, environmental health is deteriorating. Although population growth has been slowing, the world's population exceeds 11 billion people – and this growth together with the growth in economies around the world results in the environmental burden increasing dramatically over what it was in the 1990s. Natural resources are stretched – especially water.</p> <p>There is a rise in health problems and concern about the potential for plagues. Passing notice is given to the disappearance of particular species. The slow deterioration of the environment happens over time, against a background of economic growth, so that whatever signals might have raised the level of public concern tend to be misread. In most cases, these signals are not even observed.</p>
GEOpolity	<p>This is a world of highly coordinated environmental and social initiatives in which the resources and persuasive powers of a number of groups are harnessed for specific actions on a global scale. In response to perceived crises, consensus emerges surprisingly rapidly through highly interactive informal means – especially internet conferences, grassroots interactive cable conferences, and TV-ad broadsides from powerful NGOs. It is a world of big projects and of innovative institution-building.</p>
Jazz	<p>In the world of Jazz, diverse players join in ad hoc alliances to solve social and environmental problems in the most pragmatic way possible. The key note of this scenario is dynamic reciprocity – a give and take that is keenly attuned to the opportunities of the moment and, at the same time, alert to the ways of incorporating long-term values into strategies for commercial success. This is a world of social and technological innovations, experimentation, and a powerful ever-changing global market.</p>

Figure 1 for a summary of the 'uncertain' elements Porter identified.) From the long list this generated, uncertainties were categorised into dependent and independent uncertainties, and dependent ones (e.g. future levels of TV advertising, which was dependent upon the future demand of casual users) were discarded for the purpose of constructing scenarios. As with all scenario methodology, the fundamental forces which are likely to influence and change the structure of the industry are the key building blocks for the scenarios.

Four important, independent uncertainties were identified from this analysis (casual user demand – would it be low, medium or high; how quickly this demand would grow; which distribution channels would be favoured – dealers or non-dealers; and the mix of sales of private label compared with branded chain saws) which when tested for consistency and interaction with each other, generated ten plausible scenario outcomes. From these, highly specific competitor moves could be

played out. For example, one of the scenarios highlighted the possibility that the casual user market for chain saws would not become significant. In this outcome, the question of how key competitors would react was explored. Would they invest in this market anyway? What strategy should near competitors plan to take if they did? Another scenario played out events that led to private label dominance in the casual user market. In this situation, questions were raised about how branded suppliers might react – would they retreat to traditional segments? In another scenario, the casual user market is a fad and competitive advantage can be won if branded suppliers who have served the professional market maintain their strength in this traditional segment and are not tempted into the casual user segment. (For a detailed account of this scenario analysis, see Porter, 1985, Chapter 13.)

The level at which scenarios are constructed, the degree of uncertainty and the scope they set out to embrace are further criteria for dividing

**FIGURE 1: Uncertain elements in the US chain saw industry (adapted from Porter, 1985, p. 454).**

	<p><b>Entry barriers</b></p> <p>Uncertainties include:</p> <ul style="list-style-type: none"> <li>• How high any future scale economies might be, in both manufacturing and marketing.</li> <li>• How easy/difficult it might be to gain access to distribution channels.</li> <li>• Will safety legislation change or be introduced?</li> </ul>	
<p><b>Suppliers</b></p> <p>This force harboured few uncertainties.</p>	<p><b>Rivalry</b></p> <ul style="list-style-type: none"> <li>• What will existing competitors do in response to new entrants?</li> <li>• Will incumbent manufacturers exit?</li> <li>• How fast will the casual market segment grow, peak and reach maturity?</li> </ul>	<p><b>Buyer power</b></p> <ul style="list-style-type: none"> <li>• What level of fixed costs?</li> <li>• The future level of casual user demand is unknown and timing of it.</li> <li>• Which segments will develop relative to others and at which speed?</li> <li>• Will private label take-off?</li> <li>• Price sensitivity of buyers is unknown.</li> <li>• Which channel to market will be favoured?</li> </ul>
	<p><b>Substitutes</b></p> <ul style="list-style-type: none"> <li>• The extent to which electric powered saws will replace petrol-driven chain saws.</li> </ul>	

scenarios into finer taxonomies. Are they global, broad scope and long term as in the World Business Council's scenarios, or are they focused, narrow and short term, more akin to the example Porter provides? Narrow or focused does not mean they exclude uncertainty and does not necessarily imply a reduced number of scenarios as a result – as Porter's worked example demonstrates with ten plausible scenarios generated.

#### **Scenarios are adaptable and flexible in use**

Scenarios at different levels of analysis are often complementary. A first exploratory, broad exercise which looks globally can be supplemented with decision support scenarios focused on investigating a specific issue, industry, business or topic. Porter

extols the virtues of this approach: 'In some industries scenarios are best constructed by starting inside the industry and looking outward for additional sources of uncertainty. In other industries, it is more appropriate to begin with macrosenarios and then narrow the focus to the industry. Macrosenarios can provide important insights into possible industry changes. They can expose possible shifts in macroeconomic, political, or social variables that are not foreseen in a more industry-centred view of the external environment.' By macrosenario, Porter is referring to changes that might occur outside of his industry structure forces, i.e. those that are covered by the PEST model.

Similarly, the World Business Council global scenarios are designed to stimulate broad

discussion on the challenges of sustainable development for business. The recommended next step is for businesses to use these as a platform for more focused industry scenarios which incorporate local business issues. In their turn, the focused scenarios could stimulate the review of existing strategies and creation of new ones.

Scenario techniques are very flexible. They can be applied to almost any business issue that involves degrees of uncertainty. They are best known for their corporate, high-level, global and long-term use, but the technique can be used to answer very specific issues of competitive strategy (illustrated above), marketing problems or problems of organisational capability. Market research for new product development, for example, is cited by Millett (2003) as an area where the use of scenario thinking led to a successful new product launch. He described how, in the mid-1990s, Battelle worked with a household products company to think about cleaning products for the future by exploring consumer trends such as an ageing population, more households with two wage-earners, growing concerns about health and welfare. From these trends emerged future consumer values of convenience, speed and thoroughness that led, at the turn of the millennium, to the successful launch of a new hygienic, disposable wipe for cleaning surfaces effectively and quickly.

A focused scenario technique was similarly used to investigate the next ten years of the UK autogas (liquefied natural gas (LNG) as an environmentally friendly replacement for petrol) market in the light of the development of cleaner petrol, inner-city pollution problems and the prospect of hydrogen-fuelled automobile engines. The scenario outcomes were used to test how effectively the assets, capabilities and culture of the company doing the research could deliver autogas in the different worlds the scenarios described. The same approach was used to highlight significant gaps in the organisational capabilities of a UK insurance company operating in the commercial market segment. Risks for the near-term future if contingencies were not resourced with some degree of urgency were clear in both instances. For example, in the autogas exercise, the flexibility of the logistics capability serving the fuels network could not cope with consumer expectations in two of the three scenarios developed. Given the length of time required to build this capability, it was seen as urgent to make some plans for strategic investments in distribution. This was especially

important since it was clear that the closest competitor was in a stronger position with a more flexible system already in place.

## Why scenario techniques are not used

### Cost

The very flexibility and applicability of scenario techniques appear to mitigate against their use. There are different methodologies to adopt, which to the infrequent user appear confusing. Matching the methodology and the level of analysis to the business issue and the purpose underpinning the exercise is not straightforward. Added to this, there is the commonly held view that a scenario process will be expensive in terms of employing large amounts of resources in the organisation. It often requires multiple inputs and quality is definitely improved if a team is involved. While proponents argue that this broad engagement is beneficial in that more people 'own' the outcome and teams are built in the process, the cost argument is rational and hard to overcome. Millett (2003) suggests that a scenario team might consist of 5–10 people who meet regularly and broaden participation by running workshops. They conduct interviews and have to do research. This could take 50% or 100% of a few managers' time over a period of anything up to six months. Often facilitators or consultants are used. Millett suggests that costs could easily reach US\$600 000 for a six-month exercise, a real reason why SMEs (small and medium-sized enterprises) would choose not to engage in the scenario planning process and why major corporations only use the technique once every three to five years at best.

While there is a significant investment in the broad, large-scale and long-term scenario exercises similar to that completed by the World Business Council, scenarios focused on making shorter-term business decisions more akin to that suggested by Porter are much less resource-intensive. The study for the UK autogas market, for example, was completed by one person, part-time over a period of three months. Ten one-to-one interviews and two workshops were conducted over the period, complemented by desk research. From this work significant insights into the future strategy of the organisation were made. Recommendations included actions that could be implemented immediately plus ones that should be made over the next five years.

Whilst it is clearly important to consider the potential investment and commit to the resources required before engaging in a scenario exercise, the costs need not always be high. One size does not fit all, scenario processes are flexible and can be cut to fit the size of the business issue being addressed.

### **Confidence and uncertainty**

The underpinning philosophy of scenario thinking, that the future is uncertain and cannot be predicted, is often difficult for managers to accept. While it is a common experience that plans go unrealised or need to be changed because of changing external events, confidence in forecasting persists often with the belief that with better models and tools it will even improve over time. Because it is difficult for managers to accept that uncertainty and risk cannot be planned out of the future, they display a preference (a greater acceptance and understanding) for scenario approaches that include adding probabilities. From his experience, Millett (2003) argued that the stubborn avoidance of forecasting and prediction by 'purist' scenario practitioners in their prescribed methodologies was one reason why the technique lacked popularity. The research literature provides explanations of this managerial bias of overconfidence in their ability to predict and control.

Evolutionary psychology theory provides the most fundamental explanation (Cosmides and Tooby, 1997). It asserts that accepting uncertainty, recognising it as inevitable and living with it, goes against the grain of human nature. It is human instinct to downplay risk. Confidence in leaders is a virtue that is appealing and naturally attracts followers. Even before business existed, in pre-industrial and tribal societies, it was beneficial for individuals to display confidence. Gradually, over time, this trait has been selected-for in our population. Evolutionary psychologists explain that as a consequence, the human mind has evolved to be overly confident, which in the highly risky days of our ancient past helped ensure our survival.

Today, in the business world, this characteristic still confers advantage on managers who are often selected as leaders for their confident attitude. The downside, however, is that there is a tendency to believe and act as if no problem is outside management's control. Experience and complexity theory informs us that the world is not controllable and that random events occur frequently, but it is hard-wired into human nature to ignore the evidence that supports this. Organisational life and

strategy itself tend to reinforce these human instincts that everything can be planned and organised. Reality is hard to see and if left unchallenged, our minds will instinctively accept the optimistic view that everything can be controlled (Nicholson, 2000).

Evolutionary psychology also provides an explanation for managers' natural preference for analytical frameworks such as PEST and SWOT (Strengths, Weaknesses, Opportunities and Threats). Survival chances in the ancient past were enhanced if we made swift judgements that could be acted upon quickly. The learning mechanism we evolved to enable us to do this was categorisation or stereotyping. We are therefore, naturally inclined to sort phenomena that are alike, but different, into labelled boxes or onto lists under headings. It is simple, quick and helps make decisions. These are all essential characteristics for survival, but will not give any depth of understanding, thus potentially trapping the individual into a lifetime of reactive strategies.

Schoemaker (1993) investigated the psychological basis of scenario planning. He took as one of his starting points managerial overconfidence: 'Numerous behavioural studies have demonstrated how poorly calibrated people's subjective probability judgements tend to be. The reasons for such overconfidence can be several, ranging from general optimism to corporate or individual blind spots.' From this point he conducted a range of experiments to test how, if people were asked to consider different scenarios, their confidence about their own decisions for the future were affected. He found that when people engaged in scenario thinking their confidence in their own judgements about the future decreased. He also found that people were more open to consider the possibility of events that they had not experienced, could not imagine or could not recall from memory. This meant they became more open to other ideas and views than those they held personally. However, if the scenarios they were presented with were extreme, because they could not be believed, people's beliefs remained unchanged with a tendency to be more anchored to their own ideas.

Therefore, the natural instinct of human beings to be overconfident makes adopting the exploration style of scenario thinking difficult to accept. But, taking this approach does appear to bring the benefits of opening minds to other ideas as well as increasing the doubt management might have in the *one* future they have anticipated in the corporate plan.

Wack (1985) also observed managerial resistance to ambiguity and uncertainty during his working experience with managers practising scenario thinking. He noted that this resistance increased with management seniority. He explained that this was due to senior managers' training and the expectations put on them by the organisation that they should exercise judgement and provide definitive answers, not appear 'weak' with answers of, it might be like this, then again, it might be like that. However, he did consider this to be, at least in part, an outcome of history, senior managers having spent the majority of their careers to that time (he talked about the 1950s and 1960s) within one company and in highly predictable and stable economic environments. He foresaw that the world was changing and that this would influence the experience of future managers, who he anticipated as a result, would become more open to the challenges of complex, turbulent environments.

While most thinkers and managers would agree that the corporate world has become more chaotic, there has also been a trend toward celebrating strong, individual corporate leaders who appear almost single-handedly accountable for corporate direction and strategy, communicated to shareholders and investors with conviction and certainty. These leaders are required to know what value the organisation will deliver to shareholders and investors next quarter, next year and further into the future with clarity. Scenario techniques might not meet the needs of these leadership pressures or fit comfortably with this leadership style, since the scenario building process is powerful because it draws on numerous players and viewpoints and, ideally, it is a consensus building and legitimising device that should not be entrusted entirely to the corporate elite.

#### **Organisational culture and diversity**

In a study by Graetz (2002), different groups of managers from the same telecommunications company were asked to build scenarios around a common issue, following a prescribed process. Prior to the exercise, each individual completed a psychometric assessment designed to analyse preferred style and behaviour in terms of right- and left-brain thinking (rational versus imaginative) and for team working. Comparing the outcomes showed how different styles dominating each group resulted in different emphases in the scenarios produced. The group that performed very poorly at delivering creative, plausible and consistent

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scenarios (the study's criteria for successful scenario outcomes) was one that was dominated by rational thinkers and individuals with no strong predisposition for team work. Where rational, analytic and systematic approaches to problem-solving were not dominant in a group, the scenarios were creative and to some extent, plausible, but lacked consistency.

While this is not surprising, building the team to participate in a scenario exercise appears to be more crucial to the outcome than is the case using other planning tools. It is a methodology that requires multiple inputs in order to generate thought-stimulating outcomes. By its very nature, it will deliver better results if the people gathering and interpreting information for model building or crafting into stories are not limited by a narrow view or single way of thinking. Therefore, organisations that try hard to maintain and respect diversity of views among their managers will find using scenario techniques easier as well as being more likely to deliver quality outcomes. Similarly, employing the technique in these organisations will be particularly useful as a means of engaging the multiple perspectives that exist and embracing them in a framework for thinking about strategy.

A second finding of the same research, however, indicated how difficult diversity of thinking was to achieve. Despite a critical mass of creative thinkers, the dominant culture of this telecommunications company was analytic, rational and systematic. So that when put under pressure, groups that were naturally creative and imaginative changed radically to match the dominant cultural style. The resultant scenarios lacked insight, impact and imagination. Context, culture and capability are, therefore, very important in determining the outcome of a scenario exercise. Existing organisational culture is a particularly powerful influence.

Leaders need to work with balanced teams if scenario outcomes are to embrace both quantitative and qualitative information to deliver valuable insights and open managers' minds to other possibilities. If consultants are introduced into the process, they need to be sympathetic to the needs and the culture of the organisation in tailoring their advice and style. Regardless of whether consultants or internal managers are leading the exercise, the choice about how to proceed might not be straightforward, since a predominately rational, analytical culture would show greater ownership of a formal scenario process. This, however, might not deliver alternatives with significant impact to move management from their current view of reality, and could 'avoid' aspects of reality that are too difficult to measure or incorporate into a very quantitative approach. In other words, what might be 'good' for the organisation might be the most difficult process to put in place and gain acceptance with incumbent managers.

## Conclusion

Strategy is largely formulated for the future and is concerned with the world outside the organisation at least as much as with what is going on within its boundaries. Scenario techniques are one of the few tools strategists have to help them formulate their ideas about both. Environments and futures are increasingly turbulent, uncertain and complex. More than any other strategy tool, scenarios engage with these characteristics rather than ignore them. There is, however, a significant challenge for the leader who chooses to implement a scenario process in harnessing maximum return. Many things mitigate against success, including fundamental human psychology. But the benefits could be significant. No one summarises this better than Schoemaker (1993):

A concerted, collective scenario building effort will give the firm's managers a head start, as well as a conceptual framework within which to scan, encode, update and understand the future as it unfolds. In our age of information

overload, the ability to distinguish signal from noise is a critical skill. But, incisive pattern recognition can only occur if the right mental maps exist in a manager's mind. Scenarios can develop, align and focus such maps.

In a world where competitive advantage is hard to gain and sustain, any process that increases the chances of anticipating and winning this strategic prize must be worth serious consideration.

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