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Living in the Futures

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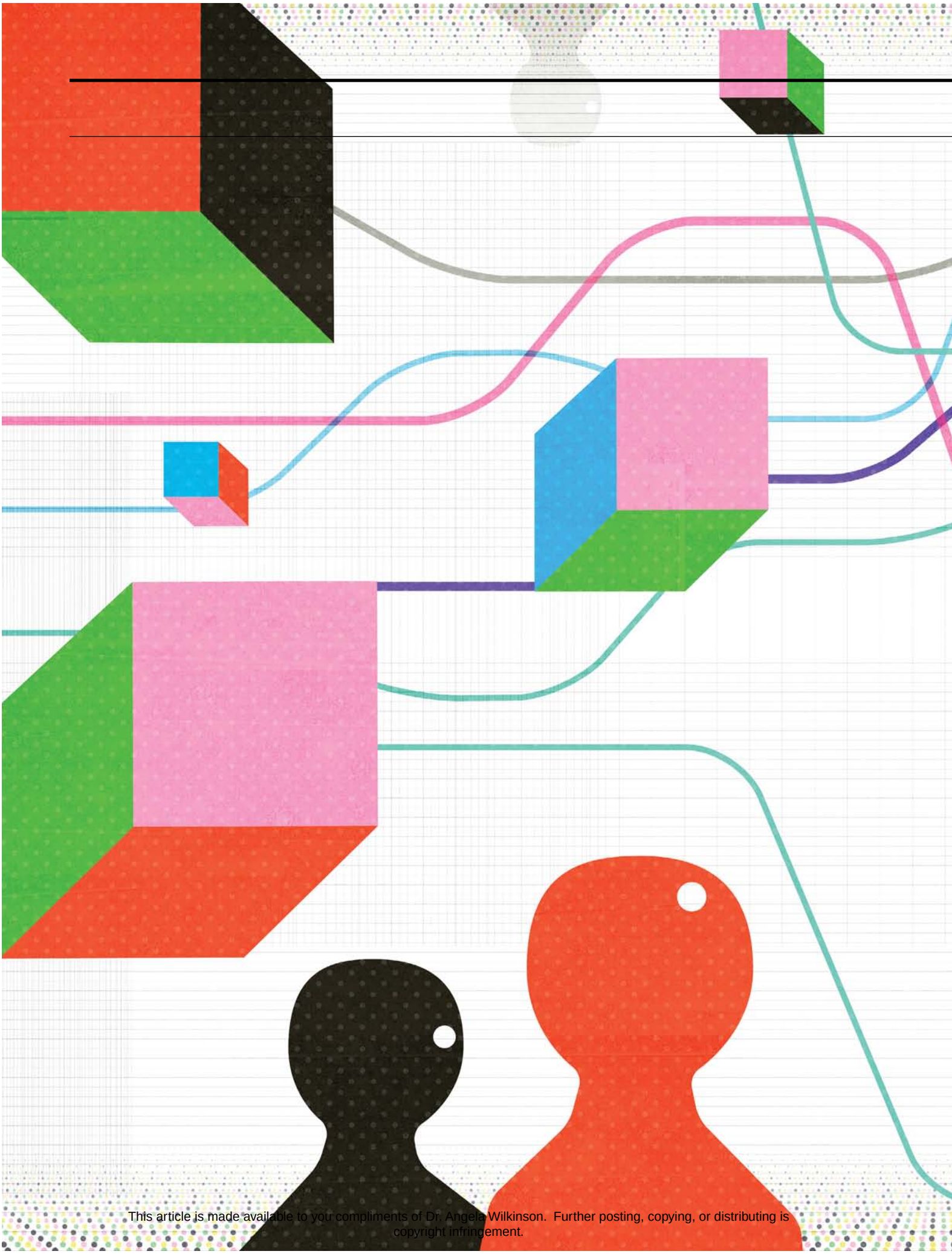
by Angela Wilkinson and Roland Kupers



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LIVING IN THE FUTURES

How scenario planning changed corporate strategy

by Angela Wilkinson and Roland Kupers

In 1965 Royal Dutch Shell put into service what it called the Unified Planning Machinery (UPM), a computer-driven system meant to bring more discipline to the company's cash flow planning. This kind of rational, model-based financial forecasting was very much in vogue in the 1960s. But before long, Shell's top executives realized that many of the commitments they had to make extended well beyond UPM's six-year time horizon—and that even within that horizon, UPM tended to get a lot wrong. In the early 1970s they shut it down.

Things have gone much better for another Shell initiative that was begun in 1965, albeit with far less fanfare. Jimmy Davidson, the head of economics and planning for Shell's exploration and production division, tapped the company veteran Ted Newland to start an activity called Long-Term Studies at the London headquarters. "I was placed in a little cubicle on the 18th floor and told to think about the future,

ILLUSTRATION: JOHN HERSEY

with no real indications of what was required of me," Newland recalls. His appointment marked the start of a remarkable and still ongoing experiment in using scenario planning to engage with an uncertain future.

Under the leadership of Newland and Davidson, who became Shell's first overall head of planning in 1967, the "futures" operation began to take shape. Newland started by delivering a "Year 2000" study report. Then, together with his new colleague Henk Alkema, he began to develop long-term outlooks in the form of alternative futures. The very first oil-price scenarios prepared by this duo were sent to senior executives by mid-1971. Around this time Davidson brought in Pierre Wack, who had been the head of planning for Shell Française, to try to secure the attention and interest of Shell's most senior executives. Wack, a former magazine editor with a bent for Eastern philosophy and mysticism, focused on telling plausible stories about how the wider business context of Shell might develop. Together with Newland he came to define the practice of scenario planning at Shell; each man headed the team at some point during an eventful decade of oil crises and economic turmoil that they and their colleagues had to some extent envisioned ahead of time. (Wack described the development of some of the early scenarios in his article "Scenarios: Uncharted Waters Ahead," HBR September–October 1985.) But Shell-style scenario planning has never really been about predicting the future. Its value lies in how scenarios are embedded in—and provide vital links between—organizational processes such as strategy making, innovation, risk management, public affairs, and leadership development. It has helped break the habit, ingrained in most corporate planning, of assuming that the future will look much like the present. As unthreatening stories, scenarios enable Shell executives to open their minds to previously inconceivable or imperceptible developments.

Scenario planning has now been in use at Shell for more than 45 years, spanning times of great triumph and prominence—especially in the 1970s—but also long stretches during which company leaders struggled to see its value. It has come close to being shut down at least three times. But it has continued to evolve and help shape the company's global thinking about energy and other matters—and, at times, its strategy. For an operation that doesn't contribute directly to the bottom line, and that emphasizes the uncertainty of the future rather than making bold predictions, this is remarkable.

The practice is also enjoying a renaissance outside Shell, with growing evidence of its effectiveness. A recent survey of 77 large companies by René Rohrbeck, of Aarhus University, and Jan Oliver Schwarz, of Germany's EBS Business School, found that formal "strategic foresight" efforts add value through (1) an enhanced capacity to perceive change, (2) an enhanced capacity to interpret and respond to change, (3) influence on other actors, and (4) an enhanced capacity for organizational learning. Two Bain researchers reported in 2007 that the firm's regular survey of management tools showed "an abrupt and sustained surge" in the use of scenario planning after 9/11 ("A Growing Focus on Preparedness," HBR July–August 2007), and although there have been ups and downs since, Bain's most recent survey showed that 65% of companies expected to use scenario planning in 2011.

STORIES OF THE FUTURE

The first formal round of Shell scenarios was completed in November 1971. Since then Shell's scenario planners have produced 34 rounds of global and long-term energy scenarios and updates and many more-focused ones. Some synopsized examples are included here and on the following pages, under the actual Shell titles.

SHELL SCENARIOS 1973

"CRISIS SCENARIO" A late response to an impending energy gap causes oil prices to spiral upward. Producer governments exert tight control on the industry through nationalization.

"DIRIGISTE SOLUTION" The governments of consumer nations intervene in energy markets, supported by public opinion. The energy industry gets subsidies, constraints are imposed on consumption, and conservation is encouraged.

(This was a very active year for scenarios: The above are just two of the six that were issued in January, and two more, focused on the likelihood of an energy shortage, came nine months later.)

Idea in Brief

In the mid-1960s Royal Dutch Shell started experimenting with a new way of looking into the future: scenario planning. Almost half a century later, scenario planning is still thriving at Shell, and it has had a huge influence on how businesses, governments, and other organizations think about and plan for the future.

Several principles have come to define the Shell approach. The most important is that scenarios are not predictions but plausible stories about the future. They are designed to help break the habit, ingrained in most corporate planning, of assuming that the future will look much like the present. They create a safe space for dialogue and for acknowledging uncertainty—allowing an organization to see realities that would otherwise be overlooked.

Credit for originating scenario planning often goes to the American game theorist and futurist Herman Kahn. However, a form of the practice emerged simultaneously in France in the work of Gaston Berger, Bertrand de Jouvenel, and others. The American approach came to emphasize probability, with degrees of likelihood assigned to various outcomes, while the French approach focused more on what *should* happen. Newland and Wack, aware of both, steered clear of probabilistic forecasts and normative statements and instead insisted that scenarios should first and foremost be *plausible.* One U.S. government report from a decade ago estimated that 85% of the scenario studies surveyed by the report's authors were based on or derived from the Royal Dutch Shell process, suggesting that Shell's experience contains lessons relevant for anyone—investors, corporations, governments, nongovernmental organizations, and others—trying to engage with the future.

We are a former Shell scenario planner and a former Shell executive who recently completed a history of scenario planning at the company after interviewing almost every surviving veteran of the operation, along with current and former top company executives. With help from Betty Sue Flowers, who edited several Shell scenarios in the 1990s, we discovered that although the practice has evolved over the decades, we can identify the principles that both define the process at Shell and help explain how it has survived and thrived for so long.

Make It Plausible, Not Probable

But, of course, you can never identify all the forces at play. If you could, and see their interactions, then real prediction of the future would be simple. This is never likely to be possible, and furthermore, there are some situations that balance on a hair's breadth.
—Jimmy Davidson, head of group planning 1967–1976

SHELL SCENARIOS 1977

"CARTER MIRACLE" The moral leadership exuded by U.S. President Jimmy Carter restores confidence. Governments take measures to strengthen international trade and investment.

"CONVALESCENCE" Recovery is slower than normal. Unemployment combines with a dim view of government in general to make the system fragile.

"RELAPSE" Inflation rises sharply, as do wages. The global economy is buffeted by conflict in the Middle East and other external shocks.

From the beginning, those engaged with Shell's scenario practice maintained that scenarios are not predictions but can provide a deeper foundation of knowledge and self-awareness in approaching the future. They also felt that the "official" view of the future—the business-as-usual outlook—both reflects an optimism bias and is based on the human tendency to see familiar patterns and be blind to the unexpected.

In the late 1960s Shell's business-as-usual approach was embodied by UPM and its quantitative, model-based methodology, which some worried was likely to suppress discussion rather than to encourage a healthy exchange of differing perspectives. Deductive methods for generating scenarios—for example, a 2x2 matrix with axes for public/private and more-expensive/less-expensive—were never core to the Shell practice, although they are often identified with it because Peter Schwartz, who ran

the scenario team in the early 1980s, subsequently promoted their use at the strategy consulting group Global Business Network. In general, the company has also avoided expressing a preference for one scenario over another. The trap of having a "good" versus a "bad" future is that there is nothing to learn in heaven, and no one wants to visit hell.

The Shell method instead emphasized plausibility. During the early years of experimentation, Wack encouraged his team to consider any scenario as long as it could not be rendered implausible through logical reasoning. Later he decided that approach generated too many scenarios to be effective. But the focus on plausibility remained. Shell scenarios are intended to set the stage for a future world in which readers imagine themselves as actors and are invited to pay attention to deeply held assumptions about how that world works. What happens at a scenario's horizon date is not as important as the storyline's clarity of logic and how it helps open the mind to new dynamics.

Plausible stories encourage judgment, not just attention to data and other information. By acknowledging that subjective judgment and intuition are an integral part of the leadership process, scenarios create a safe space in which to acknowledge uncertainty. An intuitive understanding of the world precedes and frames the analytical understanding that follows. Intuition is the essence of entrepreneurial value creation, and it can be stifled by a paralysis of analysis.

Plausibility can be strengthened by how relevant and memorable the scenario is, as well as by a logical story line. In the mid-1980s Lo van Wachem, the chairman of Shell's committee of managing directors, instructed the scenario team to begin considering the impact of sustainability concerns on the energy business. The process took years, but it ended up shaping opinion throughout the group as the threat of global warming became more real. Shell's 1998 sustainability report was one of the first acknowledgments by a major energy corporation of the challenge of climate change.

Strike a Balance Between Relevant and Challenging

All successful scenarios are focused in the sense that they are derived from a fundamental consideration of their client's dilemmas and needs.

—Ged Davis, head of the scenario team 1999–2003

Shell's scenario practice started out by exposing and questioning the official version of the future. This was especially important because of the company's decentralized nature: Until 2005 Shell had two parent companies (one British, one Dutch) and two headquarters (one in London, one in the Hague). Its country operations around the world enjoyed striking autonomy. It was led not by a CEO but by a committee of managing directors (CMD). As a result, consensus was crucial, and to a large extent the corporate view of the future was implicit and unarticulated—and thus particularly hard to change.

Scenarios facilitated dialogue in which managers' assumptions could safely be revealed and challenged. They enabled consideration of unexpected developments—such as the chairman's sustainability agenda in the 1980s—and inconvenient truths, such as OPEC's power over oil prices in the 1970s. They encouraged strategic conversations that went beyond the incremental, comfortable, and familiar progression customary in a consensus culture. Many business units, and corporate functions beyond strategy and finance, went on to develop scenarios.

To seize and retain the attention of all these constituencies, though, Shell's scenarios had to be more than disruptive and challenging; they had to be *relevant* to executives, from the CMD on down. In the early days, global events conspired to make them

SHELL SCENARIOS 1989

"GLOBAL MERCANTILISM" Economic power is the driving force. Conflicting regional interests affect economic security and the environment. Protectionism grows, and trade is managed through bilateral agreements. Many developing countries are left behind.

"SUSTAINABLE WORLD" The environment dominates the agenda. The global economic system is resilient, and developing countries are brought on board. Growth in the energy business is limited. An emphasis on clean fuels leads to a reconstruction of the industry.

so. Scenarios prepared in 1971 and 1972 sketched the possibility that the power in oil markets would shift from consumers to oil-producing nations—and that the interests of those producers would dictate cuts in production, not the eternal increases foreseen in the business-as-usual version of the future. After subsequent scenarios in 1973 deemed business-as-usual implausible, and a Mideast oil embargo and global energy crisis followed mere months later, there was no questioning the relevance of this work.

In the 1980s, though, Shell's top management largely ignored the plausible and challenging scenarios of global economic growth and power shifts. The reasons that have been offered for this range from a failure of the scenario team to listen to the concerns of executives to an overemphasis on big-picture developments as opposed to the energy industry and Shell in particular. Kees van der Heijden, who took over as scenario chief in 1988, decided that extensive interviews with Shell leaders were needed to ensure that the scenarios addressed relevant issues. "Deep listening" through structured interviews soon became standard practice; interview questions probed the core concerns of decision makers and their hopes for the future and uncovered uncertainties about the company, its business, and its environment. Van der Heijden's successor, Joseph Jaworski, spent his first six months on the job conducting more than 100 one-on-one interviews with Shell executives that lasted three or four hours each. This approach continued and has been effective: Despite the challenging and uncomfortable nature of many scenarios, only rarely have Shell leaders dismissed them as irrelevant or too dangerous to share (although rewrites have sometimes been requested).

To stay relevant, the scenarios have had to change. The early ones were designed to open up executive thinking in an environment in which oil companies had long been logistical machines that saw no need to communicate with one another or to focus on external events. Demand was assumed to be predictable, and the main job was to get oil to the customer as efficiently as possible. This was the context in which Wack "opened the company to the outside world," as Van der Heijden puts it.

Since then the global energy business has transformed Shell from a strategic player that produced 10% of the world's oil and gas before the 1970s crises to just one of many large energy companies (it produces less than 2% today). The organization's structure has also changed: Formerly a one-of-a-kind dual-nationality company with roots in the colonial past, it is now a more conventional multinational with a CEO at the top and a focus on shareholder returns. As a result, recent Shell scenarios have been more concerned with energy than with social and economic issues and have been more broadly institutionalized so as to have an impact on corporate decision making. As the current CEO, Peter Voser, says, "We have maintained intellectual agility and operational flexibility by shifting beyond global to more 'sliced and diced' scenarios."

It remains difficult to strike an appropriate balance between relevant and challenging. Relevant can be too familiar, but challenging can go unheard. As Wack once said, "You take the piece of bread and you put it in front of the goldfish, but not so far that the goldfish can't get it."

SHELL SCENARIOS 1995

"JUST DO IT!" Success comes to those who harness the latest innovations in technology to take advantage of quick-moving opportunities in a world of hypercompetition, customization, self-reliance, and informal networking.

"DA WO" (Chinese for "Big Me") Countries and companies discover that relationships of trust and the enabling role of government provide long-term strategic advantage. This favors Asia, because its people and businesses view individual and societal welfare as inextricably linked.

Tell Stories That Are Memorable Yet Disposable

You are trying to manipulate people into being open-minded.

—Ted Newland, manager of Long-Term Studies 1965–1971; scenario team leader 1980–1981

Corporations, like human beings, act on the basis of an agreed-upon reality—which is, in essence, a story. Stories of the past and the present can be based on facts, but a story of the future is *just* a story. The problem is that the stories we most commonly tell about the future simply extrapolate from the present.

SHELL SCENARIOS 2001

"BUSINESS CLASS" A globally interconnected elite and the only remaining superpower lead the world toward greater economic integration and prosperity. Cities and other power centers diminish the influence of national governments and unleash a "new medievalism."

"PRISM" The persistent power of culture and history shape a "new regionalism," putting the monochromatic world of global integration in question.

Perhaps the greatest power of scenarios, as distinct from forecasts, is that they consciously break this habit. They introduce discontinuities so that conversations about strategy—which lie at the heart of any organization's capacity to adapt—can encompass something different from the present.

Storytelling is key to making this process work. A story is not a position, so no one has to be for or against it or line up behind the CEO's opinion. If it's sufficiently vivid and memorable, it allows executives to discuss difficult issues without having to revisit arguments connected with them: A few words can evoke a world. Charismatic presenters; evocative graphics; memorable phrases, images, and archetypes; illustrative graphs of future outlooks; and the preparation of the audience through interviews, workshops, and other forms of participation all contribute to the storytelling power of Shell's scenarios.

In the early years, the Shell team developed sets of six or seven scenarios. By the mid-1970s three scenarios were common, but that tempted managers to choose a "middle way" as a best guess. Starting in 1989, two scenarios became the norm, enhancing usability and recall. Two stories open the mind but don't numb it with too many variables. In addition to these, some more-focused scenarios—on a project, a country, a crisis, a market entry, or an investment decision, for example—were often developed throughout the organization.

Scenarios have a limited shelf life. As they become familiar, the temptation arises to cling to them—which risks thinking within, rather than looking beyond, the box. Generating new scenarios on an ongoing basis counters the tendency to hold on to familiar ones. Over the past decade, Shell has abandoned its former practice of creating them according to a regular rhythm and shifted toward updating, discarding, or building new ones on an as-needed basis. Thus the scenarios act as temporary scaffolding—rather than a fixed structure—to support the strategic conversation.

Add Numbers to Narrative

Engineers are numbers people, and if you can't quantify what you are talking about, they tend to dismiss you as interesting (at best) mystics.
—DeAnne Julius, Shell's chief economist 1993–1997

As noted, Shell's scenario practice developed partly out of dissatisfaction with mechanistic, model-based projections. Scenarios were meant to harness intuition, not fall back on numbers. Wack, says his longtime colleague Napier Collyns, "regarded computer modeling as the enemy of thought."

Yet Collyns, who served on the scenario team from 1972 to 1986, frequently used numbers and computer models. Shell's scenarios have never been developed from mechanistic modeling, but they have always been associated with quantification to enhance internal consistency, reveal deep story logic and systemic insight, and illustrate outcomes using the language of numbers that characterizes most corporate cultures.

In the early years of the scenario practice, Collyns and Harry Beckers—who later became Shell's head of research—supported quantification despite Wack's limited appetite for it. Peter Schwartz later experimented with computer models linked to scenarios as a means of encouraging serious learning through "play." In the 2001 scenario round, two econometric models were used after the global scenarios had been developed to quantify the implications for GDP growth of various patterns of oil and gas price coupling, decoupling, and volatility.

During preparation of the 2007 long-term energy scenarios, the team built a comprehensive world energy model that simulated the development of the energy market over decades. It allowed the team to explore a much wider range of what-ifs by tweaking a large number of inputs, including the energy efficiency of electrical appliances, the depreciation time of coal-fired power plants, and shifts in consumer behavior.

Of course, large-scale quantitative models require considerable investment, which can lead to a

kind of "model lock-in": Difficulty in changing basic assumptions, along with the natural authority of algorithmic calculations, can result in users' being blindsided by changes in the world that don't fit a model's parameters. In the few years following publication of the 2007 scenarios, at least three major energy-market events failed to fit the world energy model: the 2008 financial crisis; the U.S. shale-gas boom; and Germany's decision, after the Fukushima nuclear disaster, to speed up its transition to renewables. However, the model *had* been used to trace the energy impact of a deep recession—giving credibility to the recession-and-recovery scenarios that were created and presented to Shell's executive committee within days of the Lehman Brothers collapse in 2008.

Quantification is essential to scenarios. The challenge lies in realizing how, when, and why models linked with them can hide assumptions and constrain thinking rather than refine it. If, for example, Shell begins to rely on its state-of-the-art global energy model to provide what-if analysis, the signature advantage of scenarios in reframing thinking will be weakened. But used as a secondary tool, a quantitative model can fortify a rapid-response scenario. The persuasive power of scenarios in the world of business rests on an effective combination of narrative and numbers.

Scenarios Open Doors

We facilitated a set of scenarios for the Chinese government. The notion that you would actually think outside the official plan was like pulling teeth. Over a one-year period we developed the scenarios with them, and it gives you insights into the way they are thinking that you just can't get otherwise and, of course, you wouldn't get as a businessperson across the table discussing things with them.

—Doug McKay, scenario team member 1996–2002

Over time, agreement appears to have been unanimous that scenarios are valuable in external engagement. Shell has used global scenarios to add color to corporate speeches, to open doors to privileged conversations with resource holders and governments, and to build a network of NGO contacts. Since 1992 it has released smaller, public versions of its global scenarios—after enough time has passed for the company to gain competitive advantage from internal digestion and use. But more important has been the way scenarios have created value through new busi-

SHELL SCENARIOS 2013

"MOUNTAINS" Governments play a strong role, helping to develop more-compact cities and to transform the global transportation network. New policies unlock plentiful natural gas and accelerate carbon capture and storage technology, resulting in a moderation of greenhouse gas emissions.

"OCEANS" Strong economic growth accelerates energy demand. Power is more widely distributed, and governments are slower to agree on major decisions. Market forces rather than policies shape the energy system: Oil and coal remain part of the mix, and greenhouse gas emissions bring dramatic climate change.

FURTHER READING

Shell Scenarios
www.shell.com/global/future-energy/scenarios.html

Scenarios: The Art of Strategic Conversation, by Kees van der Heijden (John Wiley & Sons, 2005)

"How Shell's Domains Link Innovation and Strategy," by Rafael Ramírez, Leo Roodhart, and Willem Manders (*Long Range Planning*, August 2011)

"Scenarios: Uncharted Waters Ahead," by Pierre Wack (HBR September–October 1985)

"Scenarios: Shooting the Rapids," by Pierre Wack (HBR November–December 1985)

ness development, joint venturing, and new market entry. Building scenarios with key stakeholders in prospective joint projects has enabled an invaluable exchange of perspectives and insights. Shell has developed focused scenarios for state oil companies in, for example, Brunei, Kuwait, Nigeria, and Oman.

Members of the scenario team have also occasionally shared their expertise. For example, since the 1980s, when a remarkable body of unpublished scenario work on greater China was started by one of their number, team members have been involved in a variety of scenario initiatives focused on energy, sustainable development, and other concerns relevant to the Chinese government. In 1991 one team member assisted in creating scenarios that helped focus the attention of both the African National Congress and the De Klerk government on the importance of economic development during South Africa's messy political transition. Another led a 1998 effort to develop global scenarios covering 2000–2050 for the World Business Council for Sustainable Development, which highlighted alternative models for thinking about progress. In 2005 yet another helped build scenarios for UNAIDS that exposed difficult choices between prevention and treatment and care. Shell's scenario experts often contributed to other efforts after leaving the company—starting with Wack, who participated in scenario rounds in South Africa in the 1980s.

Manage Disagreement as an Asset

In hindsight, the greatest value of scenarios is that they created a culture where you could ask anyone a question, and the answer would need to be contextual. Answering "Because I'm the boss" or "Because the business case is positive" was out-of-bounds.

—Ted Newland

Scenarios have the power to engage and open the minds of decision makers so that they pay attention to novel, less comfortable, and weaker signals of change and prepare for discontinuity and surprise. When the oil crisis of October 1973 hit, Shell's committee of managing directors had already considered a comparable scenario. As one scenario team member put it, "And then, of course, high oil prices came, and everybody said, 'You're very clever, you've got that right.' And we all said, 'No, wrong. We're not forecasters. We're your 'personal trainers.'"

Under Shell's earlier, decentralized structure, scenarios provided a common learning culture, helped create a shared view of the world, and refreshed the strategic agenda, enabling new concepts, such as resilience (1970s), sustainable development (1989), and systemic risk (2002), to penetrate the organization. They were a steering tool for the CMD and served as corporate glue to hold the organization together. As Shell became more centralized, scenarios provided a way to manage disagreement about group strategy or priorities and helped disturb the business-as-usual view that tends to result from wishful thinking or the linear extrapolation of current trends.

Within the CMD, scenarios also became a mediation tool. Given that the committee did not vote things into effect but recommended them for formal approval by the boards of the parent companies, scenarios were a unifying force. They redirected attention and encouraged dialogue rather than prescribing action, which made them nonthreatening.

Fit into a Broader Strategic Management System

Scenarios provide the right framework for appreciating fundamental long-term choice, which is not the same as next year's annual plan.

—Peter Voser, Shell's CEO 2009–

In one of a series of retirement presentations to Shell's CMD in 1981 and 1982, Pierre Wack borrowed a phrase from the organizational theorist Russell Ackoff: "corporate rain dance." This is a ritual that happens at a given time of the year, when the strategic planning process is rolled out. "It has no impact whatsoever on the weather, but everything that comes afterwards is nicely linked to and explained by this rain dance," Wack said. "And some people enjoy it very much." Wack was convinced that creativity could be institutionalized in corporate strategic planning, avoiding the rain dance. And he believed that scenarios, because they follow a rhythm distinct from the annual strategy cycle, allow an organization to see realities that might otherwise be overlooked.

Wack identified three essential starting points for corporate strategy: global scenarios, competitive positioning, and strategic vision. The first represents the world of possibility, the second the world of relativity, and the third the world of creativity. The challenge in effective scenario work is to go beyond the usual strategic focus on current trends and competitive positioning (profitability, for example) to find

the right scale of observation. The next challenge is to look for some degree of fit between the company's core capabilities and the variety of plausible future conditions.

Wack argued that strategic vision is not driven top-down by a corporate leader but involves a capacity to ask the right questions and to be amazed. He saw the organization as an animal that can prosper within a particular habitat. The success of the strategic vision thus depends on matching capabilities and context. Scenarios can help that vision evolve and become a source of dynamism.

THE MOST COMMON QUESTION about Shell's scenario practice is "Did it work?" That is, did it create direct business value by enabling better decisions? The answer is "yes" in the case of more-focused scenarios and "only indirectly" in the case of global scenarios. We have no solid examples of Shell's having anticipated future developments better than other companies—the mythology around anticipation of the 1970s oil crises notwithstanding. The historian Keetie Sluyterman characterizes Shell as being perhaps faster than other companies in catching on to changes in market or culture, by virtue of its sensitivity to emerging topics such as climate change, the rise of China, and the controversial boom in the development of extensive unconventional gas resources in the United States.

How can anyone determine in advance if one decision is better than another? In contrast to decision theory, which assumes that all outcomes can be known, scenarios encourage attention to the future's openness and irreducible uncertainty. Success in the future depends on the future success of decisions, which can't be known in advance. The outcome is at best a hypothesis rather than a range or a precise data point.

What does seem clear is that a sustained scenario practice can make leaders comfortable with the ambiguity of an open future. It can counter hubris, expose assumptions that would otherwise remain implicit, contribute to shared and systemic sensemaking, and foster quick adaptation in times of crisis. Scenarios can build social capital within and beyond the organization. They can aid in navigating complexity and conflict—managing disagreement while avoiding the extremes of groupthink and fragmentation. At Shell and elsewhere, scenarios have helped leaders prepare for futures that *might* happen, rather than the future they would like to create.

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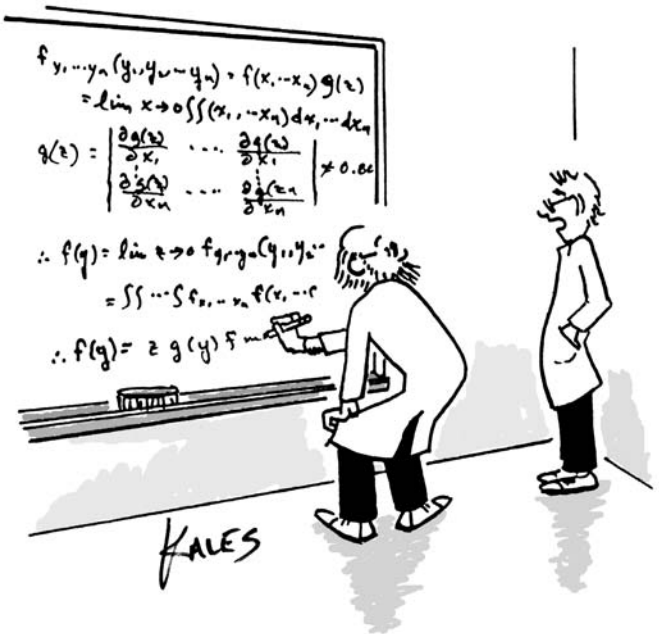

"Now can you explain that with a parable?"

CARTOON: PAUL KALES