Rigidities of imagination in scenario planning: Strategic foresight through ‘Unlearning’

**ABSTRACT**

The emergence of strategic foresight from scenarios has constantly puzzled theorists. Whilst practitioners and scholars of scenario planning contend that scenarios generate strategic foresight by both stretching a managers' mental model by exposing them to a wide range of equally plausible futures, triggering and accelerating processes of organisational learning, the true nature of this link between strategic foresight and organizational learning remains vague and undertheorized. Our paper tackles this puzzle by explicitly focussing on how strategic foresight emerges from the organizational learning process that unfolds during scenario planning. We undertook a 24-month long longitudinal study capturing both ‘actions’ and ‘reflections’ of a leading Scotch whisky manufacturer during their scenario planning exercises. Surprisingly, and perhaps counterintuitively, our findings unearth the role of ‘*unlearning*’ rather than ‘*learning*’ as the key mechanism that leads to the emergence of strategic foresight within the scenario planning process. Further reflection on the ‘unlearning process’ reveals that unlearning involves a ‘letting go’ or relaxing of deeply held assumptions and this in turn inadvertently leads to strategic foresight. Overall, by developing and introducing ‘unlearning’ as a key mechanism for the generation of strategic foresight, our paper aims to improve the effectiveness of scenario planning interventions as practiced.

**Key Words:** strategic foresight, scenarios, organizational learning, rigidities, unlearning

**INTRODUCTION**

Strategic foresight is deemed to play a crucial role in determining how organizations successfully compete, evolve, and survive in dynamic and disruptive environments (Tapinos & Pyper, 2018; Ramirez & Selskey, 2016; Sarpong & Maclean, 2016; Rhisiart, et al., 2015; Peter & Jarratt, 2015; Coates, et al., 2010). Scenarios have a long history and well established reputation in helping organizations generate strategic foresight (Spaniol & Rowland, 2018; Derbyshire & Wright, 2017; Wright, et al., 2015; Ramirez, et al., 2011; Varum & Melo, 2010; Cairns, et al., 2004; van der Heijden, et al., 2002; Duncan & Wack, 1993; Wack, 1985a; 1985b). Scholars contend that scenarios generate strategic foresight by offering “analysis, communication, education of the organization and stakeholders in both possibilities and ways of thinking” (Ringland, 2010, p. 1495) about the future.

Foresight from scenarios, as prior research suggests, results from the stretching of a management team’s mental models (Cornelius, et al., 2005; Cairns, et al., 2004; Grant, 2003; Schoemaker, 1995), opening up of management thinking by developing a number of equally plausible futures (van der Heijden, et al., 2002) that help overcome managerial blind-spots (Day & Schoemaker, 2004) and by triggering and accelerating the processes of organizational learning (Chermack & van der Merwe, 2003; Bootz, 2010). Implicit in these theoretical conjectures are the strong ties linking strategic foresight and learning processes (Bootz, et al., 2019; Bootz, 2010; Bood & Postma, 1997). However, despite these conjectures, “the true nature of this link remains vague” (Bootz, 2010, p. 1588) and a compelling explanation for how scenarios actually lead to strategic foresight is still missing in the scenario literature (Bootz, et al., 2019; Tapinos & Pyper, 2018; Rhisiart, et al., 2015). So how does organizational learning emanating from scenarios generate strategic foresight?

There are three main reasons why this theoretical lacuna persists. First, despite claims that scenarios offer support to strategic decision makers (Rohrbeck, 2012; Postma & Liebl, 2005), much of the scholarship on scenarios has been plagued by both a “dismal” state of theory and “methodological chaos” (Spaniol & Rowland, 2018, p. 33). “Scenarios”, as Wilkinson, Kupers and Mangalagiu (2013) aptly put it, “are best described as a highly innovative, pragmatic field of practice grappling with theoretical grounding” (p. 699). Progress, would therefore depend on developing a coherent theoretical framework that resonates with how scenarios and their corresponding impact unfold in practice.

Second, much of the scenarios research has been influenced by three dominant traditions, namely, intuitive-logic models, *la prospective* models and the probabilistic modified trend models (Varum & Melo, 2010; Bradfield, et al., 2005). Important distinctions between these traditions notwithstanding, much of the theoretical conjectures about foresight from such research rely on different understandings of *process*. *Process*, according to Van de Ven (1992, p. 169), is often used in three ways in the literature: (1) a logic used to explain a causal relationship in a variance theory, (2) a category of concepts that refer to actions of individuals or organizations, and (3) a sequence of events that describe how things change over time. While the first two understandings of process are widespread within the scenarios literature, there is a paucity of research that explores scenarios from the third perspective. As Van de Ven (1992) astutely observes, in the first two instances, theorising depends on a story or logic that “is used to explain why an independent (input) variable exerts a causal influence on a dependent (outcome) variable” (p. 170) without the theorists actually observing the process. Theoretical advancement would thus depend on embracing a ‘process’ approach (Langley, et al., 2013; Langley, 1999) where cross-sectional observations or retrospective case histories are replaced by studying the actual “sequence of events” (Poole, et al., 2000) that describe how and why scenarios generate strategic foresight.

Third, even though several key scholars have suggested that learning is a key component of scenario planning (van der Heijden, 2005; de Geus, 1998; Schwartz, 1991) and plays a critical role in the generation of strategic foresight (Bootz, et al., 2019; Bootz, 2010; Chermack & van der Merwe, 2003; Bood & Postma, 1997), it is surprising that little attempt has been made to integrate the extensive literature on organizational learning with the theory on scenario planning. As Chermack (2005) correctly observes “while the conceptual case linking learning and scenario planning has been made, there are no empirical studies that support or refute this relationship” (p. 62). Thus, understanding the mechanisms through which the learning processes that unfold during scenario planning generate strategic foresight would not only require a deeper theoretical integration of the literatures on organisational learning and scenario planning but would also warrant an empirical exploration into how strategic foresight emerges from the organisational learning process.

To summarise, the theoretical fragmentation within the scenarios literature, the underdeveloped status of longitudinal ‘process’ research within scenarios scholarship and the relatively little attention devoted to integrating the literatures on strategic foresight and organizational learning have all ensured that the complex processes that link organizational learning to strategic foresight remain undertheorized and underexplored. Consequently, we still know very little about the links between organisational learning and strategic foresight.

So how does strategic foresight emerge from scenario planning? Our paper aims to answer this question, both, theoretically and empirically by unpacking the ‘*black box*’ that links organizational learning, strategic foresight and the scenario planning process. To do this, we first undertook a two-part literature review. In part one we analysed the literature that links strategic foresight to the scenario planning process. In part two, we consult the literature on organizational learning and review the findings from the learning literature in tandem with the theories linking learning with strategic foresight. A synthesis of our review reveals that scenario theorists have unproblematically imported assumptions of organizational learning into the scenarios literature which could lead to strategic oversight rather than foresight (March, 2008). The organizational learning literature review also highlights the crucial yet underemphasized role played by ‘unlearning’: a promising concept for overcoming these limitations.

To reinforce these emergent theoretical insights, we undertook a 24-month long longitudinal study capturing both ‘actions’ and ‘reflections’ (Bootz, et al., 2019; Bootz, 2010) of a leading Scotch whisky manufacturer during their scenario planning exercises. Surprisingly, and perhaps counterintuitively, our findings unearth the role of ‘*unlearning*’ rather than ‘*learning*’ as the key mechanism that leads to the emergence of strategic foresight within the scenario planning process. Drawing on empirical evidence from scenario planning workshops, we outline the stages of the unlearning process and argue that strategic foresight from scenarios stems from ‘unlearning’. By exploring the etymological German roots of the word ‘learn’ which originally meant ‘to furrow’, unlearning, we argue, implies eradicating furrows and returning to the unfurrowed flux of organisational experience from which new possibilities are ‘*relevated*’. Unlearning requires letting go or relaxing the rigidities of previously held assumptions and beliefs, rather than forgetting them, as part of the general approach to creating strategic foresight.

Overall, our paper makes three significant contributions. First, we offer a theoretical analysis of the links between organizational learning, strategic foresight and the scenario planning process. This exercise not only clarifies the conceptual links between these previously unintegrated concepts but also allows us to unpack the complexities associated with learning and foresight. Second, our process methodology, offers yet another arrow into the methodological quiver of scenario scholars. By empirically tracing the emergence of strategic foresight from scenario planning, our process approach offers a more robust means to fortify foresight theory. Finally, by developing and introducing ‘unlearning’ as a key dynamic within the scenario planning process, our paper aims to improve the effectiveness of scenario planning interventions as practiced.

The remainder of our paper is structured as follows. First, we undertake a two-part literature review that analyses the conceptual links between strategic foresight, scenarios and organizational learning. Next, we present the methodology used for investigating the research question. The following two sections present the findings and analysis from our longitudinal field research. In the penultimate section, we discuss the implications of our findings and analysis for the theory and practice of strategic foresight. Finally, we conclude by summarising our contributions and suggesting avenues for future research.

**LITERATURE REVIEW**

*Scenarios and Strategic Foresight*

The scenario planning approach has been widely deployed and successfully used to boost strategic foresight within in a wide range of organisations including Shell (Cornelius, et al., 2005), British Airways (Moyer, 1996), ICL (Ringland, 1998) and Nokia (Siilasmaa, 2019). Organizations use scenarios to “create and maintain a high-quality, coherent and functional forward view, and to use the insights arising in useful organizational ways" (Slaughter, 1995; Ringland, 2010, p. 1494). Yet, despite the enthusiastic embrace of scenarios by strategy practitioners, the scholarship on scenarios reveals a “paucity of theory” (Bradfield, et al., 2016, p. 60) and “methodological chaos” (Martelli, 2001). The persistence of these theoretical gaps have prevented scholars from developing a comprehensive understanding of the links between strategic foresight and scenario planning (Spaniol & Rowland, 2018; Wright, et al., 2015; Coates, et al., 2010).

The primary source of this methodological chaos has been the imprecise use of the term ‘foresight’. Within the scenarios literature, ‘foresight’ has been “used to designate the process as well as those tools used in creating the image” (Coates, et al., 2010, p. 1423) of the future. The resulting confusion is a proliferation of foresight research where theorists speak simultaneously of the appearance of new “mental models” (Ringland, 2010, p. 1498) as scenarios and of scenarios as the *process* that creates or brings strategic foresight into being. Scenarios are, in other words, simultaneously reduced to both, a mechanism and an output. The result has been an assembly of empirical generalizations which neither resonate with the scenario planner’s ongoing challenges nor are general enough for practitioners to adopt. Theory advancement, therefore demands precise conceptualization that captures the nuances of the phenomena under investigation.

Hence, scenarios are defined as a “hypothetical sequence of events leading to a possible future” (Kahn & Wiener, 1967, p. 6). Strategic foresight refers to “the ability to see through the apparent confusion, to spot developments before they become trends, to see patterns before they emerge, and to grasp the relevant features of social currents that are likely to shape the direction of future events” (Whitehead, 1967, p. 89). Conceptualizing scenarios as a process and strategic foresight as an outcome also has an added advantage of avoiding the “episodic, linear nature” of scenarios that “makes them appear ‘cognitivist’ and ultra-rational in form” (Sarpong & Maclean, 2016, p. 2813). In other words, explanations for strategic foresight require theorists to pry open the scenario planning process and explore the temporal sequence of activities that lead to strategic foresight. Conceptual clarity on the links between scenarios and strategic foresight thus makes it possible to ask: How do scenarios generate strategic foresight?

*Organizational Learning and Strategic Foresight*

Several scenario scholars have acknowledged the crucial role played by organizational learning in the generation of strategic foresight (Bootz, et al., 2019; Bootz, 2010; Chermack, 2005; van der Heijden, 2004; Chermack & van der Merwe, 2003; Bood & Postma, 1997). Prior research has defined organizational learning as “the process of improving actions through better knowledge and understanding” (Fiol & Lyles, 1985, p. 803). Scenario planning scholars contend that learning allows the organization to re-perceive its environment (Wack, 1985a; 1985b) and this re-perception leads to strategic foresight (Chermack, 2005). Since little effort has been devoted to assessing the cognitive and evaluative limitations on organizational learning, evaluating this claim requires us to re-examine the links between scenarios and the organisational learning process.

Debates over whether organizational learning should be understood as a change in cognition or behaviour are a recurring theme within the learning literature (Argote & Miron-Spektor, 2011; Fiol & Lyles, 1985). The implications of this distinction between cognition and behaviour find expression within the scenarios literature when scholars make a distinction between “foresight attitude” and “foresight activity” (Bootz, 2010, p. 1588). The former refers to the “cognitive dimensions of anticipation and to individual learning” and the latter refers to the behaviour of a “groups of individuals participating in more interactive learning within organizations” (Rhisiart, et al., 2015, p. 126). Due to these distinctions, definitions of organizational learning assume a change in the organization’s knowledge that occurs as a function of experience (Argote & Miron-Spektor, 2011; Easterby-Smith, et al., 2000). In other words, experience plays a key role in linking the organizational learning process that unfold during scenario planning with strategic foresight.

Therefore when scenario theorists like Bood and Postma (1997) incorporate Kolb’s (1984) learning theory and Piaget’s (1977; 1937; 1936) learning theory, or when Chermack and van der Merwe (2003) incorporate Senge’s (1999) three stage organizational learning process, or when van der Heijden (2004) invokes a constructivist organizational learning process, or when Bootz, et al (2019) draw on Argyris and Schön’s (1978) theory of single and double loop learning, they are all implicitly emphasizing the crucial role of concrete experiences that link scenarios with organizational learning. Yet, learning from experience is fraught with difficulties and plagued by three significant traps, namely, the competency trap, superstitious learning trap and the myopia trap (Levitt & March, 1988; Levinthal & March, 1993).

The competency trap arises when learning from experience encourages organizations to stick to and refine the skills that they have already honed to a finer degree rather than spend time developing new skills (March & Coutu, 2006). Organizations learn from experience what strategies to use, thereby gaining competence in the strategies they use. If the organization uses a strategy and experiences favourable outcomes, they will repeat the strategy. The more a particular strategy is used, the more competent the organization using it becomes. Competency increases the likelihood of a favourable outcome which in turn reinforces the use of the strategy. Thus, the organization could quickly become firmly committed to a particular strategy, given their competence at it. However, they are likely to be trapped with an inferior strategy by the positive feedback loop of their own competency (March, 2008, p. 88). The competency trap can therefore lead to strategic oversight.

“Superstitious learning”, as Levitt and March (1988) describe, “occurs when the subjective experience of learning is compelling, but the connections between actions and outcomes are misspecified” (p. 325). Situations where the subjective evaluation of success or failure is insensitive to actions that the firm takes can trigger superstitious learning within an organisation. For example, executives from an oil pump manufacturer might believe that higher profits in years where the global oil prices are high are a result of their superior management practices. However, when global oil prices are low, the same executives are likely to blame the business environment rather than their management practices for the drop in profits. The superstitious learning trap can thus cause strategic oversight.

Finally, the myopia trap refers to the tendency within experience based learning to overlook distant times, distant places, and failures (Levinthal & March, 1993). As Levinthal and March (1993) explain: “The first form of myopia is the tendency to ignore the long run. The short run is privileged by organizational learning. As a result, long run survival is sometimes endangered. The second form of myopia is the tendency to ignore the larger picture. The near neighbourhood is privileged by organizational learning. As a result, survival of more encompassing systems is sometimes endangered. The third form of myopia is the tendency to overlook failures. The lessons gained from success are privileged by organizational learning” (p. 101). Consequently, myopia leads firms to underestimate the risks of failure. The myopia trap is thus yet another source of organizational oversight.

In light of these learning traps, some organizational learning scholars have proposed ‘unlearning’ as the means for overcoming the challenges of learning from experience (Tsang, 2017a; 2017b; Starbuck, 2017; Howells & Scholderer, 2016; Becker, 2010; Becker, 2008; Nystrom & Starbuck, 1984; Hedberg, 1981). While the literature offers several definitions for ‘unlearning’, it broadly refers to “the process by which individuals and organizations acknowledge and release *prior* learning (including assumptions and mental frameworks) in order to accommodate new information and behaviours” (Becker, 2010, p. 252). Unlearning can thus facilitate new knowledge creation by enabling firms to discover the limits of their current beliefs and methods (Starbuck, 1996). However, recent research by Howells and Scholderer (2016) has called into question some of the assumptions underpinning ‘unlearning’. This has led to calls for a more precise conceptualization and greater clarity on the phenomena (Tsang, 2017b). Unlearning is thus a relatively underdeveloped concept within organizational learning and there is a paucity of studies that explore its role in scenario planning and strategic foresight.

*Summary*

In this section, we have analysed and evaluated research that theorizes the links between scenarios, strategic foresight and organizational learning. Our review has identified imprecise conceptualization where scenarios are simultaneously reduced to both, a mechanism and an output, as the primary reason for the field’s methodological chaos. The review also establishes the need for more process research within scenarios and foresight studies. Exploring the theoretical links between strategic foresight and organizational learning allowed us to show how much of the scenario literature assume that organizational learning leads to strategic foresight. However, these assumptions are based on experiential learning (Bootz, et al., 2019; Rhisiart, et al., 2015; van der Heijden, 2004; Chermack & van der Merwe, 2003; Bood & Postma, 1997). Reviewing the challenges of learning from organizational experience highlights the possibilities of the competency trap, superstitious learning trap and the myopia trap that could produce oversight rather than foresight. Our analysis also speculates on the role of unlearning within organizational learning. These insights suggest that to “grasp the true nature of the link between foresight and organizational learning” (Bootz, 2010, p. 1592), we must empirically pry open the ‘*black box*’ that links organizational learning, strategic foresight and the scenario planning process.

**METHODOLOGY**

*Context and company background*

In order to empirically explore the links between organisational learning and strategic foresight, we undertook a 24 month long longitudinal field study with a leading Scotch whisky manufacturer (Langley, et al., 2013; Langley, 1999; Van de Ven & Huber, 1990). Having been founded in the 19th century, the company has a full-range of distilling, blending, bottling and brand management capabilities. Its portfolio includes both iconic single malt Scotch whisky brands as well as UK’s leading blended whisky.

At the time of research, the firm’s business context was characterised by flat demand for spirits and whisky, creating a highly competitive price sensitive market. Concerns were also evident about the level of tax and duties levied by the UK Government on Scotch whisky and spirits. Together, the price sensitivity and taxes were putting pressure on margins (Company Annual Reports). With flat demand a number of distilleries were either closed or ‘moth-balled’ as historical levels of Scotch whisky production had created a ‘whisky loch’. Some distillers had resorted to selling whisky in bulk at discounted prices. Year-on-year production levels resulted in Scotch whisky stocks rising in the company’s balance sheets (Company Annual Reports). The following participants from the firm took part in the scenario workshops:

* Managing Director
* Operations Director
* Operations Manager
* Quality Manager
* Human Resource Director
* Marketing Director
* Financial Director
* Group Business Development Manager

These participants remained in place throughout the 5 workshops and 16 one on one meetings that were undertaken as part of this research. They were all engaged in the activities described in this paper.

*Scenario planning activities and workshops*

In light of the challenges described above, the participants (henceforth referred to as the management team) were interested in using the scenario approach to help them understand the future of the global market for Scotch whisky and spirits in order to support their business planning activities. At the time exports were predominately to USA, France and Japan. Other markets were not as developed in comparison with today’s industry. There were several third-party supply chains, with limited in-house supply chain capability. In the UK, whisky and spirits were predominately sold off-trade though supermarkets, with the remainder of sales through on-trade public houses and restaurants.

The scenario project was designed around a number of key activities and 5 workshops (van der Heijden, et al., 2002). First, we conducted one on one interviews with all members of the management team to explore and learn about their individual views and concerns regarding the opportunities and challenges facing their firm (and the industry) (Alvesson, 2003). Second, after (anonymising and) analysing the interviews, the emergent themes from the interviews (and supporting comments) were shared with the management team in Workshop 1 (Langley, 1999). The feedback had a three-fold purpose. First, to validate and ensure accuracy of the interview data. Second, to highlight to the management team a spectrum of views held by them. Third, to jointly agree the focus of the scenario development workshop (Workshop 2), which followed a few weeks later. The focal issues agreed by the management team were:

* Technological developments, including the process of accelerating the whisky aging process, advances in bottling technology, and environmental developments in bottling/packaging/production
* Lifestyle effects, including health implications for whisky, consumer attitudes to alcohol, and development of attitudes to recreational drugs
* Demand and demand drivers, including other spirits pricing, attitudes to duty on alcohol, growth areas in world spirits market, changes in seasonality, whisky as a percentage of spirits, life cycle of whisky, relative position of Japanese whisky, average age of whisky drinker
* Trends in presentation, including packaging, product differentiation, and promotion
* Distribution structure, including ownership of distribution channels, changes in methods of distribution
* Consumer attitudes, including consumer preferences for price / quality, percentage of buyers-own-brand whisky, whisky as a gift item, consumer preferences for whisky in the future
* Industry structure, including opportunities for joint ventures, competition, trends in vertical integration/disintegration, consolidation within the big six, bottling costs in other countries, industry attitudes to bottling

Source: internal company document

*Data Sources and Data Analysis*

Interviews (Alvesson, 2003) and participant observation (Ingold, 2011) were the primary means of gathering data. However, as Ingold (2011) reminds us, participant observation refers not to “see what is ‘*out there’*” but rather to “*watch what is going on”* (p. 223 our emphasis)*.* Detailed verbatim notes and observations were recorded, capturing speaker, setting, time and responses during the 5 scenario project workshops. Key in situ moments were noted and discussed at the participant’s earliest possible convenience in order to develop a deeper understanding of their comment(s) (Miles & Huberman, 1994). Critical incidents were also noted as they occurred (Flanaghan, 1954; Chell, 1998; Butterfield, et al., 2005). All critical incidents, with supporting explanations were recorded in a database for further analysis. In total, there were 213 critical incidents. All empirical data was then coded for further analysis (Miles & Huberman, 1994; Strauss & Corbin, 1998). Themes were identified, coded and iteratively analysed to identify the following first order themes:

* Connecting previously unconnected events and experiences
* Challenge to understanding of self and current context
* Develop new understanding of the existing context
* Explore and identify a new logic for future organising

Next, we explored the temporal complexity inherent within these first order themes by undertaking a longitudinal analysis of the critical incidents and empirical notes. The process allowed us to jointly explore both the actions and reflections attributed to organisational learning. This resulted in further refinement of the initially observed themes from which we unearthed four second order themes listed below:

* Challenge to managerial assumptions
* Rigidities of imagination
* Unlearning
* Inquiry and (Re)learning

In the next section, we present the findings from our interviews and 5 scenario planning workshops as vignettes to substantiate the above listed themes.

**FINDINGS**

Categorization of the initial remarks gathered from the interviews revealed that 47.5% of the comments made pertained to internal issues, yet another 47.5% of the remarks were about potential opportunities, and the remaining 5% of comments were about possible threats to the business. When the management team were presented with these findings, the following conversation ensued:

**HR Director:** “The weight of the data in the interviews feedback is interesting, vulnerabilities are less than expected.”

**Operations Director:** “Does that tell you anything?”

**Managing Director:** “Healthy?”

**Operations Director:** “Or complacency?”

Vignette 1

This conversation highlights the rosy, optimistic view that the management team had about their future. This view was also supported by the firm’s profitability and steady performance recorded in the Company Annual Reports. However, the scenario exercise forced the management team to make explicit some of their deeply help assumptions about the ‘state of the business’. This in turn led them to *connect previously unconnected events and experiences*:

**Marketing Director:** “With static demand the distributor is all powerful. The whisky industry accelerated this situation by selling surplus whisky. The distributor is the brand; they own the consumer. We do not fit into this.”

**Operations Director:** “We might only have one final EU distributor. We can see a trend with Intermarche.”

**Marketing Director:** “The distributor is driven by margin!”

**Group Business Development Manager:** “This is a daunting picture!”

Vignette 2

As the comments suggest, the management team began to realise that power in the supply chain and wider industry context has moved to the distributor. Previously the management team had noted (on many occasions) that Scotch whisky was the scarce resource and believed that power lay with the producers. They were beginning to see for the first time a new basis of organising in the wider industry. Investment in information technology, logistics and supply chain management by distributors was emerging as the basis of a shift in power.

This realisation *challenged the management team’s understanding of their business and their current context.* As a consequence of the challenge and new interpretation of the wider processes in play in the industry, further reflection on and discussion of their situation was captured during a short interaction between the Managing Director and Operations Director. The conversation highlights the revelation that they had a (potentially) redundant view of the importance of their products.

**Managing Director:** “I am depressed, we are being stuffed by our customers; we are locked into the risk of the customer.”

**Operations Director:** “We give value, create value for others, why? We take a worthless product and create value in the process, for little reward.”

Vignette 3

The two Directors were beginning to recognise their situation, and in the process, challenge their assumption about the importance of their products to their future success. They were beginning to open up and let go of the assumption that *‘Scotch whisky is king’*. They had not fully realised the emergence of processes in their environment, the consequences of the emerging processes and the implications they had for their business. Such insights about their fluxing and flowing context acted as the second order temporary breakdown where they realised the significance and limitations of their current practices (Sandberg & Tsoukas, 2011; Argyris & Schön, 1978). This break down signals ‘limits’ to the current knowledge and understanding of their business reality within the management team. They realised that their guiding assumptions and understanding of the wider industry dynamics were deeply flawed and misaligned with their reality.

The breakdown triggered a wider discussion amongst the management team. They began to ‘*relevate*’ (Paton, et al., 2014) their experiences to *develop a new understanding of their existing context.*

**Quality Manager:** “Could there be an Asda Global Inc. who is able to utilise database marketing? They would use technology to create value and not to reduce costs.”

**Operations Director**: “We have the wrong mind-set (i.e. production orientation).”

**Marketing Director:** “If we were the distributor we would know the size of your shoes, the colour of your socks, when and where you bought them.”

**Managing Director:** “How do we react to the situation? How do we become proactive?”

**Operations Director:** “We need to go straight to consumers.”

**Quality Manager:** “If we were going to be a provider, who would be our potential partners?”

**Managing Director:** “I am hearing new ideas. We have opened up to a business we think we know about, now we are thinking about it differently.”

Vignette 4

The conversation reveals the emergence of new possibilities and understanding of the unfolding competitive dynamics. The participants realised that the role of technology along with the technological affordances, has fundamentally challenged their understanding of their business context. Technologies like the electronic point of sale (EPOS), customer relationship management (CRM) systems and real-time logistics, had the capability to create new means of ‘organising’ that would fundamentally alter the firm’s future. The management team became aware of the significance of information technology and realised that, as a business, they had no visibility or access to the data generated by their customer EPOS, CRM and logistics systems. Additionally, they also realised that technology was creating a barrier between them and their consumers. Failure to act could limit their understanding of consumer buying behaviour in the future. This realisation that insights into consumer behaviour was fast emerging as the basis of market power led the firm to explore *and identify a new ‘logic’ for future organising.*

**Human Resource Director:** “The big issue for us is our role in the future – integration or stand alone?”

**Managing Director:** “We have been manoeuvred by our customers. There are no two customers alike. It is difficult to predict their demands.”

**Quality Manager:** “Distributor power is disturbing for us. The exercise has crystalised that access to the market is critical.”

**Operations Director:** “One issue has come into focus. Flexibility is in question. It uses up more of the plant. Certain areas have pressures.”

**Managing Director:** “We have discovered pressure on our customer orientation. More business reduces flexibility”

**Operations Director:** “More customers, more problems. More customers, less flexibility. Our business idea is not ideal”

**Marketing Director:** “Our business is out of balance. We are corrupted by the changing circumstances of our customers”.

**Group Business Development Manager:** “How do we improve customer service?”

Vignette 5

Vignette 5, suggests that the management team was struggling to articulate elements of their new understanding and its subsequent implications for organising. It became evident to them that they were detached and distant from consumers and their buying patterns. Technological advancements were undermining their business model and handing power to distributors (if nothing else changed). The emerging situation presented the firm’s operations with a trilemma: *Organising for products*, *organising for customers* or *organising for flexibility* *in production*? The management team had yet to recognise this trilemma and its consequences for operations and strategy prior to the scenario workshops. This recognition triggered the following conversation:

**Marketing Director:** “I have always held the view that whisky is the scarcity. Whisky is king.”

**Operations Director:** “Yet, existing plants are running at 50% capacity!”

**Managing Director:** “How do we surround the customer?”

**Operations Director:** “What do we do best? Technology changes the game.”

**Quality Manager:** “Power is with the producers, but power is bigger through distribution. Power defines the rules of the game.”

**Operations Director:** “Technology cannot give power to consumers. They are mass market; therefore, they have no power.”

**Marketing Director:** “Who owns the consumer?”

**Operations Director:** “**Information is the new king.**”

Vignette 6

The above conversation highlights the rigid assumptions held within the management team regarding the importance of Scotch whisky for the firm’s (historical and future) success. Yet, the team realised that this ‘whisky’ centric assumption was flawed and that a new organising logic was required to secure the firm’s future competitive advantage. Technology enabled processes were altering the competitive landscape of the whisky industry. Competing within this new landscape would require the firm to harness the potential of information technology and integrate IT capabilities with current operations. This ‘information’ centric model could serve as the basis of future organising.

**ANALYSIS**

In this section, we further probe the links between scenarios and the organisational learning process. For this, we present both the ‘actions’ and the ‘reflections’ of the management team during the longitudinal scenarios exercises (Bootz, 2010). The vignettes presented in the Findings section are then analysed in conjunction with the scenarios to further illustrate the ‘unlearning’ process that occurred during the scenarios workshops. In the sections that follow, we present the four stages of this ‘unlearning’ process.

***Challenge to managerial assumptions***

The management team had deeply held assumptions about their business and what made it successful. They believed that ‘whisky is king’ and that the ‘*Precious Scotch*’ was the scarcity in the market-place. This assumption was also widely held in the industry. By holding ‘*Precious Scotch*’ as the dominant management paradigm, the team believed that they would be able to control demand for their whisky products and thus ensure production control (and consequently efficiencies in distilling, blending and bottling). Doing so would create market power and lead to profits. Investing a share of the profits into branding, they believed, would help them protect and retain their market power. The causal representation of the ‘*Precious Scotch*’ paradigm is summarised in Figure 1.

<INSERT FIGURE 1 ABOUT HERE>

Figure 1 reveals two positive feedback loops interacting with each other to create a virtuous cycle for the organisation. However, while exploring the scenarios the management team realised that their wider environment was changing. Key customers, e.g. large hotel chains, supermarkets were investing in electronic point of sales (EPOS) technology to help them develop relationships with their customers (e.g. consumers). EPOS systems provided the large hotel chains and supermarkets with profiles of and insights into consumer spending practices and product preferences. This knowledge particularly helped the supermarkets utilise the data from their EPOS system to develop customer relationship management systems (CRM) to target consumers with ‘special offers’ e.g. discount vouchers to be offset against future purchases of preferred products or vouchers to be used to ‘push’ products that the supermarkets would use to attract consumers.

In addition to investing in EPOS and CRM systems the supermarkets were also investing in logistics and distribution systems to help them manage and control incoming orders and replenish their shops and stores in the most efficient manner possible. Initially the supermarkets were predominately interested in ensuring adequate stocks of whisky products to fulfil consumer demand. The unintended consequence of investing in EPOS and CRM systems was their ability to control whisky production by consolidating knowledge of consumer buying preferences. Such information helped them to reduce their buying costs. Such investment started as a necessity but turned into a competitive advantage. Over time the supermarkets would utilise their technology to exert power over all aspects of supply chain management. These investments were leading to a situation that would move market power from the *‘Precious Scotch’* paradigm to the supermarkets and their technological systems. The causal representation of this emerging logic is summarised in Figure 2.

<INSERT FIGURE 2 ABOUT HERE>

***Rigidities of imagination***

Figure 2, reveals a third positive feedback loop. This loop represents the supermarket investment in technology that enabled a shift in market power towards them. This resulted in a vicious cycle that undermined the *‘Precious Scotch’* paradigm. Ironically, the supermarket approach also reduced the efficacy of investing in branding by the whisky producers. In the producer paradigm (Figure 1) the key lever to enhancing market power was investing in branding. Supermarket product targeting made this lever less effective.

Vignette 2 highlights the emerging foresights for the management team. They were able to make connections between previously unconnected events (Figure 2). This led them to realise that the emerging technological capability of the supermarkets was eroding their market power, and undermining their ‘*Precious Scotch’* paradigm. The management team realised that investment in EPOS and CRM systems by supermarkets enabled them to develop insights into consumer preferences. These insights allowed the supermarkets to promote product targeting to the end consumer. For example, the supermarkets could use their loyalty cards to target or not ‘promote’ brands, equally limit or withhold shelf space for whisky products. These practices began to erode the power of the whisky producers. Further, product targeting by supermarkets also forced the whisky producer to increase their investment in branding with the false hope of restoring market power. The increased investment in branding did not increase profits and this further eroded their market power. This resulted in supermarkets controlling demand for whisky which in turn influenced production control. The management trilemma highlighted earlier resulted from this dynamic. However, the management team were yet to comprehend the significance of these emerging dynamics for their business.

Vignette 2 also illustrates how 'unlearning' occurred when the management team were able to draw on their historical actions and reflect on these actions in light of the emerging situation. For example, historically, when the firm over produced whisky, they sold off their *'Precious Scotch'* to supermarkets who would then create ‘buyers-own-brands’ for the shoppers. The firm believed that the selloff would help them drain their ‘whisky loch’, generate cash and increase the future scarcity of their *'Precious Scotch'*. However, the creation of ‘buyers-own-brands’ triggered both a price war and a fight for supermarket shelf space. The unintended consequence of these actions was increased price competition for whisky brands. The disappointment from this oversight which can be attributed to the rigidity of the management team’s assumptions is well expressed in Vignette 3. It is the recognition of this oversight that triggers ‘unlearning’.

***Unlearning***

Awareness of their oversight, jolted the management team. Vignettes 3 and 4 demonstrate how the management team were ‘struck’ by this revelation. Vignettes 4, 5 and 6 show them questioning the logic of their current approach to business. Faced with this revelation the management team had choices, they could either be anxious and defensive about business-as-usual or they could grapple with the implication of this revelation and its implications for their business going forward. Vignette 4 illustrates how the management team began questioning their assumptions and exploring how they might react to their new insights. They speculate about possibilities and tentatively probe their future. The management team's reaction support 'unlearning' when they acknowledge that the approach that has served them well in the past would no longer be relevant in the future. The Managing Director’s eagerness for 'new ideas' to open up the business is a consequence of the unlearning that has taken place. However, it is important to recognise that unlearning does not directly lead to 'solutions'. As Vignettes 4 and 5 demonstrate, unlearning caused the management team to open up to new thoughts and an idea not previously considered: *the role of information and technology as the basis of gaining market power.*

Unlearning, therefore, as Vignette 6 suggests, highlighted contradictions between the management team's long-held belief about ‘Precious Scotch’ and the operational reality that despite being 'precious' their plants were only running at "50% capacity". Unlearning also helped the managers to revise their 'problem definition' about production control. They realised that further investment into technology that maintains the 'scarcity' of whisky is futile and will not allow them to protect their market power. Their rigid assumptions had caused them to misunderstand their past actions which actually compounded their current problems by triggering a 'price war' that made Scotch less 'precious' in the eyes of the consumer. By letting-go of their previously held assumptions, unlearning opened them up to the possibility of strategic foresight. Unlearning allowed the management team to realise that whisky was no longer king and their inability to capture and utilise sales information was limiting the efficiency of their operations. Letting-go of the ‘whisky is king’ assumption allowed them to see their production issues in a new light.

***Inquiry and (Re)learning***

Having realised that “*Information is the new king*”, the management team began to explore for a new basis of success. The supermarket investment in technology was resulting in new capabilities that allowed them to dictate the demand and price to whisky producers. The market power was gradually shifting from the producers of ‘Scotch Whisky’ to the retailers of ‘Scotch Whisky’. This unlearning had triggered a second-order temporary breakdown (Sandberg & Tsoukas, 2011; Argyris & Schön, 1978) where previously held views could not be reconciled with new insights about their unfolding situation. The management team began to use the scenarios approach to create the space for self-distanciation (Tsoukas, 2009) to reflect on and re-interpret the consequences of the ‘*information is the new king*’ paradigm for their business. The strategic foresight that emerged is summarised in Figure 3 below.

<INSERT FIGURE 3 ABOUT HERE>

Self-distanciation facilitated novelty and new thinking where management “judgement arises from the self-conscious use of the prefix re: the desire to re-order, to re-arrange, to re-design what one knows and thus create new angles of vision or new knowledge for scientific or aesthetic purposes” (Bell, 1999, p. xiv). By harnessing their insights about technological change the management team identified the crucial role of information technology and customer data for future success. The management team harnessed these scenario insights to innovate and create the ‘Customer Service Centre’ that would capture supermarket demand information flows, and aggregate them to aid production control, thus creating a new positive feedback loop for the firm. The ‘*information is the new king*’ paradigm also threw new light onto the trilemma facing their operations. The management team now realised that any potential solution that they might have considered previously would have compounded the situation. By capturing and consolidating customer orders in a timely manner through the ‘Customer Service Centre’, they would be able to develop demand intelligence that would help them plan and manage their operations to achieve economies of scale in production.

The resulting foresight led them to identify that they would need to create a ‘Customer Service Centre’ (Company Annual Accounts) to harness technological innovation and help them understand and manage future customer re-ordering processes. Previously customer re-ordering was sporadic and resulted in either short-run changes to production or longer-run production for stock. Both approaches were impacting negatively on the profitability of the business. In Vignette 6 the Operations Director noted that ‘information is the new king’ and it is argued here that such a transformation in understanding exemplifies strategic foresight through unlearning. The links between unlearning and strategic foresight are summarise in Figure 4 below.

<INSERT FIGURE 4 ABOUT HERE>

**DISCUSSION AND IMPLICATIONS**

So how does strategic foresight emerge from scenarios? The evidence from our longitudinal field study reveal, perhaps counterintuitively, how *unlearning* rather than learning helped generate the strategic foresight. By examining the actual temporal sequence of events within the foresight generation process, our findings and analysis demonstrate how the unlearning process (Figure 4) played a key role in helping the whisky producer overcome the rigidities of their imagination. Strategic foresight only emerged when the beliefs of the management team were transformed by the challenge to their managerial assumptions, recognition of rigidities in their imagination, unlearning followed by inquiry and (re)learning.

Our study also highlights the limitations of learning from organizational experience. We notice in Vignette 1 that the firm was initially caught in a ‘*competency*’ trap (Levitt & March, 1988, p. 322). They believed that their operational experience with production, distilling, blending and bottling will allow them to make efficiency gains and increase their competitive advantage. When viewed through the current organizational learning lens used by scenario theorists, the scenario in Figure 1, would trigger single loop learning (Bootz, et al., 2019; Argyris & Schön, 1978), where the management team can act to rectify mistakes, but without fundamentally changing their representations. The competency trap is therefore reinforced leading to strategic oversight rather than foresight.

Similarly, Vignettes 2, 3 and 6 illustrate the superstitious learning trap (Levitt & March, 1988, p. 325) where learning reinforced the ‘*Precious Scotch’* paradigm and the ‘whisky is king’ logic within the management team. While scenario theorists have suggested the need for ‘double loop learning’ that helps organizations shift their “system of norms, beliefs and organizational rules” (Bootz, et al., 2019, p. 93; Argyris & Schön, 1978), the literature is silent on how this can be brought about. We suggest that the ‘unlearning’ mechanism that we have proposed can act as a natural bridge to help organizations switch from single to double loop learning.

Finally, Vignette 4, and Figure 3 offer evidence for how the whisky producer overcame the myopia trap (Levinthal & March, 1993). By recognising their flawed ‘mind-set’ (Operations Director) and encouraging ‘new ideas’ (Managing Director), the team were able to effect the shift from operational efficiency to ‘information is the new king’ paradigm as the basis of success. They also realised the myopia of investing in branding and recognized the importance of investing in a Customer Service Centre for business effectiveness. These shifts are summarised in Table 1 below.

<INSERT TABLE 1 ABOUT HERE>

The empirical evidence from our study on ‘unlearning’ also allow us to weigh into the current theoretical debate regarding the concept (Howells & Scholderer, 2016; Tsang, 2017a; 2017b; Klein, 1989). We define unlearning as a process of recognising, acknowledging and letting go of prior learning (including assumptions and mental frameworks) in order to *relevate* new learning possibilities. Our definition of unlearning is significantly different from Hedberg’s (1981) original definition. We developed this definition by exploring the etymological roots of the word ‘*learn*’. According to The Oxford Dictionary of English Etymology, ‘*learn*’ originated from the Old High German word *lernen* whose root *lois (*from which *lernen* is derived*)* originally meant *"furrow, track.".* Hence, *lernen* originally meant *"to follow or find the track"* (Hoad, 2003, p. our emphasis). Unlearning, we argue, implies eradicating furrows and returning to the unfurrowed flux of organisational experience from which new possibilities are ‘*relevated*’ (Paton, et al., 2014). Unlearning requires letting go or relaxing the rigidities of previously held assumptions and beliefs, rather than forgetting them, as part of the general approach to creating strategic foresight.

Therefore, it is incorrect to conflate unlearning with either forgetting as Howells and Scholderer (2016) do or discarding old experiences, as Hedberg (1981) and Nystrom and Starbuck (1984) have claimed. Unlearning involves recognition and acknowledgement of the limits of current knowledge and insights that may have outlived their utility. Further, unlearning need not necessarily precede learning (single loop learning for instance does not require unlearning), however it must precede foresight. Unlearning is therefore a necessary, but not a sufficient condition, for strategic foresight. Finally, we agree with Howells and Scholderer (2016) when they say that unlearning cannot be managed. In our study, the unlearning and subsequent foresight emerged inadvertently as the management team relaxed their rigid assumptions. The ‘reflexivity’ (Cunliffe, 2002) of the participants played a crucial role in the inquiry and (re)learning that succeeded unlearning. Table 2 below offers a comparative summary of our unlearning concept/mechanism.

<INSERT TABLE 2 ABOUT HERE>

Our findings bear significant insights for the strategic foresight literature. Foresight in our study emerged from the participants gaining insights about their changing competitive landscape and then using those insights to probe future possibilities. Foresight, did not emerge from the development of strategic options (Ringland, 2010; Tapinos & Pyper, 2018) and the use of scenarios as wind-tunnels for testing these options (van der Heijden, 2005). Unlearning is thus one of the means to cultivate strategic foresight. Future research can therefore identify “organising practises and activities” (Sarpong & Maclean, 2016, p. 2013) that facilitate unlearning.

The study also support suggestions “that companies should invest in pedagogically rich scenario processes that develop the capability of managers to sense changes” (Rhisiart, et al., 2015, p. 124). Prior research by Schoemaker (1995) has distinguished between three categories of foresight relevant knowledge: 1. Things we know we know, 2. Things we know we do not know and 3. Things we do not know we do not know. Unlearning can be used as a mechanism to enable firms to transition from Category 3 to Category 2. It can also alert organizations to the learning traps that could plague Category 1 knowledge.

Scenario theorists can also draw on our process methodology and adapt their foresight studies to investigate other organizational phenomena like improved decision making (Derbyshire & Wright, 2017), knowledge management (Bootz, et al., 2019) and dynamic capabilities (Rohrbeck, 2012). Our approach allows theorists to capture and establish a link between a firm’s reflection and action (Bootz, 2010, p. 1591) thereby increasing the validity of their theoretical explanation.

Finally, we concur with Rhisiart, et al (2015) when they state that “the greatest potential for innovation, progress and insight in strategic foresight may be found in the richness of contemporary debates on the organisations, strategy and social theory – and their epistemological and ontological foundations” (p. 127). Recent advancements within process research studies has proposed the need for a *Becoming* mode of theorising predicated on a process ontology (MacKay & Chia, 2013; Langley & Tsoukas, 2010; Tsoukas & Chia, 2002; Chia, 1999). Developing scenario planning theory from a *Becoming* perspective could be yet another promising area for scholarly inquiry.

**CONCLUSION**

We began our paper by asking: How does organizational learning emanating from scenarios generate strategic foresight? Whilst there is widespread acknowledgement of the effectiveness of scenario planning for generating strategic foresight (Spaniol & Rowland, 2018; Wright, et al., 2015; Ramirez, et al., 2011; Varum & Melo, 2010; Cairns, et al., 2004; van der Heijden, et al., 2002; Duncan & Wack, 1993; Wack, 1985a; 1985b), few studies have examined the assumptions that lead to this assertion. Questions about how and why scenario planning leads to strategic foresight have received little theoretical and empirical attention (Bootz, et al., 2019). Addressing these questions requires us to critically examine the conceptual and theoretical links between scenarios, strategic foresight and organizational learning.

Our study makes three specific contributions. First, our paper responds to calls for confronting “foresight practices with a complete and coherent theoretical framework built from a detailed analysis of the concept of organizational learning” (Bootz, 2010, p. 1592). We not only identify the imprecise use of scenarios as both mechanism and outcome as the source of methodological chaos (Martelli, 2001; Spaniol & Rowland, 2018) within foresight studies but also theorise and problematize the ‘rigid’ assumptions that link organizational learning with strategic foresight.

Second, by theorising and developing a process research methodology (Van de Ven & Huber, 1990; Van de Ven, 1992) within scenarios, we introduce a novel approach that allows scenario theorists to pry open, explore and explain various kinds of ‘black-boxes’ that link scenarios with their stated organizational outcomes. The approach allows us to capture both actions and reflections of the participants as they take part in the scenario exercises. The methodology also offers theorists the opportunity to create the know-how knowledge valued by practitioners (Langley, et al., 2013).

Third, rather than assuming that scenario planning triggers organizational learning that yields strategic foresight, our longitudinal study helps unpack the complexities inherent within organizational learning and demonstrates how strategic foresight emerged from ‘unlearning’. Overall, by uncovering and specifying the ‘unlearning’ mechanism our study reveals how scenarios generate strategic foresight.

To conclude, we have exposed some of the theoretical orthodoxy within the scenario literature, particularly, with regards to the links between organizational learning and strategic foresight. The unlearning mechanism that we have unearthed and developed in this paper offers a novel explanation for how strategic foresight actually emerges from scenarios. We hope that our theoretical and methodological contributions will stimulate new practitioner foresights and scholarly debates, thereby moving knowledge forward.

# **REFERENCES**

Alvesson, M., 2003. Beyond Neopositivists, Romantics, And Localists: A Reflexive Approach to Interviews in Organizational Research. *Academy of Management Review,* 28(1), pp. 13-33.

Argote, L. & Miron-Spektor, E., 2011. Organizational Learning: From Experience to Knowledge. *Organization Science,* 22(5), pp. 1123-1137.

Argyris, C. & Schön, D. A., 1978. *Theory in Practice: Increasing Professional Effectiveness.* San Francisco: Jossey-Bass.

Becker, K., 2008. Unlearning as a driver of sustainable change and innovation: Three Australian case studies. *International Journal of Technology Management,* 42(1/2), pp. 89-106.

Becker, K., 2010. Facilitating unlearning during implementation of new technology. *Journal of Organizational Change Management,* 23(3), pp. 251-268.

Bell, D., 1999. The axial age of technology foreword. In: D. Bell, ed. *The coming of the post-industrial society, Special anniversary edition.* New York: Basic Books, pp. ix-lxxxv.

Bood, R. & Postma, T., 1997. Strategic learning with scenarios. *European Management Journal,* 15(6), pp. 633-647.

Bootz, J. P., 2010. Strategic foresight and organizational learning: A survey and critical analysis. *Technological Forecasting & Social Change,* Volume 77, pp. 1588-1594.

Bootz, J. P. et al., 2019. The links between French school of foresight and organizational learning: An assessment of developments in the last ten years. *Technological Forecasting & Social Change,* Volume 140 , p. 92–104.

Bradfield, R., Derbyshire, J. & Wright, G., 2016. The critical role of history in scenario thinking: Augmenting causal analysis within the intuitive logics scenario development methodology. *Futures,* Volume 77, p. 56–66.

Bradfield, R. et al., 2005. The origins and evolution of scenario techniques in long range business planning. *Futures,* Volume 37, pp. 795-812.

Butterfield, L. D., Borgen, W. A., Amundson, N. E. & Maglio, A. T., 2005. Fifty years of the critical incident technique: 1954-2004 and beyond. *Qualitative Research,* 5(4), p. 475–497.

Cairns, G. et al., 2004. Exploring e-government futures through the application of scenario planning. *Technological Forecasting & Social Change,* 71(3), pp. 217-238.

Chell, E., 1998. Critical incident technique. In: G. Symon & C. Cassell, eds. *Qualitative Methods and Analysis in Organizational Research: A Practical Guide.* London: Sage Publications Ltd, pp. 51-72.

Chermack, T. J., 2005. Studying scenario planning: Theory, research suggestions, and hypotheses. *Technological Forecasting & Social Change,* Volume 72, p. 59–73.

Chermack, T. J. & van der Merwe, L., 2003. The role of constructivist learning in scenario planning. *Futures,* 35(5), pp. 445-460.

Chia, R., 1999. A 'Rhizomic' model of organizational change and transformation: Perspectives from a metaphysics of change'. *British Journal of Management,* Volume 10, pp. 209-227.

Coates, J., Durance, P. & Godet, M., 2010. Strategic Foresight Issue: Introduction. *Technological Forecasting & Social Change,* Volume 77, pp. 1423-1425.

Cornelius, P., van de Putte, A. & Romani, M., 2005. Three Decades of Scenario Planning in Shell. *California Management Review,* 48(1), pp. 92-109.

Cunliffe, A. L., 2002. Reflexive dialogical practice in management learning. *Management Learning,* 33(1), pp. 35-61.

Day, G. S. & Schoemaker, P. J., 2004. Driving through the fog: managing at the edge. *Long Range Planning,* Volume 37, pp. 127-142.

de Geus, A. P., 1998. Planning as learning. *Harvard Business Review,* 66(2), pp. 70-74.

Derbyshire, J. & Wright, G., 2017. Augmenting the intuitive logics scenario planning method for a more comprehensive analysis of causation. *International Journal of Forecasting,* Volume 33, pp. 254-266.

Duncan, N. E. & Wack, P., 1993. Scenarios designed to improve decision making. *Strategy & Leadership,* 22(4), pp. 18-46.

Easterby-Smith, M., Crossan, M. & Niccolini, D., 2000. Organizational learning: Debates past, present and future. *Journal of Management Studies,* 37(6), p. 783–796.

Fiol, C. M. & Lyles, M. A., 1985. Organizational Learning. *Academy of Management Review,* 10(4), pp. 803-813.

Flanaghan, J. C., 1954. The critical incident technique. *Psychological Bulletin,* 51(4), pp. 327-358.

Grant, R. M., 2003. Strategic planning in a turbulent environment: Evidence from the oil majors. *Strategic Management Journal,* 24(6), pp. 491-517.

Hedberg, B., 1981. How organizations learn and unlearn. In: P. Nystrom & W. H. Starbuck, eds. *Handbook of Organizational Design.* Oxford, UK: Oxford University Press, pp. 3-27.

Hoad, T. F., 2003. *The Oxford Dictionary of English Etymology.* Oxford, UK: Oxford University Press.

Howells, J. & Scholderer, J., 2016. Forget unlearning? How an empirically unwarranted concept from psychology was imported to flourish in management and organisation studies. *Management Learning,* 47(4), pp. 443-446.

Ingold, T., 2011. *Being Alive: Essays On Movement, Knowledge and Description.* London and New York: Routledge.

Kahn, H. & Wiener, A. J., 1967. *The year 2000: A framework for speculation on the next 33 years.* London: Macmillan.

Klein, J., 1989. Parenthic learning in organizations: Toward the unlearning of the unlearning model. *Journal of Management Studies,* Volume 26, pp. 292-308.

Kolb, D. A., 1984. *Experiential Learning: Experience as the source of learning and development.* s.l.:Case Western Reserve University Press.

Langley, A., 1999. Strategies for theorizing from process data. *Academy of Management Review,* 24(4), pp. 691-710.

Langley, A., Smallman, C., Tsoukas, H. & Van De Ven, A. H., 2013. Process Studies of Change in Organization and Management: Unveiling Temporality, Activity and Flow. *Academy of Management Journal,* 56(1), pp. 1-13.

Langley, A. & Tsoukas, H., 2010. Introducing 'perspectives on process organization studies'. In: T. Hernes & S. Maitlis, eds. *Process, sensemaking and organizing.* Oxford: Oxford University Press, pp. 1-26.

Levinthal, D. A. & March, J. G., 1993. The Myopia of Learning. *Strategic Management Journal,* 14(Winter), pp. 95-112.

Levitt, B. & March, J. G., 1988. Organizational Learning. *Annual Review of Sociology,* Volume 14, pp. 319-340.

MacKay, B. R. & Chia, R., 2013. Choice, Chance, and Unintended Consequences in Strategic Change: A Process Understanding of the Rise and Fall of Northco Automotive. *Academy of Management Journal,* 56(1), pp. 208-230.

March, J. G., 2008. *Exploration in Organizations.* Stanford, California: Stanford University Press.

March, J. G. & Coutu, D., 2006. "Ideas as Art: A Conversation with James G March". *Harvard Business Review,* 84(10 (October)), pp. 82-89.

Martelli, A., 2001. Scenario building and scenario planning: State of the art and prospects of evolution. *Futures Research Quarterly,* Volume 17, p. 57–70.

Miles, M. B. & Huberman, A. M., 1994. *Qualitative Data Analysis.* Thousand Oaks, CA: Sage Publications Ltd.

Moyer, K., 1996. Scenario Planning at British Airways – A Case Study. *Long Range Planning,* 29(2), pp. 172-181.

Nystrom, P. C. & Starbuck, W. H., 1984. To avoid organizational crises, unlearn. *Organizational Dynamics,* 12(4), pp. 53-65.

Paton, S., Chia, R. & Burt, G., 2014. How Business Schools Can Become Useful through Strategic Partnerships. *Management Learning,* 45(3), pp. 267-288.

Peter, M. K. & Jarratt, D. G., 2015. The practice of foresight in long-term planning. *Technological Forecasting & Social Change,* Volume 101, p. 49–61.

Piaget, J., 1936. The origins of intelligence in children. In: H. E. Gruber & J. J. Voneche, eds. *The essential Piaget: An Interpretive Reference and Guide.* New York: Basic Books, pp. 215-249.

Piaget, J., 1937. The construction of reality in the child. In: H. E. Gruber & J. J. Voneche, eds. *The essential Piaget: An Interpretive Reference and Guide.* New York: Basic Books, pp. 250-294.

Piaget, J., 1977. *Equilibration of cognitive structures.* New York: Viking Publishers.

Poole, M. S., Van De Ven, A. H., Dooley, K. & Holmes, M. E., 2000. *Organizational Change and Innovation Processes, Theory and Methods for Research.* New York: Oxford University Press.

Postma, T. J. & Liebl, F., 2005. How to improve scenario analysis as a strategic management tool?. *Technological Forecasting & Social Change,* Volume 72, p. 161–173.

Ramirez, R., Roodhart, L. & Manders, W., 2011. How Shell domains link innovation and strategy. *Long Range Planning,* 44(4), pp. 250-270.

Ramirez, R. & Selskey, J. W., 2016. Strategic planning in turbulent environments: A social ecology approach to scenarios. *Long Range Planning,* 49(1), pp. 90-102.

Rhisiart, M., Miller, R. & Brook, S., 2015. Learning to use the future: developing foresight capabilities through scenario processes. *Technological Forecasting & Social Change,* Volume 101, pp. 124-133.

Ringland, G., 1998. *Scenario planning: Managing for the future.* Chichester: John Wiley & Sons Ltd.

Ringland, G., 2010. The role of scenarios in strategic foresight. *Technological Forecasting & Social Change,* Volume 77, p. 1493–1498.

Rohrbeck, R., 2012. Exploring value creation from corporate-foresight activities. *Futures,* 44(5), p. 440–452.

Sandberg, J. & Tsoukas, H., 2011. Grasping The Logic Of Practice: Theorizing Through Practical Rationality. *Academy of Management Review,* 36(2), pp. 338-360.

Sarpong, D. & Maclean, M., 2016. Cultivating strategic foresight in practise: A relational perspective. *Journal of Business Research,* Volume 69, pp. 2812-2820.

Schoemaker, P. H., 1995. Scenario planning: a tool for strategic thinking. *Sloan Management Review,* Issue Winter, p. 25–40.

Schoemaker, P. J., 1995. Scenario Planning: A Tool for Strategic Thinking. *Sloan Management Review,* 26(2), pp. 25-40.

Schwartz, P., 1991. *The Art of the Long View.* New York: Doubleday.

Senge, P. et al., 1999. *The dance of change: The challenges to sustaining momentum in learning organizations.* New York: Doubleday.

Siilasmaa, R., 2019. *Transforming Nokia: The power of paranoid optimism to lead through colossal change.* New York: McGraw-Hill.

Slaughter, R. A., 1995. *Futures for the Third Millennium.* St. Leonards, NSW, Australia: Prospect Media.

Spaniol, M. J. & Rowland, N. J., 2018. The scenario planning paradox. *Futures,* Volume 95, pp. 33-43.

Starbuck, W. H., 1996. Unlearning ineffective or obsolete technologies. *International Journal of Technology Management,* 11(7-8), pp. 725-737.

Starbuck, W. H., 2017. Organizational learning and unlearning. *The Learning Organization,* 24(1), pp. 30-38.

Strauss, A. & Corbin, J., 1998. *Basics of qualitative research: Techniques and procedures for developing grounded theory.* 2 ed. Thousand Oaks CA: Sage.

Tapinos, E. & Pyper, N., 2018. Forward looking analysis: Investigating how individuals ‘do’ foresight and make sense of the future. *Technological Forecasting & Social Change,* Volume 126, p. 292–302.

Tsang, E. W., 2017a. How the concept of organizational unlearning contributes to studies of learning organizations: A personal reflection. *The Learning Organization,* 24(1), pp. 39-48.

Tsang, E. W., 2017b. Stop eulogizing, complicating or straitjacketing the concept of organizational unlearning, please. *The Learning Organization,* 24(2), pp. 78-81.

Tsoukas, H., 2009. A dialogical approach to the creation of new knowledge in organizations. *Organization Science,* 20(6), pp. 941-957.

Tsoukas, H. & Chia, R., 2002. On organisational becoming: rethinking organisational change. *Organisational Science,* Volume 13, pp. 567-582.

Van de Ven, A. H., 1992. Suggestions For Studying Strategy Process: A Research Note. *Strategic Management Journal,* Volume 13, pp. 169-188.

Van de Ven, A. H. & Huber, G. P., 1990. Longitudinal Field Research Methods for Studying Processes of Organisational Change. *Organization Science,* 1(3), pp. 213-219.

van der Heijden, K., 2004. Can internally generated futures accelerate organizational learning?. *Futures,* Volume 36, p. 145–159.

van der Heijden, K., 2005. *Scenarios: The art of strategic conversation.* 2nd ed. Chichester, UK: John Wiley & Sons.

van der Heijden, K. et al., 2002. *The sixth sense: Accelerating organizational learning with scenarios.* John Wiley & Sons Ltd: Chichester, UK.

Varum, C. A. & Melo, C., 2010. Directions in scenario planning literature – A review of the past decades. *Futures,* Volume 42, p. 355–369.

Wack, P., 1985a. Scenarios: uncharted waters ahead. *Harvard Business Review,* Volume Sept-Oct, pp. 73-89.

Wack, P., 1985b. Scenarios: shooting the rapids. *Harvard Business Review,* Volume Nov-Dec, pp. 139-150.

Whitehead, A. N., 1967. *Adventures of ideas.* New York: Free Press.

Wilkinson, A., Kupers, R. & Mangalagiu, D., 2013. How plausibility-based scenario practices are grappling with complexity to appreciate and address 21st century challenges. *Technological Forecasting & Social Change,* Volume 80, pp. 699-710.

Wright, G., Cairns, G. & Bradfield, R., 2015. Scenario methodology: New developments in theory and practice – Introduction to the special issue.. *Technological Forecasting & Social Change,* Volume 80, pp. 561-565.

**TABLE 1**

|  |  |  |
| --- | --- | --- |
| **SI No** | **Rigidity in Imagination** | **Unlearning** |
| 1 | ‘Precious Scotch’ / Whisky is King | Information is the new king |
| 2 | Branding is key to success | Investment in technology and information management key to success |
| 3 | Operational Efficiency | Customer Service Centre |

**Table 1: Rigidity of Imagination and Unlearning**

**TABLE 2**

|  |  |  |  |
| --- | --- | --- | --- |
| **Hedberg (1981) and Nystrom and Starbuck (1984) Assumptions on unlearning** | **Howells and Scholderer's (2016) Critique** | **Insights from the field study** | **Implications for Unlearning** |
| Unlearning as the discard of knowledge is an independent process to learning | No evidence of deliberate efforts to remove memory, or success in deliberately discarding knowledge from memory | Unlearning involves recognition and acknowledgement of the limits of current knowledge and insights that may have outlived their utility | Unlearning is not forgetting or discarding old experiences |
| Unlearning precedes learning | Conventional theory-change where new knowledge that did not fit established theory stimulated a change in understanding | Unlearning precedes re-learning, but unlearning does not necessarily precede learning; re-learning not always new learning | Unlearning and new learning could occur in parallel |
| Unlearning aids both later learning and adoption of practice | Discard of practice(s) evident but not unlearning | Unlearning is a necessary condition but not a sufficient condition | Unlearning is useful only when the limits to prior understanding are remembered |
| The idea that unlearning can be ‘managed’, that is, knowledge may be deliberately and intentionally discarded or ‘removed’ to facilitate later learning | New understanding leads to setting-aside old understanding in the theory-change model | Understanding the difference between purposive, non-deliberate and unpredictable outcomes and purposeful action where there is a intended outcome | Unlearning requires participants to be reflexive. It can be facilitated but not managed |

**Table 2: Insights about Unlearning**

**FIGURE 1**



**Figure 1: Producer Logic (Original Assumption)**

**FIGURE 2**

****

**Figure 2: Emerging Logic (Reality of the Business Context)**

**FIGURE 3**

****

**Figure 3: Strategic Foresight from the 'Unlearning'**

**FIGURE 4**



**Figure 4: Strategic Foresight through 'Unlearning'**