



Contents lists available at ScienceDirect

## Technological Forecasting &amp; Social Change



# Learning to use the future: developing foresight capabilities through scenario processes



Martin Rhisiart<sup>a,\*</sup>, Riel Miller<sup>b</sup>, Simon Brooks<sup>c</sup>

<sup>a</sup> South Wales Business School, University of South Wales, Pontypridd CF37 1DL, UK

<sup>b</sup> UNESCO, 7 Place de Fontenoy, 75007 Paris, France

<sup>c</sup> School of Management, Swansea University, Singleton Park, Swansea, SA2 8PP, UK

## ARTICLE INFO

### Article history:

Received 16 July 2013

Received in revised form 12 October 2014

Accepted 29 October 2014

Available online 15 November 2014

### Keywords:

Scenarios

Strategic foresight

Learning

## ABSTRACT

Organizational learning is one type of value created by scenarios and strategic foresight within companies. However, relatively little attention has been devoted to what and how individuals – such as managers and strategists – learn from participation within strategic scenario processes. The paper focuses on the learning effects of scenario processes on participants, using the Futures Literacy Hybrid Strategic Scenario (FL HSS) method. It presents an evaluative framework for capturing the learning and cognitive effects of using the imaginary future, and the learning benefits derived by participants in intensive scenario processes. The paper outlines how scenario activities change the capabilities of the individuals and organizational systems to understand the nature and role of the future for what they perceive and what they do. Cognition is the domain of the individual rather than the organization and, as a result, the micro processes through which individuals learn and challenge mental models appear to be antecedent resources to collective mental model changes within organizations. This suggests that companies should invest in pedagogically rich scenario processes that develop the capability of managers to sense changes. The learning generated by scenario processes can strengthen the ‘sensing’ dynamic capabilities of firms.

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## 1. Introduction

This paper addresses two important issues for strategic foresight practice and theory. The first is the value of strategic foresight – particularly scenario work. Here we focus on the learning effects of scenario processes on participants. The second is the difficulty posed when engaged in scenario work by the lack of robust theory, as already noted by recent academic literature (Chermack, 2005; MacKay and Tambeau, 2013).

Strategic foresight activities are used by companies to support a range of functions and objectives, including strategic decision-making, business development and innovation (Bradfield et al., 2005; Coates et al., 2010; Costanzo, 2004a;

Daheim, 2008; Day and Schoemaker, 2004a; O'Brien and Meadows, 2013; Sarpong and Maclean, 2011). Concerns regarding uncertainty are also important triggers for companies to engage in strategic foresight work (Tapinos, 2012; Vecchiato and Roveda, 2010). Given the resources devoted to strategic foresight efforts by companies, a *prima facie* case can be made for its value and impact. Although there is little robust evidence of the effect of scenario planning on firm performance (Amorim Varum and Melo, 2010), there are many documented cases in which strategic foresight activities have guided firms along paths that have resulted in concrete successes for the company, i.e. improved corporate outcomes (surviving and thriving) (Coates et al., 2010; Costanzo, 2004a; Heger and Rohrbeck, 2012).

Recent work has sought to unpack the value-creating benefits of strategic foresight activities for companies. The predominant hypothesis or model used to describe and explain

\* Corresponding author. Tel.: +44 1443 483565; fax: +44 1443 482380.

E-mail addresses: martin.rhisiart@southwales.ac.uk (M. Rhisiart), r.miller@unesco.org (R. Miller), s.b.brooks@swansea.ac.uk (S. Brooks).

such impact rests on the proposition that strategic foresight improves decision-making (Vecchiato, 2012), organizational ambidexterity (Bodwell and Chermack, 2010), organizational learning (Bootz, 2010), strategic agility (Doz and Kosonen, 2008a, 2008b), and the dynamic capabilities of firms to survive and grow in the face of competitive and uncertain environments (Ramírez et al., 2013; Rohrbeck, 2012). Explicit anticipatory activities influence the cognitive capabilities of the organization to sense and make-sense of changes, risks, opportunities and the need for strategic shifts. Foresight activities, when deployed on an on-going basis and as a capability diffused throughout the organization's culture and structure, can continuously provide new or refocused lenses for identifying weak signals that cannot be detected using the dominant search logic of the businesses (Day and Schoemaker, 2004b; e Cunha and Chia, 2007; Winter, 2004).

Taking advantage of the value offered by the effective integration of strategic foresight activities into everyday operations and management within the corporate setting requires building up individual capabilities and establishing good systems for organizational learning (Sarpong and Maclean, 2011). There are many options and resources available to organizations and corporate leaders with an interest in advancing strategic foresight capabilities and systems – developing organizational capability, and operating at different levels and within different functions in the company. For example, approaches such as backcasting and visioning often require an alignment and repurposing of the whole organization. Whilst elaborate processes and methods might be employed in some strategic foresight activities that involve teams from multiple business units, others focus on individual processes of learning and cognition. One main approach is addressed by the primary research question guiding this paper: How does the deployment of strategic foresight activities change the capabilities of the individuals and organizational systems to understand the nature and role of the future for what they perceive and what they do? This paper addresses how strategic foresight processes influence the domain of learning, cognition and enhancing capabilities. We develop and apply a framework for evaluating the learning of participants in scenario workshops using the Futures Literacy Hybrid Strategic Scenario (FL HSS) method (Miller, 2007). Using the results of a FL HSS process run with participants from multiple companies (and other organizations) in Brazil, the paper presents the results of a reflective survey conducted by participants in which they self-evaluate how their understanding of the future has been affected through their full immersion in the scenario process. It assesses the learning and knowledge generated by the method – and sets this in the context of individuals' previous knowledge of strategic foresight and the way in which they frame the future.

The paper makes two principal contributions. First, it presents an evaluative framework for capturing the learning and cognitive effects of using the imaginary future. Second, on the basis of this evaluative framework there is an assessment of the learning benefits generated by using a specific methodology for working with the imaginary future.

## 2. Literature review

There is a wide range of existing knowledge and literature on the role, methods and value of strategic foresight within

organizations. Strategic foresight activities vary in terms of purpose, structuring and approaches (Coates et al., 2010; O'Brien and Meadows, 2013; Rohrbeck, 2012; Rohrbeck and Gemünden, 2011; Wright et al., 2013a, 2013b). Here we review the literature that is relevant to the main scope and interest of our paper: the value of strategic foresight – specifically scenario processes – with a particular emphasis on individual learning and cognition.

### 2.1. Main uses and objectives of foresight and scenarios

Several authors have sought to synthesise contemporary understanding of the objectives and deployment of scenarios and other strategic foresight methods within the corporate setting. In a review of scenario planning literature, the main categories of applications of firm-based strategic foresight activities were identified as follows: strategic decision-making, change management, finance, product or service development, supply-chain management and logistics, economies, government and policies, and environment; the category with the highest number of appearances was strategic decision-making (Amorim Varum and Melo, 2010). Rohrbeck (2012) identifies new potential value creation contributions of corporate Foresight under three general categories: to trigger responses, start and facilitate strategic discussions to enable strategic change, and identify and support acquisition of needed strategic resources. Other research using cross-case analysis has suggested that corporate Foresight has three distinct roles in innovation: outside the innovation process/funnel as a strategist role, at the start of the innovation funnel (initiator role), and as an opponent role along the innovation funnel (Rohrbeck and Gemünden, 2011). Durand and Godet (Coates et al., 2010) make a distinction between confidential scenario processes used by an executive team to develop enterprise strategy and scenarios for mobilising staff resources and consciousness in the face of significant external change – where the communication of strategy across the company is a central goal. For many firms strategic foresight activities are an important part of innovation processes – in product development and visioning (Andriopoulos and Gotsi, 2006; Sarpong and Maclean, 2012) and in guiding strategic innovation (Rohrbeck and Gemünden, 2011; van der Duin and Hartigh, 2009; von der Gracht et al., 2010).

### 2.2. Cognition, learning, weak signals and mental models

One of the main, generic motivations for conducting strategic foresight work has been the perception of environmental uncertainty. Because of the way in which the future is understood by most people and leaders in particular, discontinuities and unpredictable external contexts are seen as a rationale for deploying the analytical, cognitive and learning frameworks that can help companies navigate through the 'fog' of uncertainty (Day and Schoemaker, 2004a; van Notten et al., 2005). Investments in environmental scanning are one response for dealing with this way of understanding the future and uncertainty (Daheim, 2008). Organizations use foresight for 'improving perception of opportunities and options' (Bezold, 2010, p.1514). Foresight activities provide important lenses for sensing and identification of weak signals that may be undetected through the dominant search logic of the

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