Assessing emerging issues. The external and internal approach

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A R T I C L E   I N F O

A B S T R A C T

This article analyses emerging issues trying to find elements to assess the possibility that they become a relevant trend in the future using a twofold perspective for that purpose. On the one hand it considers the external approach, that is, the analysis of visible signals linked to the emerging issues that in an early stage are called "weak signals". On the other hand, it tries to study emerging issues taking into account their internal motivations. In this case the aim is to value the social, economic or other kind of reasons that are hidden under emerging issues. A post-structuralism perspective (CLA, causal layered analysis) is used to address this objective.

This double approach allows to consider emerging issues in a holistic way, taking into account what is visible and what is not so apparent. In order to offer conclusions and results a real use case is included analyzing the emerging issues showed in the report "Informe de la Sociedad de la Información 2013" (one of the references about information society situation and ICT trends in Spain).

1. Introduction

Getting an in depth understanding of the environment and its changes is one of the main management goals for any organization, mainly when it is necessary to make decisions with long term implications, that is, with a strategic nature. This is a common problem that all organizations have to deal with in one or another moment of its life, though some companies traditionally have not paid enough attention to it. Growth in competitiveness among the companies and faster changing conditions of the environment due to new technologies irruption is changing this situation, what forces to reconsider environment surveillance processes as a main source of data to feed strategy.

For this reason, foresight capability is seen as one of the aspects that make the difference for the success of any company, in many scholars (Hines, 2003) and corporate foresight "the art of the long view" has become a relevant task in modern organizations (Schwartz, 1991). Though these activities can be considered quite diverse, a holistic approach is necessary grouping them as part of an integrated process. In academic literature this is sometimes referred to as corporate foresight, conceiving it as a set of practices connected to management, organizations, strategy and technology (Pettigrew et al., 2002). These processes require some kind of structure within the organizations, at least in large organizations, in order to give them support and visibility. There is a debate about the best way to set up this unit and even if it should be a unit separated from the rest (Battistella, 2014), so that diverse models and classifications about its structure can be found in literature. One kind of structure that is gaining importance in the field of corporate foresight is the Observatory, an organizational model that

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includes specialized tasks addressed internally that can be distinguished from other kinds of units such as think tanks or outsourcers because of culture and management style (Daheim & Uerz, 2008). Nowadays, observatories are springing up in the organizations with the aim to surveillance the environment, activity commonly known as scanning. They can be found in the administration, in sectorial industry lobbies, in big corporations. There are many methodologies to do this scanning such as STEEP (Social, Technological, Economical, Environmental and Political), PEST (Political, Economic, Social and Technological) . . . , nevertheless it is a process not very formalized that depends too much on each organization's way of working and sometimes they fail to consider how the conjunction of those various angles should be combined into a sense-making whole. One key objective of these observatories is the detection of new phenomena that in Foresight literature are called "emerging issues", a process that is usually informal, even messy and often serendipitous. It is believed that these emerging issues do not occur all of a sudden and they are preceded by some kind of signals usually known as weak signals that are defined as "first symptoms of strategic discontinuities, i.e. symptoms of possible change in the future, acting as warning signs or signs of new possibilities" (Ansoff, 1984).

This paper dives into the process of emerging issues assessment, considering for that their signals and their internal motivations, and establishes a debate to obtain conclusions and orientations to carry out this task. It is organized into 7 sections. After the introduction, the necessity and role of observatories is raised in section two. In the third section, the emerging issues and other foresight concepts are explained. In sections 4 and 5 the external and internal analysis of emerging issues are studied. Section 6 develops the use case of SIE 2013 emerging issues based on the previous approaches. Section 7 summarizes the results and proposes new lines to continue the research.

2. The Surveillance necessity in organizations: the surge of the observatories

The capacity of an organization to adapt itself to the changing environment is paramount for its survival. For this reason, during the last century a high number of methodologies and theories intending to manage environments of uncertainty have been developed to orientate their activities. First models presupposed that it was possible to know with anticipation the different alternatives that could happen in the future, these alternatives usually called "states of the nature" are defined as "exhausted and mutually exclusive lifting of those aspects of nature which are relevant to this particular choice problem and about which the decision-maker is uncertain" (Luce & Raiffa, 1958). These models, from which Maximax, Maximin and Laplace's criteria are the greatest exponent, are still used in planning and construction of scenarios. They manage the uncertainty by estimating a probability for each of the alternatives, but they do not deal with the number and nature of the alternatives.

During the last years, it has been made clear that organizations cannot assume that they know all the possible future states of nature. This leads to the necessity of implementing processes to detect new phenomena with the power to change the environment affecting an organization. These phenomena, named in a generic way as "emerging issues" have been acquiring importance as subject of study, which has raised an important research activity about their nature, their detection and their classification. This development has driven to the definition of a great number of concepts and terms, whose boundaries are at current not well defined, giving rise to several debates about the limits and the sense of each one of them.

Once the importance of emerging issues is understood, it acquires special interest to design structures and methods to capture and filter properly these phenomena as far in advance as possible, which implies to introduce the notion of filters. In this case a filter must not be considered as a kind of glasses to pick up pertinent signals objectively placed in the environment. These filters in one way or another rely on internal cognitive knowledge structures so the signals meaning depends to some extent on actor's (person, organization . . .) mental models: a signal can mean something for one actor and lack of interest to others because "Cognitive systems interact with their environments, but it is the cognitive system – and not the environment – that determines how and in what way it interacts" (Seidl, 2004). This situation is more common in the cases of unexpected signals as is the case of a weak signal, which is by definition unstructured information and its implications to the organization are at an early stage very hard to define (Ilmola & Kuusi, 2006).

One approach to cope with filtering was developed by Ansoff (1984) who divided this activity in several levels. In the first place he considered a filter at environment level he called "Surveillance filter" that has the objective to filter the information that enters in the organization. Later, inside the company, mentality and power filters only let pass the most outstanding information so that the organization can make appropriate decisions.

From these three filters, the first has a special importance as it allows the organization to capture from the environment the relevant information (at least relevant to its cognitive knowledge structures) that can be useful for business development, a critical activity that in large organizations is faced with setting up some kind of structure (independent or not). This fact was considered some decades ago, for instance it was proposed in the model of viable organizations from Beer in 1972. In particular, subsystem 4 in its model named "intelligent subsystem" is in charge of environment surveillance in order to obtain relevant information to adapt the organization to external changes (Beer, 1972).

3. Foresight, terminology associated to "emerging issues"

At present, there is a considerable standardization activity about foresight theory and concepts. In this field the "The Millenium Project"[1] community stands out with 3500 members spread out in 49 nodes throughout the planet that address

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