Understanding the Role of Computer-Supported Argumentation in the Strategic Change Process

Emmanuel D. Adamides, Industrial Management and Information Systems Laboratory, Department of Mechanical Engineering and Aeronautics, University of Patras, Rio, Greece

Nikos Karacapilidis, Industrial Management and Information Systems Laboratory, Department of Mechanical Engineering and Aeronautics, University of Patras, Rio, Greece

ABSTRACT

In this paper the authors develop a conceptual framework for appreciating the use of computer-supported argumentation systems in organisational settings undergoing strategic change. More specifically, the authors concentrate on the role of computer-supported argumentation as catalyst for compensating distortions in the outcome of change, originating from the organisation’s power regime. The framework developed is based on a view of strategic change as actor-network (re)formation. Argumentation is in the core of this process which is greatly influenced by the power distribution among the participants of the change effort. A dynamic simulation model is used to instantiate the conceptual framework and to capture the dynamics of change. Simulation experiments are conducted to investigate the effects of employing argumentation technologies with specific characteristics related to the representation of power and accessibility in the argumentation discourse on the outcome of change.

Keywords: Actor-Network Theory, Computer-Supported Argumentation, Organisational Change, Strategic Change, System Dynamics

INTRODUCTION

Organizational change is a response to the fluidity of the external environment which induces a persistent need for operational and strategic flexibility (Chakravarthly & White, 2002). Consequently, organizational change and strategic change, if not synonymous, are closely interrelated. Strategic change can be defined as an attempt to change and align the organization (i.e. to redefine social relations, roles, etc among organizational members and artefacts) as a whole, or some of its functions (e.g. operations), with the external environment as it is perceived by the organization, by taking appropriate actions both internally and externally (Rajagopalan & Spreitzer, 1996). Obviously, today, strategic change for sustainable
competitive advantage means a move towards strategy innovation rather than incremental change (Hamel, 1998). In this paper we aim at providing a conceptual framework for understanding the role of a particular information and communication technology in such strategic change processes.

In general, information and communication technology is closely related to organisational change, as far as strategies and their organisational structures are concerned. Many functionalities of information systems have been considered as enablers, or active supporters, of new organisational forms sought after (Orlikowski & Hofman, 1997; Bloodgood & Salisbury, 2001; Markus, 2004). In other cases, the rigidities and limitations of technology have received the blame for cancelling creative strategies and innovative organisational reforms (Davenport, 1998). However, the relationship between information and communication technology and the process and outcome of strategic change has not received much attention. Executive information systems, (group) decision support systems, even collaboration systems, have been researched with respect to, and used in, individual strategic change episodes (e.g. Eden & Ackermann, 1998; Adamides & Karacapilidis, 2006), but the consideration of their contribution with respect to the entire change process is still pending. This is despite the fact that, today, the use of computer-supported collaboration and group decision support systems in change processes within disperse, networked organisations seems to be essential. To the same degree essential looks the use of computer-supported argumentation systems, which can handle “political” behaviours, conflict of opinions and negotiations, as well as solidifying commitments towards common goals (De Moor & Aakhus, 2006).

One possible reason for this gap in research, and for the reluctance of practitioners to embrace such tools in real organisational settings, stems from both the way organisations are ontologically assumed, and the way technology is related to processes of organising and organisations. Usually, organisations are assumed as entities that move from one state to another, as organisational changes are accomplished. Such a perspective is compatible with the analysis of strategic episodes, but limits the potential for researching the role of technology in change processes in wider time perspectives. Process-based research methods seem more appropriate, especially when the focus of interest is in the interaction between human agents and technological artefacts at the micro level of agency. Their ontological assumption is that organisations are not collections of individual “pieces” (human and non-human), but situation-specific webs of social relations in which technology enters and modifies, and, in turn, is modified (Taylor, 1993; Tsoukas & Chia, 2002; Van de Ven & Poole, 2005). In other words, it is assumed that the materiality of information and communication technology “is not an incidental or intermittent aspect of organisational life; it is integral to it” (Orlikowski, 2007), and that materiality is not “pre-formed substances” but rather “performed relations” with social agents (Orlikowski & Scott, 2008).

Having identified the research gap, and by adopting the above process-centred perspective, as far as the relation between organisational change and technology is concerned within the dialectic model of strategic change (Van de Ven & Poole, 1995), in this paper, we develop a systems-based conceptual framework for understanding the role of argumentative collaboration technology in the strategic change process. Our aim is to structure the issue within a dynamic perspective so that it becomes easier to examine whether, in reality, such tools have a significant role to play in the support of complex organisational processes (as change processes are), and if yes, under which technological and organisational conditions. Then, specific investigations can take place under the assumption that, in effect, organisations and their strategies are actor networks and that change is an actor-network (Latour, 2005) (re)formation process. In this process, argumentation is an important component that has long-term effects on the organisation’s strategy and its change processes. In the paper, we show, in a rather
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