



The panoptic gaze: Analysing the interaction between enterprise resource planning technology and organisational culture

Oliver George Kayas*, Rachel McLean, Tony Hines, Gillian H. Wright

Manchester Metropolitan University Business School, Aytoun Building, Aytoun Street, Manchester M1 3GH, UK

ARTICLE INFO

Article history:

Keywords:

Enterprise resource planning systems
Organisational culture
Workforce surveillance
Panopticon

ABSTRACT

The use of enterprise resource planning (ERP) systems to deploy the panoptic gaze remains unresearched in the UK. Though there are studies outside the UK which use panoptic theory to investigate ERP systems, they do not analyse the influence the interaction between ERP technology and organisational culture have on the development of the panoptic gaze. The aim emerging from these issues was to understand whether ERP technology, organisational culture, or a combination of both could support development of the panoptic gaze in an organisation from the UK. The method selected was a qualitative case study of a UK organisation's finance division, and the techniques used were semi-structured interviews and observations. The study suggests the ERP technology provided an infrastructure from which the panoptic gaze could be deployed. It was not deployed in this instance however, as the finance division's culture did not emphasise workforce surveillance. The study therefore suggests that in addition to ERP technology a culture emphasising workforce surveillance was needed to develop the panoptic gaze. The findings support the social shaping concept as it was the finance division's cultural context that influenced whether the ERP technology would be used to deploy the panoptic gaze.

© 2008 Elsevier Ltd. All rights reserved.

1. Introduction

The panopticon was originally conceived as a prison in 1787 by Jeremy Bentham. He designed it in such a way that a guard could observe prisoners, who knew they could be observed, but were unable to tell when they were being observed. He argued that prisoners who know they can be observed would conform to disciplinary power. Foucault (1977) later extended Bentham's work and adopted the panopticon as a metaphor for societal surveillance and disciplinary power. The literature acknowledges the panopticon's potential to exert disciplinary power over workers, particularly in relation to the monitoring and surveillance of their activities (e.g. Bain & Taylor, 2000; Sewell, 1996; Sewell & Wilkinson, 1992).

More recently, electronic or informational panopticons have emerged in the workplace (Bain & Taylor, 2000; Sewell, 1996; Thompson & Ackroyd, 1995). Zuboff (1988) provides an often cited exposition on the panoptic power of information technology in the workplace. She claims information technology that translates, records, and displays human behaviour, can provide the computerised version of universal transparency. She argues that systems which do not depend on the physical arrangement

of buildings, record keeping, or the presence of an observer, can become information panopticons. Gandy (1989) agrees with Zuboff by suggesting information technology can render panopticism if it can support the automatic generation of intelligence about people. More recently, it has been suggested that ERP systems can provide management with a mechanism for workforce surveillance (Elmes, Strong, & Volkoff, 2005; Sia, Tang, Soh, & Boh, 2002).

ERP systems are a software package designed to integrate, standardise, and automate processes and information transactions within the adopting organisation and throughout its supply chain (Al-Mashari & Zairi, 2000; Bingi, Sharma, & Godla, 1999; Davenport, 1998; Gibson, Holland, & Light, 1999; Holland & Light, 1999). It is done by a collection of application modules communicating with each other directly via one central database from which all modules draw, manipulate, and update data (Bingi et al., 1999; Davenport, 1998; Umble, Haft, & Umble, 2003). The central database enables information to be accessible to those intended across diverse organisational functions, units, and geographic boundaries in real time (Bingi et al., 1999; Nah, Lau, & Kuang, 2001). For the purpose of this study ERP technology refers to the hardware and software, whereas ERP system also refers to the adopting organisation's social context.

Enterprise resource planning (ERP) systems are becoming more widely implemented in organisations of all types and sizes (Dillard & Yuthas, 2006; Holland & Light, 2001). Despite their proliferation, research tends to focus on issues of implementation whilst their

* Corresponding author. Tel.: +44 161 247 6791; fax: +44 247 6794.

E-mail addresses: o.kayas@mmu.ac.uk (O.G. Kayas), r.mclean@mmu.ac.uk (R. McLean), a.hines@mmu.ac.uk (T. Hines), g.wright@mmu.ac.uk (G.H. Wright).

use remains comparatively unresearched (Esteves & Bohórquez, 2007; Esteves & Pastor, 2001; Holland & Light, 2001; Møller, Kraemmergaard, Rikhardsson, & Møller, 2004). One aspect of their use which needed further research was whether the interaction between ERP technology and the adopting organisation's cultural context could support development of the panoptic gaze.

Three issues emerge from previous studies which have investigated ERP systems using panoptic theory. First, they have differing conclusions as to whether ERP systems can support the panoptic gaze. Second, those that claim ERP systems can support the panoptic gaze do not analyse whether it is developed because of ERP technology, organisational culture, or a combination of both. Third, existing research is not within the context of the United Kingdom. The aim which emerged from these three research issues was to understand whether ERP technology, organisational culture, or a combination of both could support development of the panoptic gaze in an organisation from the United Kingdom. It is important to note the study focused on the development of the panoptic gaze, not whether it may in turn render disciplinary power.

This paper explores the potential of ERP systems in facilitating the panoptic gaze using the finance division of a United Kingdom higher education institute as a case study. First it outlines the theoretical underpinnings by drawing upon theory of organisational culture, the sociology of technology, and the panopticon. The research issues are then presented and explored before the methodological approach and organisational context is outlined. The discussion presents findings under two main headings: before the implementation of the ERP system and after the implementation of the ERP system and presents the findings through this comparison. The final section presents conclusions and highlights issues for further research.

2. Theoretical background

This section starts by examining the current focus of ERP systems research to show that the interaction between ERP technology and organisational culture and whether they can support the panoptic gaze is under researched. Organisational culture, a complex social phenomenon which lacks consensus about its definition because of a dispute in its underlying philosophical assumptions, is then analysed as the perspective adopted would influence the approach taken regarding sociological and technological interaction. To understand whether the ERP technology, the adopting organisation's cultural context, or a combination of both can render the panoptic gaze, the literature review then discusses theories of sociological and technological interaction. ERP systems studies adopting panoptic theory are then critiqued to identify the three research issues which the study addresses in its aim.

2.1. The focus of ERP systems literature

Esteves and Pastor (2001) conducted a survey of 189 enterprise system articles published between 1997 and 2000 within what they considered to be the key information systems journals and conferences. They found that implementation was the dominant category with 78 publications, followed in second place by general with 38, education with 26, usage with 17, evolution with 12, acquisition with 11, adoption with 7, and retirement with 0. In 2007 this publication was updated by Esteves and Bohórquez (2007). The revised survey analysed 449 enterprise system articles published between 2001 and 2005. They found that implementation was still the dominant category with 207 publications, followed by usage with 68, evolution with 59, general with 40, education with 35, adoption with 25, acquisition with 15, and retirement still with 0. Møller et al. (2004) conducted a survey of 739 enterprise sys-

Table 1
Most frequently used keywords in enterprise systems publications

Keyword	Occurrences
1. Implementation (enterprise system)	42
2. Information technology	35
3. Studies	35
4. Business planning	29
5. (System) integration	26
6. Supply (-) chain (management)	25
7. Information systems	19
8. Organizational change	18
9. Resource management	17
10. Software	15
11. Resource allocation	14
12. Business process reengineering	13
13. Business enterprises	12
14. Electronic commerce	11
15. Critical success factors	10

Source: Møller et al. (2004) p. 8.

tem articles published between 2000 and 2004 in 212 journals. The study sought the most frequently used keywords in enterprise system publications. Table 1 shows the 15 keywords with 10 or more occurrences.

These studies indicate literature often takes a managerial perspective, focuses on issues relating to ERP system implementation, and how the introduction of an ERP system can improve organisational efficiency, effectiveness, and/or performance. They also suggest literature which investigates organisational culture and workforce surveillance is not high on the research agenda; therefore, offering an opportunity to explore whether ERP technology, organisational culture, or a combination of both can support development of the panoptic gaze.

2.2. Organisational culture

There is disagreement in the literature about the definition of organisational (or corporate) culture (Alvesson, 2002; Harris & Ogbonna, 1998; Martin, 1992). This absence of agreement could be because of the variation in philosophical assumptions which guide approaches to organisational culture studies (Alvesson, 2002). An important philosophical distinction is between the functionalist (or positivist) and interpretivist paradigms (Alvesson, 2002; Martin, 2002; Smircich, 1983).

Functionalism is rooted in the sociology of regulation, and approaches a phenomenon from an objective position (Alvesson, 2002; Burrell & Morgan, 1979; Martin, 2002). It holds that organisational culture is something an organisation possesses and is given to people when they join. Studies drawing upon functionalism tend to use models and methods derived from the natural sciences to analyse organisational culture as a real phenomenon. Functionalist definitions of organisational culture include Hofstede (2001) who describes it as the "collective programming of the mind; it manifests itself not only in values, but in more superficial ways: in symbols, heroes, and rituals" (p. 1). Alternatively, Schein (2004) claims it is:

... a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems (p. 17).

Though interpretivism is also rooted in the sociology of regulation, it approaches a phenomenon from a subjective position (Alvesson, 2002; Burrell & Morgan, 1979; Martin, 2002). It seeks to understand organisational culture by explaining it within the realm

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات