

TRANSITIONING TO A NEW HRIS: THE RESHAPING OF HUMAN RESOURCES AND INFORMATION TECHNOLOGY TALENT

Sharna Wiblen

Work and Organisational Studies, Faculty of Economics and Business
University of Sydney
Institute Building H03, NSW 2006
Sharna.wiblen@sydney.edu.au

David Grant

Work and Organisational Studies, Faculty of Economics and Business
University of Sydney
Institute Building H03, NSW 2006
David.grant@sydney.edu.au

Kristine Dery

Work and Organisational Studies, Faculty of Economics and Business
University of Sydney
Institute Building H03, NSW 2006
Kristine.dery@sydney.edu.au

ABSTRACT

The management of talent is increasingly recognised as critical to organisational performance, particularly during periods of change. This is evident in large scale change projects that are technologically based and where major changes to processes typically require shifts in skills and capability requirements. Based on a single in-depth case study, this paper presents a comprehensive exploration of an organisation's decision to transition from their proprietary stand-alone HRIS system to an integrated vendor system. The study shows how this transition ultimately led to the reshaping of the organisation's understanding of the talent requirements in both the Human Resources (HR) and information technology (IT) functions and resulted in a new approach to the management of talent. By applying a social construction of technology based approach (SCOT), we argue that it is important for those involved in the study and practice of transitioning technology to be mindful of the potential consequences for talent and talent management.

Keywords: Human Resource Information Systems (HRIS), E-HR, talent management, social construction of technology (SCOT)

1. Introduction

Changes in labour demographics, the 'war for talent' [Ready, Hill and Conger 2008], skills shortages and several other factors have compelled organisations to consider new ways by which to more effectively manage their human capital. One response has been to recognise that "our people are our greatest asset" [Boudreau, Ramstad and Dowling 2002:4] and to seek to demonstrate a commitment to this claim by putting in place policies and practices that are specifically designed to enable an organisation to manage the identification, recruitment and development of individuals who are deemed 'talent'. The ability of organisations to effectively implement policies and practices associated with the management of talent can benefit from the use of information technology. The range of technology that can be used for this purpose is diverse, and within the academic and practitioner sphere it is referred to in a number of ways including E-HRM [Strohmeier 2007], web-based HR, virtual HR and Human Resource Information Systems (HRISs) [Ruël, Bondarouk and Looise 2004]. The focus of this study is on HRISs as they are considered to be one of the most dynamic and potentially useful technologies for business [Mayfield, Mayfield and Lunce 2003].

To date, studies of HRISs have tended to focus on their selection and implementation, and the contexts surrounding this [Beckers and Bsat 2002; Kinnie and Arthurs 1996; Gueutal 2003], on the appropriation of HRIS related technology [Ball 2001; Hendrickson 2003; Eckhardt, Laumer and Weitzel 2009] and on the vast organisation

related changes associated with these projects [Stone and Mason Davis 2009; Wilson-Evered and Hartel, 2009]. At the same time, while there is some literature that advocates the use of HRIS technology for talent management [CIPD 2005; Bassi and McMurrer 2007; Williams 2009], there is, as yet, little empirical research which simultaneously contributes to our understanding of both HRISs and talent management and the nature of any inter-relationship. What research there is, has tended to focus either on the ways in which HRISs have the ability to produce data that might inform an organisation's approach to the management of its human capital assets (i.e., talent) [Gueutal, 2003; Lengnick-Hall and Moritz, 2003] or on the talent required to effectively manage and deliver HR services via an HRIS [Bassi and McMurrer, 2007; Pilbeam, and Corbridge 2006]. In what follows we seek to provide a study that is primarily aligned with, and contributes to, our understanding of the latter of these two issues. That is, we consider how the transition to a new HRIS, reshapes an organisation's understanding of what constitutes talent for the organisation with a focus on the talent requirements in both the HR and IT functions charged with delivering this new technology. Specifically, we draw upon an in-depth case study of a single organisation and reflect upon the changes associated with the transition from a proprietary to a new vendor HRIS. This approach enabled us to gain comprehensive insights into the processes and activities undertaken as the transition took place. Specifically, it enabled us to address two inter-related research questions. First, how does the process of transitioning to using a new HRIS reshape the organisation and its understanding of talent? Second, how do the changes that flow from transitioning to a new HRIS technology reshape the Human Resource (HR) and Information Technology (IT) functions?

The remainder of the paper comprises six sections. Section 2 provides an overview of the extant HRIS and talent management literature, paying particular attention to those previous studies that recognise the connection between technology and talent management. Section 3 presents our theoretical approach. In section 4 we outline the study's methodology and design. This is followed by an overview of the organisation and its approach to the use of HRIS technology. Sections 6 and 7 focus on the presentation and analysis of the research findings and concludes by providing recommendations for academics and practitioners.

2. Human Resource Information Systems and Talent Management

There is some debate around the definition of HRISs, focussing primarily on the type of the technology that should be included, who uses it and how it is used. Additionally, given the infancy of research into talent management, there is also significant debate around the definitions within this domain. The following discussion serves to summarise these debates and highlight those definitions of HRISs and talent management that are utilised in this research.

2.1. Defining Human Resource Information Systems

The precise definition of HRISs has been debated by a number of academics [see Hyde and Shafritz, 1977; Ball 2001; Kavanagh and Thite, 2009]. There is however, a general consensus that an HRIS is a system used to acquire, store, analyze, retrieve and distribute pertinent information regarding an organisation's human resources [Bondarouk and Ruël, 2008; Hendrickson, 2003] and that it includes hardware, software, people, policies, procedures, and data [Kavanagh, Gueutal and Tannenbaum, 1990]. Further, there appears to be agreement that a HRIS is an information system that is associated with the human resource function and that the primary users of these systems and the information that they capture are individuals employed as part of this function. As a direct consequence of this positioning, it has been argued that '... there is a fundamental difference between HRIS and E-HR... where users of these systems [HRISs] are mainly HR staff' and furthermore 'technically speaking, it can be said that E-HR is the technical unlocking of HRIS for all employees of an organisation' [Ruël, Bondarouk, and Looise, 2004:17]. For this reason, the study of HRISs has been regarded as a distinct area of research within the E-HRM domain [Bondarouk and Ruël, 2009; Strohmeier, 2007; Voermans and Van Veldhoven, 2007]. In line with this perspective we view HRISs as a sub-domain of E-HR and our study thus focuses on the technology, people, policies, procedures and data used to effectively manage the HR function within the organisation.

When seeking to select, implement and appropriate information technologies, including HRISs, organisations are required to make many decisions. One such decision is whether they will adopt a technology or business-driven approach. Several authors have argued that rather than adopting a technology-driven approach, where the technology influences the direction of the business, a business-driven approach should be adopted as this encourages the implementation of technology within the context of the organisation and its strategic position [Apigian, Ragu-Nathan, Agu-Nathan and Kunnathur 2005; Porter, 2001]. Furthermore, given the potential functionality of the HRIS and the diverse array of modules that are available from vendors, organisations are also required to decide upon the extent to which they will customize the technology. Specifically, organisations need to determine whether they will tailor their existing human resource processes to fit with the functionality of the technology (a vanilla or configured implementation) versus customizing the functionality of the technology to fit their existing human resource

processes (a customized implementation). Evidence to date shows that most organisations choose to select, implement and maintain a vanilla or configured HRIS due to the higher costs and risks associated with making changes to the technology [Shrivastava and Shaw, 2003]. Regardless of the approach adopted, the organisational implications of the decision are typically complex [Dery, Grant, and Wiblen, 2009; Grant, Dery, Hall, Wailes, and Wiblen, 2009].

At a general level, HRISs are promoted as systems that enable organisations to create a centralized system enabling employees and managers to access information about their human resources [Ceriello and Freeman, 1991]. It is also believed that HRISs will allow the organisation to cut costs through the automation of previously labour intensive activities [Bussler and Davis, 2001]; that they can be used to maintain and facilitate communication up and down the organisation [Hannon, Jelf, and Brandes, 1996]; that they can be a tool for increased efficiency [Farndale, Paauwe, and Hoeksema, 2009:546]; and that they can assist in managing a rich variety of information about the firm's human capital and can provide analytical tools to assist in decision making about the management of these assets [Hendrickson, 2003:382]. Accordingly, HRISs have been depicted as critical contemporary human resource management tools [Bassett, Campbell, and Licciardi, 2003:2] enabling organisations to transform data into information that is essential for business operations and decision making [Marler and Floyd, 2009].

Associated with the increased role of HRISs are the implications for talent management. The intersection and potential relationship between talent management and HRISs suggests that HRISs can impact on the management of talent in the organisation in two significant respects. Firstly, HRISs have the ability to produce metrics, analytics and data about an organisation's human capital and hence 'talent' [Gueutal, 2003; Lawler, Levenson, and Boudreau 2004; Lengnick-Hall and Moritz, 2003]. Secondly, the implementation of an HRIS in itself has implications for the talent required for the effective management and delivery of HR services [Bassi and McMurrer, 2007; Pilbeam, and Corbridge 2006]. This paper focuses on the latter of these issues as it examines the changing talent requirements in both the HR and IT functions that result from of the transition from an existing proprietary HRIS to a new, integrated system.

Because our study considers the processes and activities undertaken as part of an organisation's decision to transition to a new HRIS technology, we need to reflect upon research concerning the implementation of technology. There are a number of studies that examine many aspects of such implementations including motivations [Beckers and Bsot, 2002], the importance of design [Bedell, Canniff, and Wyrick, 2009], and the role of trust [Lippert and Swiercz, 2005]. Many of these studies have looked at the processes and challenges associated with the transitioning of HRIS technology and demonstrate that it represents a significant form of organisational change [Senge 1990, 1994]. For example, Tansley and Watson [2000] examined the processes associated with the design and implementation of an HRIS in a large organisation and found that the successful introduction of these systems can neither be understood nor practically achieved without consideration of the change processes used to embed them. More recently, Stone and Mason Davis [2009] provided a comprehensive overview of the obstacles encountered during HRIS implementations arguing that as with many other types of organisation-wide change initiatives, they invariably lacked leadership, were poorly planned, managed and communicated and often failed to take account of the prevailing organisational culture such that they encountered low user acceptance. Recognising that such implementations are complex and not without their challenges, these authors also argue that 'While technical challenges will always remain in implementing complex HRIS, the major challenge to successful implementation is more behavioral than technical' [2009:173].

2.2. Defining Talent Management

The use of the term 'talent management' gained momentum in the late 1990's. The realisation that a number of previously separated demographic and global business patterns were combining in a manner which had important implications led organisations to recognise that there was a need to manage talent more effectively. The McKinsey and Company's 1998 study [Chambers, Foulton, Handfield-Jones, Hankin, and Michaels III, 1998] drew widespread attention to a rising demand for talent-intensive skills that would outpace supply in many industries and markets and result in a 'war for talent'. Stahl et al [2007] further elaborate upon this influential change by stating that in the context of the late 1990's 'talent management' came to appear synonymous with human capital management and its influence on an organisation's strategy. There are currently a number of practitioner and academic debates that focus upon diverse aspects associated with the management of talent. These include: its socio-economic significance [see Boudreau and Ramstad, 2005a; Buckingham and Vosburgh, 2001; Ready and Conger, 2007], the drivers [see Blass, 2007; Calo, 2008; CIPD, 2006a; Frank, Finnegan, and Taylor, 2004], approaches [see CIPD, 2006b; Lewis and Heckman, 2006; McDonnell, Lamare, Gunnigle, and Lavelle, 2010], and parties to talent management [see Boudreau and Ramstad, 2002; Devine and Powell, 2008; Guthridge, Komm, and Lawson, 2008].

While the term 'talent' has been used as a generic term to describe employee skills, knowledge etc., for several decades, there is little consensus regarding definitions of what constitutes talent in the context of talent management.

Some have viewed this as a weakness of talent management and its associated research. Lewis and Heckman emphasise this point by arguing that ‘a review of the literature focused on talent management reveals a disturbing lack of clarity regarding the definition, scope and overall goals of talent management’ [2006:139]. Despite the lack of consensus, at the most basic level the extant literature tends to agree that talent and the characteristics of talented individuals is individualistic, and that desired talents will differ between individuals, organisations and industries. A closer analysis of this literature, does, however reveal that talent can be organized into three basic categories. The first category, views individuals as talent, and involves the identification of individuals who are believed to be high performers with high potential and who are consequently understood to contribute positively to the organisation [see Blass, 2007; CIPD, 2008; Snell, 2008]. The second category, posits talent as skills and capabilities, and centres upon the organisation’s evaluation of particular skills and knowledge that are critical to organisational performance. This category can include individuals and cohorts of employees such as knowledge workers, professional services staff and/ or technical experts [April and Jappie, 2008; Blass, 2007; CIPD, 2006a; Lah, 2009]. Individuals or cohorts included in this category are deemed to possess attributes and skills that are considered to be difficult to replace [CIPD, 2006a]. The third category, considers talent as particular functions, or as Boudreau refers to them ‘pivotal roles’ [2003:21], and involves the identification of resources and roles that are deemed critical to the strategic success of the organisation. To identify such functions, organisations need to undertake systematic analysis of their business. These three approaches all assume that talent is held within the organisation. Widening the scope of this debate, the role of external consultants as ‘talent’ has also been discussed [see Calo, 2008; Miner, 1973].

While there is some debate around the definition of talent, it can also be argued that it is not essential that academics, practitioners and organisations agree on definitions of talent and talent management and that an organisation needs to define and pursue talent management in a manner that is specific to its business strategy. As such the desired characteristics of talent can change over time [Guthridge, Komm, and Lawson, 2006] as well as in accordance with changes in organisational priorities and strategies [CIPD, 2007; Wu, Hsia and Heng 2006]. It is this perspective that we adopt in this study, arguing that talent management is in itself socially constructed as organisations define and redefine their strategic priorities and the way in which they make sense of the concept of talent within those parameters. The definition of talent is an iterative process as organisations struggle with the tension between existing skills and knowledge that are valued under the current strategic paradigm, and the new projected requirements to meet future challenges. This is particularly evident during the implementation of new technologies where the challenge of predicting what might constitute talent is complicated by a wide spectrum of unknowns as the organisation struggles to predict the implications of the technological change on processes and behaviours.

3. Theoretical approach

There are a number of debates about technology which have highlighted the importance of including and considering the role of both the social and material context upon the selection, adoption and use of new technologies [see Dery, Hall, and Wailes, 2006; Grint and Woolgar, 1997; Orlikowski and Barley, 2001] including HRISs. Such social constructivist approaches emerged as a response to research that assumes a deterministic influence and impact of technology [Strohmeier, 2009]. Embracing the social construction of technology (SCOT) approach, we examine the way in which HRIS implementation processes and subsequent use of the HRIS shape the organisation’s view of talent and talent management in the HR and IT functions. Thus, rather than the HRIS technology itself determining what constitutes talent and how it is managed, we argue that the meanings attached to these phenomena are constructed by key actors through an iterative and interpretative process. As these understandings of talent are promoted and articulated, it is this process that shapes, forms and stabilises the way in which the technology is interpreted and used [Orlikowski, 2000]. This is not to say, however that a uniform use and interpretation of the technology can not emerge across the HR and IT functions. While over time, a dominant interpretation may emerge, differing and competing meanings among those in these ‘social groups’, both of whom have an interest in its use may become apparent and this will have consequences for how it is appropriated.

The SCOT approach is relevant to this study as it argues that the process, design and selection of technologies are open to and can be subjected to contestation [Pinch and Bijker, 1984] and hence challenges the more technological deterministic approaches which argue that a HRIS has pre-given and fixed meanings. Our study shows that using HRIS technology in relation to talent management involves users interacting with ‘facilities’ (such as the properties of the technological artefact), ‘norms’ (such as the protocols of using the technology), and ‘interpretative schemes’ (such as the skills, knowledge and the assumptions about the technology that the user brings to bear) [Dery et al., 2006]. In short, by adopting SCOT as our theoretical approach we were able to recognise that when considering relationships and experiences of technology and talent, it is essential that social factors and previous experiences be considered.

4. Methodology

The research approach adopted by this study follows that adopted by Levina and Orlikowski [2009] and seeks to focus on the use of the technology as interpreted through the self reported and observed use of an HRIS. An interpretative epistemology was considered the most appropriate for this study as it advocates two essential assumptions. Firstly, that individuals create their own meanings and secondly that context can influence the creation of such meanings. As the authors assume that the world is not a given, but rather an emergent social process [Burrell and Morgan, 1979] the study sought to analyse and explore the subjective meanings that individuals and organisations attributed to the HRIS technology and the consequences for the organisation. More specifically we were seeking ‘to understand the intersubjective meanings embedded in social life... (and) to explain why people act the way they do’ [Gibbons, 1987:3]. Additionally the adoption of interpretative assumptions gave salience to organisational context and is in line with the perspective adopted by Orlikowski and Baroudi who believe that the context of the use of technology is important. Furthermore, we agree that ‘the design and use of technology in organisations, in particular, is intrinsically embedded in social contexts, marked by time, locale, politics, and culture. Neglecting these influences may reveal an incomplete picture of information systems phenomena’ [1991:12].

Our study adopted an exploratory single site case study methodology [Berg, 2009]. The investigation of our research questions were addressed and answered via qualitative methods. This approach enabled the collection and presentation of empirical data that could capture the situated dynamics that emerged as the transition to the new HRIS took place. We also adopted a theory-before-research model of investigation [Berg, 2004] which involved the theory adopted (SCOT) directing the data collection. We also adopted an emergent process as suggested by Miles and Huberman [1994]. The adoption of an emergent process was possible due to the longitudinal nature of the study and involved the reflective analysis and interpretation of interview and secondary data while observing and noting changes in the social and organisational context before embarking upon the next round of interviews. This process sought to ensure that we were able to select and obtain the perspectives of salient individuals involved with the HRIS and the management of talent. The process also included simultaneous reflection upon academic and practitioner developments and debates and enhanced our ability to obtain multiple perspectives. This approach was well suited to the study of complex organisational processes and practices such as the transition to a new HRIS [Allan and Skinner, 1991; Berg, 2009; Hartley, 2000] and has been used by other researchers whose projects share similarities [see Dery, Grant, Harley, and Wright, 2006; Orlikowski, 2002; Tyre and Orlikowski, 1994].

The empirical data presented in this study focuses on ManuOrg (an assumed name). This organisation is currently participating in a larger research study funded by an Australian Research Council (ARC) Linkage Grant. A case study approach, for the purposes of this study, enabled the collection of information about social settings, events and/or individuals which facilitated an understanding of how the organisation and the individuals therein operated and behaved [Berg, 2009]. Over a 2 year period (2008-2010), 22 semi-structured in-depth interviews [Taylor and Bogdan, 1984] were conducted with a range of participants selected on the basis of their knowledge and understanding of the HRIS (see Table 1). In order to get beyond the potentially simplistic and broad generalisations that can eventuate from interviewing only individuals from comparable positions, participants were obtained from a range of positions and levels in the organisation, as well as from both the human resource and information technology functions. We also interviewed a number of external individuals, including consultants and vendors, who were also associated with the HRIS project. The empirical data collected from our interviews was transcribed and reviewed by the authors [Roulston, deMarrais, and Lewis, 2003].

The study methods enabled us to gather a set of rich, empirical data that represents the stories and experiences of individuals and functions within the organisation. Analysis of this data comprised four main stages. First, the data were read and catalogued according to their genre (e.g. interviews, technical manuals, correspondence, other written materials from the HRIS project team) and the time they were produced [Orlikowski and Yates, 1994; Yates and Orlikowski, 2002].

Second, using content analysis, the data was subjected to a detailed and systematic examination and interpretation in order to identify key themes [Berg, 2009; Leedy and Ormrod, 2005] associated with our research questions. This involved initially coding at two levels. At the first level, we sought to use a lexicon of terms that emanated from data itself and which related directly to the organization and its approach to talent management and the HRIS implementation. We were, for example, able to identify regular references by actors to ManuOrg’s organizational structure overall and the organisation of its HR and IT functions. We were also able to identify references to ManuOrg’s proprietary HRIS and the SAP HRIS it was transitioning to, as well as to the management of skills and knowledge among HR and IT staff. At the second level, we applied a lexicon of less case-specific terms to the data that arose from our *a priori* use and specification of constructs [Eisenhardt, 1989] that are to be found in the literature. For example, we identified terminology that related to HRIS and to concepts of organisational change,

talent management and business strategy. The key themes that emerged from this process were explored further and either discarded or refined [Glaser and Strauss, 1967; Miles and Huberman, 1994]. For example, we were able to code and aggregate data such that we captured study participants’ perceptions of what sorts of skills and knowledge were needed in relation to both the existing and new HRISs. We were also able to capture the ways in which participants conceptualised and articulated ‘talent’ and how they perceived it to be managed at ManuOrg. Further, we were able to code data in relation to the effects of the transition to the new HRIS on specific HRIS stakeholder groups such as the HR and IT functions. In line with the approach used by, for example, Fendt and Sachs [2008] and Ezzamel and Willmott [2008], instances of disagreement during the coding process were resolved through discussion amongst the coders.

Third, we constructed an ‘event history database’ [Van de Ven and Poole, 1990]. This involved analysing the data in order to establish a chronological order of key events and practices and using this information in order to develop an account of how the transition to the new HRIS played out [Eisenhardt and Bourgeois III, 1988; Langley, 1999]. Specifically, we organised the themes in relation to: (i) the situation prior to the transition to the new HRIS, (ii) the changes that occurred as the transition to the new HRIS took place and (iii) the situation once the transition had taken place.

For the fourth and final stage of analysis we moved to a process of axial coding [Strauss and Corbin, 1998]. This was a systematic and iterative process in which we moved among our already chronologically ordered, coded data seeking to identify relationships and emerging patterns [Eisenhardt, 1989]. Here, for example, we were able to analyse how changes among key actors’ understandings of what constituted talent at ManuOrg altered as the transition to the new HRIS unfolded and to examine how these changed understandings were tied into changes in the actual practice of talent management at the organisation.

In sum, and consistent with the Levina and Orlikowski’s [2009] research approach, our study can be seen to have applied multiple techniques and perspectives so as to analyse the way that practices evolve and are enacted. By allowing us to look at the multiple perspectives of a wide range of participants in the transition to the new HRIS over time, it enables us to construct a picture that is multifaceted and which provides insight into how participants constructed meaning from HRIS technology in practice.

Table 1: Summary of Data Collection

	2008	2009	2010
Structured Interviews:			
Internal	<ul style="list-style-type: none"> Group HR Director (interviewed twice) Senior HR Manager HRIS Project Team Leader HR Managers (2 interviewees) 	<ul style="list-style-type: none"> Group HR Director (interviewed twice) Senior HR Manager HRIS Project team Leader HR Manager Payroll Manager HRIS Project Team Members (2 interviewees) 	<ul style="list-style-type: none"> Group HR Director Senior HR Manager Payroll Manager
External		<ul style="list-style-type: none"> HRIS Project Consultant’s (2 interviewees) Vendor representative (SAP) 	<ul style="list-style-type: none"> HRIS Project Consultant Vendor representative (SAP)
Secondary data	<ul style="list-style-type: none"> Proprietary HRIS observation with different users Annual Report Internal HRIS project correspondence Site visits Observation of organisational culture 	<ul style="list-style-type: none"> Proprietary HRIS observation with different users SAP HRIS observation Annual Report SAP Technical manuals SAP Training exercises Observation of organisational culture 	<ul style="list-style-type: none"> SAP HRIS observation SAP presentations Use of SAP Site visits Observation of organisational culture

5. ManuOrg

ManuOrg is a leading diversified manufacturing company with operations throughout Australia as well as in Asia and New Zealand. It was established over 150 years ago and today employs more than 7,200 individuals across five distinct businesses (referred to hereon as the Group). Over time, ManuOrg has undergone a number of significant changes to its business structure and operations. However despite these changes, they have continued to maintain and manage their human resource activities primarily through a proprietary HRIS.

The impetus for the first major technological investment in an HRIS was driven by business requirements to manage the complexity of HR administrative and reporting requirements. Frontier's CHRIS was selected and implemented in 1986 and initially used for activities including those associated with leave, salary review, legislative compliance, and occupational health and safety. The initial implementation program was undertaken totally in-house with no on-going maintenance agreement with Frontier. This resulted in Frontier eventually coming to an arrangement with ManuOrg whereby they "sold" the code to the organisation giving them freedom to design and manipulate the system to meet their specific business needs. At the outset CHRIS was considered to be a HR management system and was not used for payroll, however in 1987 the upgrade to incorporate payroll functionality was initiated, recognising the capabilities of the system to manage a wide range of complex pay structures and awards.

Through progressive implementations and changes made to the functionality of the HRIS over twenty years, ManuOrg built a proprietary system that specifically addressed the needs of its different businesses and the organisation as a whole. This system was, of necessity, totally managed in-house, bore little resemblance to its originating CHRIS system and was totally reliant on the knowledge of those who had built and developed the technology over the years. The HRIS team were based in the HR department and consisted of four key players under the management of the HR Manager, who had played a key role in building the system. They all had long service with ManuOrg with two key individuals remaining with the organisation from the earliest days of the technology development.

Representing a significant break with the past, in 2008 the decision was made to transition away from the proprietary HRIS. This decision was driven by two key factors: the pending retirement of the HR Manager and a series of strategic directives that required each of the ManuOrg businesses to stand-alone which would provide for future re-structuring of the Group, while still being able to take advantage of a shared-services model. A new Group Director of HR was appointed who quickly moved the organisation along the path to considering a vanilla system which would be capable of delivering HR functionality and also providing the requisite information to facilitate a more strategic role for HR within the Group. The brief for the new HRIS was to minimise the risks attached to having a proprietary system that relied on the knowledge of individual employees (such as the current system) and to ensure that each business within the Group would be supported by an integrated HRIS that was widely recognised and easily transferable to a new owner if that was the desired strategic future direction of ManuOrg. This brief was met by a major HRIS vendor, SAP. SAP was to implement a new Payroll module along with a number of other HR modules including employee administration, personnel time management, organisational and benefits managements, career management, succession management, performance management and recruiting. These modules were to be accessible through both Manager Self Service (MSS) and Employee Self Service (ESS) systems. The organisation also opted to maintain some existing stand-alone systems for activities including occupational health and safety as it was deemed that the SAP modules did not adequately address these areas. The selection of SAP as the new HRIS was viewed by the organisation as a strategic decision that explicitly considered the future needs of the Group in regards to technology capabilities and the management of critical technological skills. The new SAP HRIS went live in October 2009 with all employees required to use the new ESS.

6. Key Changes

6.1. The Reshaping of Talent

In this section we observe that the change from ManuOrg's proprietary HRIS to SAP resulted in the organisation reshaping its understanding of talent and the desired employee skills and capabilities which added value to the business. This reshaping is summarised in Table 2.

Previously ManuOrg's conceptualisation of talent focused on notions of history and loyalty in such a way that many individuals had been able to create and pursue career paths centered within this one organisation. The pursuit of such organisational focused careers was seen to have a number of benefits for the organisation and the individuals involved. For instance, the organisation was able to gain greater returns from investments in training and development combined with the ability to retain knowledge about the organisation and its operations within the organisation. Similarly, the individuals that stayed with the organisation were rewarded for their loyalty and organisational commitment with security in employment and promotions. The authors witnessed the value attributed to organisational commitment during the data collection phase of this research, where we liaised with a number of individuals who had been with the organisation for more than 20 years and our primary point of contact for the project had served an impressive four decades with the organisation. Despite continuing to recognise the value of long term organisational commitment, members of the organisation's executive team acknowledged that the guard was changing and as such the value attributed to organisational based careers were beginning to wain. The Group HR Director reflected upon this change:

“I think historically from talking to people around the business, you can talk to people who’ve had careers in a number of streams within the various businesses that [ManuOrg] has owned over the years, but I don’t get a sense of that from more current joiners.”

The change in mindset regarding the value of long serving employees coupled with the changes resulting from the transitioning to a new HRIS also encouraged ManuOrg to re-evaluate the skills and capabilities that it desired from the ‘talent’ within the organisation. Given the long and established history of ManuOrg, previous human resource and talent management policies and practices had been normalised in the organisation. As such, individual employees deemed as ‘talent’ were perceived as possessing extensive knowledge and understanding of the organisation and its operations.

Our study found that most individuals employed within the HR team had lived through very few technology platform changes such that the proprietary HRIS was known “...back to front” and was considered to be “brilliant” by several of the HR team members we interviewed. Similarly the composition of the HR team had experienced very few changes during this time. The small number of individuals located in the HR team (7 in 2009) had demonstrated a significant commitment to the organisation through their length of service. For example two individuals employed in the HR function were also associated with updating the organisation’s HRIS in 1986 and were still with the organisation in 2009. Furthermore the newest member had been with the organisation for 7 years. Further reflection upon these similar patterns illustrates the organisation’s desire to retain individuals because of the value attributed to organisational commitment and loyalty as talent. Similarly individuals with knowledge and expertise of the proprietary HRIS were also valued and deemed as talent. Overall, HR and IT talent centred upon specific proprietary IT skills strengthened by in-depth knowledge of the organisation and its operations.

The consistency in the composition of the HR team and the HRIS technology meant that the organisation’s decision to transition their HRIS represented a significant break with the past and as such all members of the HR function would be affected. Given the nature of the proprietary HRIS, that is a technology created, implemented, customised and maintained by the HR function for the HR function, all members of this function would experience changes in the way that they collect, view and appropriate information generated by the new vendor HRIS. During an interview in mid 2009, two senior members of the HR team reflected upon the degree of change that the HR function would experience as a consequence of the new HRIS. One of these stated that it represents “... *significant change ... to a number of processes that have been around a long time within the operation...*” and as such all members of the HR function will need to develop an additional skill set, that is, SAP HR skills and capabilities. It was the need for these additional skills that helped to represent the organisation’s reshaping of their understanding of talent.

Several members of the organisation had clearly recognised that the decision to transition to a new HRIS would consequently reshape the organisation’s understanding of talent and the skills and capabilities that were valued. Despite the relative recent appropriation of the vendor HRIS, the authors had already heard several internal and external interviewees reflect upon the increased need for ManuOrg’s employees to be able to cope with and embrace the change that the new HRIS represented: *“The most obvious one [talent] is the capacity for change.”*

The ability for the organisation to sustain its understanding of HR and IT talent came under fire when a key individual who was primarily responsible for the proprietary HRIS decided to retire. It was during this time that the dangers of their traditional approach to talent were explicitly recognised by members of the HR function. The concern regarding the concentration of knowledge and reliance on particular individuals as talent was best expressed by a HR team member who stated that: *“But (HR Manager A) is retiring...so we need to look at upgrading because our human capital was within two people and we need to upgrade it.”* It was this realisation that provided additional momentum to the HRIS project and through its senior management, the organisation sought to reshape their traditional talent management processes as these were no longer considered as the most appropriate for the organisation going forward. To continue the traditional approach to talent, where the salience was attributed to proprietary HRIS and organisational based knowledge, was not only seen as outdated, but also risky. The Group HR Director recognised that these risks further encouraged the organisation to reshape their understanding of the future talents required of the HR function while simultaneously reflecting upon the way in which they *“...future-proof...our thinking as much as possible rather than just assuming that what we’ve done for the last period of time an organisation is going to see us through.”*

The organisation was encouraged to re-evaluate their understanding of talent upon the selection of SAP as the new HRIS. More specifically the selection of this HRIS technology resulted in an increased need for SAP skills, knowledge and experience. Given the previous reliance on proprietary HRIS skills and knowledge, the organisation found itself in a position where *“... all of our expertise has been with our legacy system because that’s what we have been using.”* However this change meant that those individuals with specific proprietary IT knowledge who were previously valued by the organisation were no longer considered as talent. When asked about the reshaping of

HRIS and hence IT talent, the retiring Senior HR Manager noted that: *“clearly we’re not going to need (proprietary HRIS) skills. Rather each individual will need to have a broad set of business skills...”* These views were echoed by the replacement Senior HR Manager who stated that *“... it would be great to have people who had very good knowledge in the business of SAP.”*

Prior to selecting the new HRIS, the organisation had limited SAP skills and knowledge and hence a clear talent gap existed. The extent of the talent gap was significant for HR and IT as individuals employed in both functions lacked SAP related skills. To fill this void in the short term, the organisation elected to buy-in appropriate talent. It did so by engaging a consulting company with staff who had specialized and certified SAP skills and the knowledge to assist with the selection and implementation of the new HRIS. Discussions undertaken during an interview with the most senior member of the consulting company in February 2009 centered upon the salience of SAP skills. This individual attributed the organisation’s involvement in ManuOrg’s HRIS project solely to their lack of SAP talent and the ability of the consultants to act as *“...specialists in the HR SAP area.”* During a later interview in September, he further reflected that current members of the HR team still *“do not have enough qualifications and skills”* in SAP and hence external assistance with transitioning the technology was still essential.

Despite the use of consultants, ManuOrg faced the challenge of acquiring SAP skills and knowledge for the longer term. This could either be achieved through providing traditional training and development for existing employees or targeting the acquisition of SAP skills, knowledge, and expertise through external recruitment. The approach adopted by the organisation to date has been to externally recruit for SAP skills and hence IT talent. By October 2009 three individuals with SAP and SAP HR skills had been recruited as members of the IT function. The recruitment of these three individuals all of whom were new to the organisation and lacked organisational based knowledge and expertise represent the manifestation of the organisation’s reshaping of their understanding of talent. The organisation recognised that they have been required to make talent management trade-offs. The recently appointed replacement Senior HR Manager accepted this point:

“I think whether you go with an SAP versus business knowledge, its like anything, it’s like when you recruit for any role. Do you go with someone who has got subject matter expertise, which one can you learn the quickest to actually get you over the line.”

It was through such external recruitment that the value attributed to SAP and more business based knowledge was demonstrated to both the HR and IT functions. The need to reshape the understanding of talent to include SAP skills required a change in mindset and it was believed that this change in mindset would *“...actually add value to the business.”*

Overall the decision to move to a new SAP HRIS resulted in ManuOrg reshaping its understanding of talent and making trade offs between organisational knowledge and specific technological knowledge. The ability to acquire such talent in both the short and long terms not only influenced the perceived success of the technology but was also recognised as having the ability to enhance or hinder future talent and operational elements of the business.

Table 2: The Reshaping of Talent

	Before the HRIS transitioning	Changes observed	After the HRIS transitioning
Understanding of Talent	<ul style="list-style-type: none"> • Individuals with knowledge of the organisation. • Individuals with knowledge of the proprietary HRIS. • Organisational loyalty. • Organisational commitment. • Organisational based careers. 	<ul style="list-style-type: none"> • Decision to replace long standing proprietary HRIS. • Selection and implementation of vendor HRIS. • Longest serving HRIS team member retired. 	<ul style="list-style-type: none"> • SAP knowledge and expertise. • Ability to cope with change. • General information technology experience and knowledge. • Function based careers.

6.2. Consequences of the reshaping of talent

During the early implementation stages of the new SAP HRIS we observed a number of talent management consequences which are summarized in Table 3. Several of these had broad organisational wide implications for the management of talent. Others specifically related to the repositioning of the HRIS team and HR and IT functions within the organisation.

Firstly the organisation’s desire to increase the number of policies and processes that can be conducted online and facilitated through E-HR had consequences for the organisation regarding their ability to manage changes associated with transitioning the technology. As alluded to by both members of the HR function and the consultants engaged for the HRIS project, the implementation of SAP represented a significant break with the past. Given the consistent nature of ManuOrg’s previous HRIS, many employees, in a similar way to those in HR function, had

experienced very little organisational and technological change and as such the organisation needed to cater for and manage the differing needs and expectations of employee cohorts regarding the new technology. The importance of managing these expectations of employees was discussed during an interview with the Group HR Director:

"I think you've got to be careful not to be luddite here, but the technology and how we interface with staff is just going to be absolutely critical. That's where I come down to response time and how we actually use the technology, but in a way that doesn't alienate the long-serving staff."

The second consequence of transitioning the HRIS technology centred upon the perceived opportunities for ManuOrg to adopt an understanding of talent management which would then be reflected in their remuneration policies and distribution of short, medium and long term incentives. Previous to the HRIS project, the organisation adopted human resource management approaches which tended to promote parity among employees located in different areas of the business. Although this approach was believed to have served them well in the past, they now believed that it might not be the best way for the organisation to manage remuneration in the future:

"...I think it is, but for a whole lot of good reasons, we've tended to have the one-size-fits-all, and that's going to have to be tested and I suspect changed to reflect where the different streams of the business are, because clearly sugar and building products are somewhat different,...So what does that mean for the reward programs? At the moment, the LTI (long term incentives) is obviously structured around an equity plan and what's the value of that to people who are in one side of the business vis-à-vis another..."

In contrast to the older approaches to remuneration, ManuOrg saw the implementation of a SAP HRIS as providing them with the kind of functionality that could be utilised to manage remuneration systems that targeted and rewarded individuals and / or groups of individuals that possessed the talent required for the organisation to achieve its business objectives. Such a transition in thinking represented a move towards a more strategic approach to talent management.

The transition to the new HRIS technology also led to a major repositioning of the HRIS team and the HR and IT functions. One consequence of this was the desire to centralise IT skills and talents. In order to centralise IT talent, the organisation sought to reposition the previous HRIS team from HR to Business Information Systems (BIS) and hence existing employees with proprietary HRIS technical knowledge were no longer to be considered part of the HR function. The retiring Senior HR Manager observed that the desire to change the way in which this HR and IT talent was managed was a consequence of the reshaping of talent early on during the HRIS project. He noted that members of the HRIS team included *"...a team of IT professionals...and we maintain and develop the present HRIS system. That won't continue in the future..."* The Group HR Director corroborated this view by stating that *"...obviously one of the things that will probably come out of the new system is... a move towards a more conventional structure of that (the HRIS) team within the IT structure."*

The decision to relocate the existing HRIS team from HR to BIS reflected the reshaping of talent and the recognition that individuals with extensive knowledge of the proprietary HRIS and the organisation were no longer regarded as contributing to the performance of the HR function. The individuals affected by this transition would not only be relocated to become members of the BIS team, but they would also need to be found alternative roles as their previous positions were made redundant. When asked about what would happen to the current HRIS team when the transition to SAP was finalised, the Senior HR Manager explained that the team would be totally disbanded and that particular members might leave the organisation if alternative positions could not be found. Similar sentiments were shared during discussions with other study participants, with one stating that: *"...it's really more around is there actually a meaningful role that makes sense, both from the company standpoint and obviously from the individual standpoint."*

Effectively then, the transition to a new HRIS required senior members of the HR and IT functions within ManuOrg to choose individuals who were highly conversant with the new SAP HRIS over individuals who possessed extensive organisational knowledge. These senior managers were very aware of this issue and of the need to plan for and manage its consequences. As the Senior HR Manager noted when reflecting on what future roles staff with knowledge of the old proprietary system might play: *"All that knowledge is gone. Not gone, sorry, all that knowledge can no longer be used in the new systems, so I think that is one of the challenges that we have."*

Table 3: Consequences of the Reshaping of Talent

	Before transition to new HRIS	Changes observed	After transition to new HRIS
ManuOrg	<ul style="list-style-type: none"> • Focus on the past – steeped in history and tradition. • Stable and consistent. • Valued, long term, organisation based careers. 	<ul style="list-style-type: none"> • Direct communication provided to employees that the organisation was undergoing change. • Relocated head office premises to location considered as a corporate centre for business. • New head office premises located in new building with modern facilities. • Undertook organisational change. 	<ul style="list-style-type: none"> • Move away from salience attributed to history and tradition – greater focus on future needs of the business. • Undergoing change. • Value function based careers.
Human Resource Function	<ul style="list-style-type: none"> • Extensive knowledge of proprietary HRIS. • Access to highly customised information and reports to fulfil and meet business and functional needs. 	<ul style="list-style-type: none"> • New Executive HR and Senior HR managers recruited. • Responsibility for maintenance for HRIS moved to BIS. • Required to liaise with new payroll function. 	<ul style="list-style-type: none"> • Limited knowledge and experience of SAP. • Loss of some highly customised reporting functionality. • Required to relearn HR and talent management processes. • Greater ability to physically liaise with payroll.
HRIS team	<ul style="list-style-type: none"> • Considered to be members of the HR function. • All required knowledge held internally. 	<ul style="list-style-type: none"> • Most senior HRIS team member retired. • Previous HRIS team was disbanded. • Specialised SAP Consultants engaged. 	<ul style="list-style-type: none"> • Loss of significant organisational knowledge through departure of long serving HRIS team members. • Individuals hired to maintain new vendor HRIS considered to members of IT team. • No one individual with extensive knowledge of the proprietary and vendor HRIS.
Information Technology Function	<ul style="list-style-type: none"> • Required to provide advice to HR regarding capabilities of proprietary HRIS. • Extensive knowledge of the proprietary HRIS. 	<ul style="list-style-type: none"> • Relocated to new premises • IT hardware upgraded • Specialised HRIS consultants engaged 	<ul style="list-style-type: none"> • External individuals hired to fulfil SAP knowledge gap. • New recruits with limited knowledge of the organisation, its operations, policies and processes.

7. Discussions and conclusions

In this study we have adopted a social constructivist perspective and approach that has enabled us to gain a greater understanding of the relationship between talent management and technology. By examining the processes associated with transitioning to a new HRIS, we were able to explore how one organisations understanding of talent and approaches to talent management were shaped and how they were informed by the implementation of new technology. The data derived and analysed for this study has demonstrated that the transition to a new HRIS had two significant consequences. Firstly, the organisation's understanding of talent and hence desired skills and capabilities among those in the HR and IT functions were reshaped and moved from valuing specific proprietary HRIS skills and extensive knowledge of the organisation and its operations, to valuing information technology related skills primarily associated with the SAP coupled with an ability to deal with change. The second consequence is that the transition led to a number of changes in the way talent in the organisation was organised and managed such that the contribution of the previous HRIS team and IT was re-evaluated and repositioned. In both cases these outcomes took place as a result not of the technology driving understandings of what constituted talent and talent management, but as a result of how key actors in the organisation chose to interpret and use the technology in relation to talent and how it should be managed.

Our findings corroborate a number of existing debates regarding information technology (including HRISs), talent and talent management. Firstly, our examination of ManuOrg through a longitudinal analysis meant that we were able to consider and reflect upon the selection and implementation of a technology based project. The

transitioning to a new HRIS technology in ManuOrg can be deemed as an IT, and more specifically an example of an HRIS implementation. As such, our results contribute to several of these debates by highlighting the motivations underpinning HRIS implementations and the processes associated with implementing the technology. They also highlight the need to consider the perspectives of individuals and social groups at different levels and in different areas of the organisation as suggested by Tansley and Watson [2000]. Although our case study also represents an example of organisational change and highlights the need to manage change during this process, we are yet to evaluate the extent to which the implementation of the SAP HRIS is considered as effective and successful. To date, we have been privy to the motivations and processes underpinning the decision to transition to the new HRIS technology, however, due to the emergent nature of the research we are yet to collect empirical data that reflects upon the nature of the change management processes. As such, this study's ability to contribute in-depth to debates and studies concerning organisational change such as that presented by organisational change scholars including Senge [1990, 1994] is somewhat limited. Our findings do however contribute to, and expand upon, IT and HRIS selection literature by highlighting elements of the HRIS selection process. ManuOrg chose to select a new technology in a manner that was mindful of both the technology and the organisation's business needs. In this respect, our findings are in line with those of both Porter [2001] and Apigan et al [2005]. At the same time, the organisation's decision to transition to a vanilla / vendor based HRIS rather than adopt another proprietary system also corroborates and extends Shrivastava and Shaw's [2003] study which found that most organisations choose to select, implement and maintain a vanilla based HRIS to minimise costs and exposure to risk. Additionally this decision was shaped and informed by the past experiences of the Groups HR Director, the strategic imperatives of the organisation at a higher level, and also the perceived opportunity that the change represented regarding the ability to reorganise the HR function across the organisation.

Secondly, our study shows that there are diverse ways in which 'talent' can be conceptualised and defined. If one considers ManuOrg's approach to talent alongside the three categories of talent presented in the literature: talent as particular individuals, talent as skills and capabilities and talent as particular functions, the process by which the organisation transitioned to its new HRIS technology was used to inform and reshape its understanding of talent. Before embarking upon their HRIS project, the organisation viewed proprietary HRIS and organisational knowledge as valued capabilities that contributed to the pursuit of organisational operations and goals; that is, the organisation considered talent to involve a particular individual (the retiring Senior HR Manager) as well as particular skills and capabilities. The process of transitioning to the new HRIS informed new thinking in the organisation around what particular skills and capabilities were required and as such the salience of proprietary HRIS and organisational knowledge was replaced by specific vendor HRIS knowledge and change management skills. During this period of change and the reshaping of talent, the organisation also sought to revise the value and contribution of several functions. This revaluation was undertaken with the perceived future needs of the Group in mind. The reshaping of talent, coupled with the consequences that we observed and presented in this study have interesting implications for the study of talent as they not only corroborate the notion that talent can be conceptualised and defined as particular skills and capabilities [April and Jappie, 2008; Blass, 2007; CIPD, 2006a; Lah, 2009] and as particular functions [Boudreau, 2003], but that these categories are not mutually exclusive and hence an organisation is not required to adopt only one approach. Our findings also support the arguments of Guthridge et al [2006] who state that the desired characteristics of talent can change over time. Specifically, they show that, over time, an organisation's approach to talent and talent management can change in accordance with changes in organisational priorities and strategies [CIPD, 2007; Wu et al 2006].

By adopting a social construction of technology approach to the study of talent, the findings demonstrate that the influence of technology on talent management is determined in part by the agency of the individuals involved and the social context within which the organisation operates [Orlikowski and Barley, 2001]. In sum, it is only through the appreciation of both the material and the social that more informed understandings of E-HR and talent management can be obtained. These findings corroborate those from the existing literature that apply SCOT to the study of technology [Dery et al., 2006; Grant et al., 2009].

The results also show that an organisation's understanding of talent is socially constructed. Furthermore, they remind us that the management of talent is designed to assist the organisation in meeting its business objectives and that as a result of the constant changes and adjustments that are made to these objectives, the way that an organisation understands talent, along with its approach to talent management, is always subject to change. Through the presentation of one organisation, ManuOrg, we have demonstrated how the decision to make changes within the organisation, such as a change in HRIS, encouraged the organisation to re-evaluate the skills and capabilities that they required and contributed to the formulation of business strategy. Changes in technology will also have consequences for talent management policies, processes and activities. The influence of transitioning technology on talent and talent management is an area that currently lacks extensive consideration by academics and practitioners.

It is suggested that future research and studies that address E-HR, HRIS and/or talent management may like to further consider such impacts and extend this body of knowledge.

This study responds to JECR's call for further research and empirical evidence based on interpretative assumptions and qualitative methods [Dwivedi, Kiang, Williams, and Lal, 2008]. Using a SCOT based approach, our study demonstrates the significant connections between HRIS technology and talent management and suggests that these present a potentially fruitful area for future research that adopts a similar approach. Additional in-depth comparative case studies considering a diverse range of organisations according to industry, location and size would, we believe, further enhance our understanding of the increasingly significant relationship between this technology and talent management. Furthermore, additional theoretical lenses such as discourse theory and the resource-based view of the firm could be usefully applied. While this study focuses on an HRIS that could become part of an integrated ERP system, we suggest that our findings are equally applicable to stand alone or outsourced HRIS and IT systems and that the transition to this technology would also have consequences for the management of talent, including HR and IT talent. As such, we suggest that future research should consider the role and consequences of outsourced systems. We suggest that this research would likely find that this change would also have significant consequences for the management of talent as the organisations involved seek to re-assess and restructure the management of talent in order to respond to this change.

As organisations increasingly compete through talent [Boudreau and Ramstad, 2005b], and continue to realise that the management of their talent is critical to their operations and survival, the use and application of HRISs, through access to encompassing information, may allow organisations to more effectively and strategically manage their talent and allocate resources. A growing awareness of the changing nature of business through globalisation combined with changing demographics such as an ageing population and talent shortage, compels business to focus more of their attention and energy on not only retaining their talent but also keeping them actively engaged in their work [Byrd, 2001; Frank and Taylor, 2004; Joerres and Turcq, 2007; McConville, 2006; Ready and Conger, 2007; Stevens, 2008]. In this environment, it will be critical for organisations to manage their talent in a more strategic manner than they have previously been accustomed to doing [Pfeffer, 1995]. Moreover, it is believed that as technologies such as HRISs evolve further they will bring with them new talent management opportunities and solutions [Joerres and Turcq, 2007]. Studies of the relationship between technology and talent management will need to capture and analyse these important developments.

By drawing on the experiences of our organisation, ManuOrg, we have been able to reflect upon the consequences of the transition to a new technology and the role that technologies such as HRISs and E-HR may have on the organisation paying particular attention to HR and IT professionals. For this organisation, the selection and implementation of a vendor provided HRIS (SAP) was seen to provide a number of benefits for the organisation such as the ability to enhance the technological skills of its employees and provide an integrated technology platform to undertake its operations. Despite the salience attributed to these benefits, the organisation also encountered some more detrimental consequences. In particular, the decision to exchange proprietary knowledge and skills for vendor based knowledge and skills resulted in the substantial loss of organisational based knowledge. As the need to compete for talent continues, many organisations will be encouraged to conceptualise what and / or who represents talent within their organisation. The role of many functions and professions, including HR and IT, may be evaluated within this process. Regardless of whether organisations choose to upgrade, downgrade, combine or replace any form of technology, this study shows that academics, practitioners, consultants and organisations should be aware of, and be sympathetic to, the possible talent and talent management implications of pursuing changes in technology.

Acknowledgment

This research is part of a larger project supported by an Australian Research Council Linkage Project LP0882247, in collaboration with the Australian Senior Human Resources Roundtable (ASHRR). The authors would also like to thank the editors and three anonymous reviewers for their insightful comments.

REFERENCES

- Apigian, C., B. Ragu-Nathan, Ragu-Nathan, T and A. Kunnathur, A, "Internet Technology: The Strategic Imperative," *Journal of Electronic Commerce Research*, Vol 6, No 2:123-145, 2005.
- Allan, G. and C. Skinner, (Eds.) *Handbook for research students in the social sciences*, London, New York: Falmer Press, 1991.
- April, K., and A. Jappie, "Global talent warfare: Line managers are still the determinant," *Journal for Convergence* Vol 9, No1:40-43, 2008.

- Ball, K. "The use of human resource information systems: a survey," *Personnel Review*, Vol 30, No 5/6:677-693, 2001.
- Bassett, P., G. Campbell, and R. Licciardi, "Tunnel Vision: Limited Use of Human Resource Information Systems (HRIS)" Victoria University of Technology, 2003.
- Bassi, L. and D. McMurrer, "Maximizing Your Return on People," *Harvard Business Review*, March: 115-123, 2007
- Beckers, A. and M. Bsat, "A DSS Classification Model for Research in Human Resource Information Systems," *Information Systems Management*, Vol 19, No 3:41-50, 2002.
- Bedell, M. D., M. Canniff, and C. Wyrick, "Systems Consideration in the Design of an HRIS: Planning for Implementation" In M. Thite, & M. J. Kavanagh (Eds.), *Human Resource Information Systems. Basic, Applications, and Future Directions* California: SAGE Publications Inc, pp 45-76. 2009.
- Berg, B. *Qualitative Research Methods for the Social Sciences* (5th Ed). Boston: Pearson, 2004.
- Berg, B. *Qualitative Research Methods for the Social Sciences* (7th Ed.). Boston: Allyn and Bacon, 2009.
- Blass, E. "Talent Management: Maximising talent for business performance: Executive Summary" London: Chartered Management Institute and Ashbridge Consulting, 2007.
- Bondarouk, T. and H. Ruël, "HRM systems for successful information technology implementation: evidence from three case studies," *European Management Journal*, Vol 26, No 3:153-165, 2008.
- Bondarouk, T. and H. Ruël, "Electronic Human Resource Management: challenges in the digital era," *International Journal of Human Resource Management*, Vol 20, No3:505-514, 2009.
- Boudreau, J. "Sustainability and the Talentship Paradigm: Strategic Human Resource Management Beyond the Bottom Line" CAHRS Working Paper 03-21, Ithaca: New York: Cornell University, School of Industrial and Labor Relations, Center for Advanced Human Resource Studies, 2003.
- Boudreau, J. and P. Ramstad, "Strategic HRM measurement in the 21st Century: From Justifying HR to Strategic Talent Leadership" CAHRS Working Paper 02-15 Ithaca: New York: Cornell University, School of Industrial and Labor Relations, Center for Advanced Human Resource Studies, 2002.
- Boudreau, J. and P. Ramstad, "Talentship and the New Paradigm for Human Resource Management: From Professional Practices to Strategic Talent Decision Science," *Human Resource Planning*, Vol 28, No 2:17-26, 2005a.
- Boudreau, J and P. Ramstad, "Where's Your Pivotal Talent?" *Harvard Business Review*, Vol 83, No 4:23-24, 2005b.
- Boudreau, J., P. Ramstad, and P. Dowling, "Global Talentship: Towards a Decision Science Connecting Talent to Global Strategic Success" CAHRS Working Paper 02-21, Ithaca: New York: Cornell University, School of Industrial and Labor Relations, Center for Advanced Human Resource Studies, 2002.
- Buckingham, M. and R. Vosburgh, "The 21st Century Human Resources Function: It's the Talent, Stupid!" *Human Resource Planning*, Vol 24, No 4:17-23, 2001.
- Burrell, G. and G. Morgan, *Sociological paradigms and organisational analysis: Elements of the sociology of corporate life*. London: Heinemann, 1979.
- Bussler, L. and E. Davis, "Information Systems: The Quiet Revolution in Human Resource Management," *Journal of Computer Information Systems*, Vol 42, No 2:17-20, 2001.
- Byrd, T. "Information technology: Core competencies, and sustained competitive advantage," *Information Resources Management Journal*, Vol 14, No 2:27-36, 2001.
- Calo, T. "Talent Management in the Era of the Aging Workforce: The Critical Role of Knowledge Transfer," *Public Personnel Management*, Vol 37, No 4:403-416, 2008.
- Ceriello, V. and C. Freeman, *Human Resource Management Systems: Strategies, Tactics and Techniques* Lexington: Lexington Books, 1991.
- Chambers, E., M. Foulton, H. Handfield-Jones, S. Hankin, and E. Michaels III, "The War For Talent," *McKinsey Quarterly* Vol 3:44-57, 1998.
- CIPD "People Management and Technology: Progress and Potential," London: Chartered Institute of Personnel and Development, 2005.
- CIPD "Reflections on Talent Management," London: Chartered Institute of Personnel and Development, 2006a.
- CIPD "Talent Management: Understanding the Dimensions," London: Chartered Institute of Personnel and Development, 2006b.
- CIPD "Talent Management," London: Chartered Institute of Personnel and Development, 2007.
- CIPD "Talent Management: an overview," London: Chartered Institute of Personnel and Development, 2008.
- Dery, K., D. Grant, B. Harley, and C. Wright, "Work, organisation and Enterprise Resource Planning systems: an alternative research agenda," *New Technology, Work and Employment*, Vol 21, No3:199-214, 2006.

- Dery, K., D. Grant, and S. Wiblen, "Human Resource Information Systems: Replacing or Enhancing HRM," 15th World Congress of the International Industrial Relations Association IIRA 2009 'The New World of Work, Organisations and Employment', Sydney, Australia, 27 August 2009.
- Dery, K., R. Hall, and N. Wailes, "ERPs as 'technologies-in-practice': social construction, materiality and the role of organisational factors," *New Technology, Work and Employment*, Vol 21, No 3:229-241, 2006.
- Devine, M. and M. Powell, "Talent management in the public sector," *360 The Ashridge Journal* Autumn: 1-6, 2008.
- Dwivedi, Y., M. Kiang, M. Williams, and B. Lal, "Profiling Research Published in the Journal of Electronic Commerce Research," *Journal of Electronic Commerce Research*, Vol 9, No 2:77-91, 2008.
- Eckhardt, A., S. Laumer, and T. Weitzel, "Who influences whom? Analyzing workplace referents' social influence on IT adoption and non-adoption," *Journal of Information Technology*, Vol 24, No 1:11-24, 2009.
- Eisenhardt, K. M. "Building Theories from Case Study Research," *The Academy of Management Review*, Vol 14, No 3: 532-550, 1989.
- Eisenhardt, K. M. and L. J. Bourgeois III, "Politics of Strategic Decision Making in High-Velocity Environments: Toward a Midrange Theory," *The Academy of Management Journal*, Vol 31, No 4:737-770, 1988.
- Ezzamel, M. and H. Willmot, H. "Strategy as Discourse in a Global Retailer: A Supplement to Rationalist and Interpretive Accounts," *Organization Studies*, Vol. 29, No. 2: 191-217, 2008.
- Fendt, J. and W. Sachs, "Grounded Theory Method in Management Research: Users' Perspectives," *Organizational Research Methods*, Vol 11, No 4: 430-455, 2008.
- Farndale, E., J. Paauwe, and L. Hoeksema, "In-sourcing HR: shared service centres in the Netherlands," *International Journal of Human Resource Management*, Vol 20, No 3:544-561, 2009.
- Frank, F., R. Finnegan, and C. Taylor, "The Race for Talent: Retaining and Engaging Workers in the 21st Century," *Human Resource Planning*, Vol 27, No 3:12-25, 2004.
- Frank, F., and C. Taylor, "Talent Management: Trends that Will Shape the Future," *Human Resource Planning*, Vol 27, No 1:33-41, 2004.
- Gibbons, M. "Introduction: the Politics of Interpretation" In M. Gibbons (Ed.), *Interpreting Politics* New York: New York University Press, 1-13, 1987.
- Glaser, B. G. and A. L. Strauss, *The Discovery of Grounded Theory: Strategies for Qualitative Research*, Chicago, Aldine, 1967.
- Grant, D., K. Dery, R. Hall, N. Wailes, and S. Wiblen, "Human Resource Information Systems (HRIS): An Unrealised Potential" Paper presented at the Annual CIPD Centres' Conference, 2009.
- Grint, K. and S. Woolgar, *The Machine at Work: Technology, Work and Organisation* Cambridge: Polity Press, 1997.
- Gueutal, H. "The Brave New World of E-HR," *Advances in Human Performance and Cognitive Engineering Research* Vol 3:13-36, 2003.
- Guthridge, M., A. Komm, and E. Lawson, "The people problem in talent management," *McKinsey Quarterly*, Vol 2: 6-8, 2006.
- Guthridge, M., A. Komm, and E. Lawson, "Making talent a strategic priority," *McKinsey Quarterly*, Vol 1:49-59, 2008.
- Hannon, J., G. Jelf, and D. Brandes, "Human resource information systems: operational issues and strategic considerations in a global environment," *International Journal of Human Resource Management*, Vol 7, No 1:245-269, 1996.
- Hartley, J. "Case Studies in Organisational Research" In G. Symon, C. Cassell and R. Dickson (Eds.), *Qualitative Methods in Organisational Research and Practice*, Hove: Psychology Press, 208-229, 2000.
- Hendrickson, A. "Human Resource Information Systems: Backbone Technology of Contemporary Human Resources," *Journal of Labor Research*, Vol 24, No 3:381-394, 2003.
- Hyde, A. and J. Shafritz, "HRIS: Introduction to Tomorrow's System for Managing Human Resources," *Public Personnel Management*, Vol 6, No 2:70-77, 1977.
- Joerres, J. and D. Turcq, "Talent Value Management," *Industrial Management*, Vol 49, No 2:8-13, 2007.
- Kavanagh, M., H. Gueutal, and S. Tannenbaum, *Human resource information systems: development and application*. Boston, Mass: PWS-Kent Publications Co, 1990.
- Kavanagh, M. and M. Thite, "The Future of HRIS: Emerging Trends in HRM and IT," In M. Kavanagh and M. Thite (Eds.), *Human Resource Information Systems: Basics, Applications, and Future Directions*, California: SAGE Publications Inc, pp 409-418, 2009.
- Kinnie, N. and A. Arthurs, "Personnel specialists' advanced use of information technology," *Personnel Review*, Vol 25, No 3:3- 19, 1996.

- Lah, T. "Using Talent Supply Chain Management to Overcome Challenges in the Professional Services Market," *Workforce Management*, Vol 88, No 3, 2009.
- Langley, A. "Strategies for Theorizing from Process Data," *Academy of Management Review*, Vol 24, No 4:691-710, 1999.
- Lawler, E. E., A. Levenson, and J. Boudreau, "HR Metrics and Analytics: Use and Impact," *Human Resource Planning*, 27 (4): 27-35, 2004
- Leedy, P. and J. Ormrod, *Practical Research: Planning and Design* New Jersey: Pearson Education, 2005
- Lengnick-Hall, M. and S. Moritz, "The Impact of e-HR on the Human Resource Management Function," *Journal of Labor Research*, Vol 24, No 3: 65-379, 2003
- Lewis, R. and R. Heckman, "Talent management: A critical review," *Human Resource Management Review*, Vol 16, No 2:139-154, 2006.
- Levina, N. and W. Orlikowski, "Understanding the Shifting Power Relations Within and Across Organisations: A Critical Genre Analysis," *Academy of Management Journal*, Vol 52, No 4:672-703, 2009.
- Lippert, S. K., and P.M. Swiercz, "Human resource information systems (HRIS) and technology trust," *Journal of Information Science*, Vol 31, No 5: 340-353, 2005.
- Marler, J. and B. Floyd, "Database Concepts and Applications in HRIS," In M. Kavanagh and M. Thite (Eds.), *Human Resource Information Systems. Basics, Applications, and Future Directions*, California: SAGE Publications INC, pp 25-44, 2009
- Mayfield, M., J. Mayfield, and S. Lunce, "Human Resource Information Systems: A Review and Model Development," *Advances in Competitiveness Research*, Vol 11, No 1:139-152, 2003.
- McConville, T. "Devolved HRM responsibilities, middle-mangers and role dissonance," *Personnel Review*, Vol 35, No 6:637-653, 2006.
- McDonnell, A., R. Lamare, P. Gunnigle, and J. Lavelle, "Developing Tomorrow's Leaders- Evidence of Global Talent management in Multinational Companies," *Journal of World Business*, Vol 45, No 2, 150-160, 2010.
- Miles, M. and A. Huberman, *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: Sage, 1994.
- Miner, J. "The Management Consulting Firm as a Source of High-Level Managerial Talent," *Academy of Management Journal*, Vol 16, No 2:253-264, 1973.
- Orlikowski, W. "Using Technology and Constituting Structures: A Practice Lens for Studying Technology in Organisations," *Organisation Science*, Vol 11, No 4:404-428, 2000.
- Orlikowski, W. "Knowing in Practice: Enacting a Collective Capability in Distributed Organizing," *Organisation Science*, Vol 13, No 3:249-273, 2002.
- Orlikowski, W. and S. Barley, "Technology and Institutions: What Can Research on Information Technology and Research on Organisations learn From Each Other?" *MIS Quarterly*, Vol 25, No 2:145-165, 2001.
- Orlikowski, W. and J. Baroudi, "Studying Information Technology in Organisations: Research Approaches and Assumptions," *Information Systems Research*, Vol 2, No 1:1-28, 1991.
- Orlikowski, W.J. and J. Yates, "Genre Reporting: The Structuring of Communicative Practices in Organizations," *Administrative Science Quarterly*, Vol 39, 541-574, 1994.
- Pfeffer, J. "Producing sustainable competitive advantage through the effective management of people," *Academy of Management Executive*, Vol 9, No 1: 55-69, 1995.
- Pilbeam, S., and M. Corbridge, "HR Information Systems and e-enabled HR" In S. Pilbeam and M. Corbridge (Eds.), *People Resourcing: Contemporary HRM in Practice* (3rd Ed.), Harlow, England: Pearson Education Limited, pp 121-140, 2006.
- Pinch, T. and W. Bijker, "The Social Construction of Facts and Artifacts: or How the Sociology of Science and the Sociology of Technology might Benefit Each Other," *Social Studies of Science*, Vol 14, No 3:399-441, 1984.
- Porter, M. "Strategy and the Internet," *Harvard Business Review*, Vol 79, No 3: 62-78, 2001.
- Ready, D. and J. Conger, "Make Your Company a TALENT FACTORY," *Harvard Business Review*, Vol 85, No 6:68-77, 2007.
- Ready, D., L. Hill, and J. Conger, "Winning the Race for Talent in Emerging Markets," *Harvard Business Review*, Vol 86:62-70, 2008.
- Roulston, K., K. deMarrais, and J. Lewis, "Learning to Interview in the Social Sciences," *Qualitative Inquiry*, Vol 9, No 4:643-668, 2003.
- Ruël, H., T. Bondarouk, and J. Looise, J. "E-HRM: Innovation or Irritation. An Explorative Empirical Study in Five Large Companies on Web-based HRM," *Management Revue*, Vol 15, No 3:364-380, 2004.
- Ruël, H., T. Bondarouk, and J. Looise, *E-HRM: Innovation or Irritation? An Exploration of Web-Based Human Resource Management in Large Companies* Utrecht: Lemma Publishers, 2004

- Senge, P. *The Fifth Discipline: The Art and Practice of The Learning Organisation*. New York: Doubleday, 1990
- Senge, P. *The Fifth Discipline Field book: Strategies and Tools for Building a Learning Organisation*. New York: Doubleday, 1994
- Shrivastava, S., and J. Shaw, "Liberating HR Through Technology," *Human Resource Management*, Vol 42, No 3:201-222, 2003.
- Snell, A. "The Future of Talent Management," *Workforce Management*, Vol 87, No 20, 2008.
- Stahl, G., I. Bjorkman, E. Farndale, S. Morris, J. Paauwe, and P. Stiles, J. Trevor and P. Wright *Global Talent Management: How Leading Multinationals Build and Sustain Their Talent Pipeline* France: INSEAD, 2007
- Stevens, H. "Total Quality Management Now Applies to Managing Talent," *Journal for Quality and Participation*, Vol 31, No 2:15-18, 2008.
- Stone, R. and J. Mason Davis, "Change Management: Implementation, Integration, and Maintenance of the HRIS," In M. Thite and M. J. Kavanagh (Eds.), *Human Resource Information Systems. Basics, Applications, and Future Directions* California: SAGE Publications Inc, pp 173-208, 2009.
- Strauss, A., & J. Corbin, *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Thousand Oaks, CA: Sage, 1998.
- Strohmeier, S "Research in e-HRM: Review and Implications" *Human Resource Management Review*, Vol 17:19-37, 2007.
- Strohmeier, S. "Concepts of e-HRM consequences: a categorisation, review and suggestion," *International Journal of Human Resource Management*, Vol 20, No 3:528-543, 2009.
- Tansley, C., and T. Watson, "Strategic exchange in the development of Human Resource Information Systems (HRIS)," *New Technology, Work & Employment*, Vol 15, No 2: 108- 122, 2000
- Taylor, S. and R. Bogdan, *In Depth Interviewing*. In *Introduction to qualitative research methods: the search for meanings* (2nd Ed) New York: Wiley, 1984.
- Tyre, M. and W. Orlikowski, "Windows of Opportunity: Temporal Patterns of Technological Adaptation in Organisations," *Organisation Science*, Vol 5, No 1:98-118, 1994.
- Van de Ven, A. H. and M. S Poole, M. S. "Methods for Studying Innovation Development in the Minnesota Innovation Research Program," *Organization Science*, Vol 1, No 3: 313-335, 1990.
- Voermans, M., and M. Van Veldhoven, "Attitude towards E-HRM: an empirical study at Philips," *Personnel Review*, Vol 36, No 6:887-902, 2007.
- Williams, H. "Job Analysis and HR Planning," In M. Thite and M. J. Kavanagh (Eds.), *Human Resource Information Systems. Basics, Applications, and Future Directions*. California: SAGE Publications Inc, pp 251-276, 2009.
- Wilson-Evered, E., and C. Hartel, "Measuring attitudes to HRIS implementation: A field study to inform implementation methodology," *Asia Pacific Journal of Human Resources*, Vol 47, No 3:374-384, 2009.
- Wu, J.-H., T.-L. Hsia, and M. Heng, "Core Capabilities for Exploiting Electronic Banking," *Journal of Electronic Commerce Research*, Vol 7, No 2:111-122, 2006.
- Yates, J. and Orlikowski, W. "Genre systems: structuring interaction through communication norms," *Journal of Business Communication*, Vol 39, No 1:13-35, 2002.