"Exploring Enterprise Social Systems & Organisational Change: Implementation in a Digital Age"

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1. Introduction

Information systems (IS), since their introduction into organisations over five decades ago, have promised to streamline business processes, integrate disparate systems, increase innovation, and offer greater competitive advantage. Over the past decades, the evolution of Information Systems have mirrored many of the challenges experienced by our work organisations. For example, throughout the 1980s a primary concern for many organisations was the attainment of competitive advantage within their respective industries (Porter, 1980). The IS field responded by developing systems that sought to provide management with timely information to assist in making better strategic decisions, e.g. executive support and decision support systems. In the 1990s, organisations began to look inwards searching for key strategic resources that would yield unique core competencies (Barney, 1991). Similarly, the IS field responded by building highly integrative enterprise-wide systems (Davenport, 1998), which would unite every pillar of the organisation with a single transparent view of firm competencies and business processes, viz Enterprise Systems. The first decade of the 21st century continued in this vein, with organisations extending their global reach through new and innovative business models (Johnson et al, 2008). Similarly, IS have responded with the emergence of digital technologies and their continued growth as transformative organisational systems enabling boundary-less corporate structures, 24/7 real-time customer-centric communication, collaborative supply chain environments, and virtual IS infrastructures delivered via cloud computing.

Yet, this parallel journey between organisations and IS has not always run smoothly. History has taught us that large-scale IS implementations have caused significant challenges for organisations (Iveroth, 2010). While such change initiatives promise greater organisational efficiencies and strategic effectiveness, research shows that such gifts are not easily obtained (Markus & Benjamin, 1997). Large-scale IS initiatives often require transformational change by seeking realignment of business processes, which frequently requires significant cultural change across the entire organisation.

A preliminary review of the Enterprise Systems (ES) literature reveals that organisational change has been central to scholarly debate since these systems emerged in the early 1990s. In preparation for this Special issue, we, the Guest Editors, scanned the titles of 768 articles from across 113 Harzing ranked Journals

and found that more than twice as many ES studies have focused on 'organisational-level' aspects rather than 'technical-level' issues, for example, topics such as leading large-scale change (Wei et al, 2005), education and training (Hustad & Olsen, 2014), the role of management and leadership required when implementing ES initiatives (Dong et al, 2009), end user involvement and buy-in (Klaus & Blanton, 2010), managing cultural shifts and change (Ke & Wei, 2008), critical success factors (Loonam et al, 2016), ES success (Markus et al, 2000), ES failure (Grossman & Walsh, 2004), ES selection (Wu et al, 2007), ES benefits (Shang & Seddon, 2002) ES risks (Sumner, 2000), and organisational resilience required with ES implementation (Ignatiadis & Nandhakumar, 2007).

Today organisations are confronted with continual disruptions, whether market or technologically focused, and as a result look to IS tools that enable greater organisational flexibility, create more porous flows across divisions and between business processes, and support a move to innovative and creative cultures. With these lessons in mind, this Special issue seeks to shed light on the topic of Enterprise Social Systems (ESS) and organisational change.   ESS promise enterprise-wide transformation and their introduction into organisations will undoubtedly bring changes to how employees and management engage and conduct their work. ESS enables a 'social' dimension for engaging organisational business processes. In other words, 'ESS are aimed at assisting social collaboration across the organisation and hence enhancing its producitivty and business outcomes' (Alimam et al, 2015: 9). As McAfee noted, these tools exert powerful effects on the organisation's ways of communicating with external stakeholders as well as between internal collaborators (2006). The successful introduction of ESS technologies are allowing organisations to create new forms of value by transforming their entire customer experience, exploiting greater value from organisational operations, and creating new business models that reorder value chains and offer new competitive advantages (Westerman et al, 2014).

ESS, also referred to as enterprise social software (Thompson, 2013), enterprise social media systems (Leonardi et al, 2013), and enterprise 2.0 systems (McAfee, 2006), are digital technologies that combine social media tools, e.g. Facebook, mobile computer applications, e.g. smartphones and tablets, and virtual data analytics and cloud computing, to leverage greater organisational value.   ESS technologies first emerged as personal collaborative tools in the early 2000s with the launch of social networking tools, e.g. Facebook in 2004, video sharing tools, e.g. YouTube in 2005, and wikis, blogs and tweets, e.g. Twitter in 2006. These tools became know as generation Web 2.0 technologies (O'Reilly, 2004) and were fundamentally about supporting individuals to engage socially. However, from the mid 2000s work organisations became interested in leveraging these tools to improve performance and provide greater enterprise-wide collaboration. For example, tools such as Yammar and SharePoint (both Microsoft owned) are collaboration software systems that run off an enterprise social networking platform. In 2006, McAfee coined the term 'Enterprise 2.0' to refer to an organisation's use of such digital technologies.

In many ways, ESS tools break with the traditional view of information systems, which primarily seek to integrate data within a controlled and bounded manner, e.g. ES software. ESS, on the other hand, seeks greater organisational flexibility with their collaborative orientation often fielding data from external sources and from the bottom-up. From an organisational perspective such an unbounded view of data challenges management thinking and approaches to work. Specifically, a key lesson learned from the previous generations of IS technologies is the enduring challenge presented by organisational change. Looking at the promise of ESS, the obvious question to ask now is how will their disruptive nature, unbounded approach to data management, and bottom-up usage, shape the paradigms and frameworks we currently understand for leading successful IS-enabled change.

While ESS tools would be more effective with more flexible organisational structures, more porous channels between management and employees, and greater real-time influence on product innovation and service provision, it is difficult to envisage any of this being possible without an integrated approach to back-office systems and centralized business processes. Traditional IS have viewed such a dichotomy as a paradox, i.e. organisations could typically pursue IS strategies that supported either greater centralization or decentralization. However, as Westerman et al note, digital transformations resolve the operational paradoxes of the past (2014: 54), instead ESS technologies can provide a bridge across such polarizations. Therefore, this Special issue has set out to focus on the nature of ESS technologies and their underlying effects on work organisations. Of particular interest is the role ESS technologies are playing in shaping and influencing change within organisations. The following excerpts are taken from the eight accepted articles.

2. Special issue Articles

The first four articles of this Special issue explore the crucial question of information sharing in Enterprise Social Systems. Do users of social technology in organizations face similar motivations, constraints, and incentives for information sharing as social media users in the outside world, or as traditional Enterprise Systems users within organizations? By identifying and developing key distinctions such as 'social' vs. 'business' users, local vs. global user communities, top-down vs. bottom-up constraints, and extrinsic vs. intrinsic motivation, these studies offer a portrait of ESS information sharing as occupying a novel hybrid space between purely social media, and traditional organizations. A key management implication of these articles is that while ESS involves significant bottom-up change, the organizational benefits of ESS are unlikely to occur on their own. These articles begin to clarify areas where thoughtful management choices can make a difference.

The first article, *Are Business Users Social? A Design Experiment Exploring Information Sharing in Enterprise Social Systems*, uses an experimental approach to study the information sharing behavior of business users when using social features in enterprise systems. Challenging the assumption that "business users share the same interaction patterns as private users", the study finds that business users are

less 'social' in their information sharing behavior, and that their use of social features is highly context dependent.

The second article, *A Field Study of Spatial Preferences in Enterprise Microblogging*, investigates patterns of enterprise social networking use by store managers in a leading Australian retail company. The research identifies two distinct user communities, 'locals' and 'globals', each with their own communication preferences. The article identifies potential areas of organizational intervention, such as increased engagement of store managers with each other that might increase the benefits of ESS use. The study concludes that the technology itself "does not automatically lead to spatially expansive, let alone intensive, communication behavior" without the support of appropriate technology features and organizational interventions.

The third article, *Understanding Individual User Resistance and Workarounds of Enterprise Social Networks: The Case of Service Ltd*, uses an interpretivist case study of a large global services organization to explore resistance and workarounds in enterprise social networks. Their study identifies two categories of barriers that lead to resistance and workarounds: 'top-down' barriers, such as organizational policies that are written down or encoded in systems, and 'bottom-up' barriers that create mismatches between ESS use and everyday work practices and understandings. ESS usage patterns were found to relate to organizational goals, and the level of users within the organization.

The fourth article, *To Share or Not to Share: The Effects of Extrinsic and Intrinsic Motivations on Knowledge-Sharing in Enterprise Social Media Platforms*, uses a survey in a multinational German high-technology firm to compare the relative importance of extrinsic versus intrinsic motivations for sharing knowledge through enterprise social media. Their study concludes that extrinsic motivations, such as reputation gains and building relationships through reciprocity, "play a decisive role in employees' decisions to share knowledge", consistent with results in existing knowledge management research. Unlike in previous research, an important intrinsic motivator, enjoyment in helping others, was not found to play a role. Their study offers a set of managerial implications for ESS, such as assigning status to contributors in order to improve the visibility of knowledge contributors.

The second four articles of this Special issue investigate how Enterprise Social Systems offer new ways of working together in organizations. These studies of novel ESS technologies, including internal crowdsourcing, wikis, and enterprise social media, explore how ESS use relates to existing organizational structures and relationships. While ESS offers the possibility of structural change, the articles provide insights into how existing organizational structures and ESS co-exist, and influence each other. An important theme in these studies is the identification of specific organizational roles relative to ESS use, particularly new leadership roles.

The fifth article, *Internal Crowdsourcing: Conceptual Framework, Structured Review and Research Agenda*, uses a review of 74 published studies to create a framework and research agenda for internal crowdsourcing. Their literature review defines

internal crowdsourcing as a distinct option that exists between traditional, or external, crowdsourcing, and hierarchy-based work. The article finds that, "in contrast with external crowdsourcing, internal crowdsourcing is more long-term oriented with 'the crowd' consisting of permanent employees, not independent externals." This key difference has implications for governance and rewards, making change management and culture issues critically important. However, the article points to more research that is needed in many areas, including into which participants, and which roles, are best suited for internal crowdsourcing.

The sixth article, *e-Leadership Through Strategic Alignment: An Empirical Study of Small and Medium Sized Enterprises in the Digital Age*, interviews 42 leaders of small and medium sized enterprises (SMEs) to validate a model of e-leadership, which their study argues is critical to obtaining the benefits of traditional Enterprise Systems and ESS. In their model, the authors identify e-leadership roles, such as strategy formulator, business visionary, catalyst, and prioritiser, which derive from a number of e-leadership qualities, which in turn are associated with a number of specific constructs identified by the article. This article expands and clarifies the many facets of leadership in enterprise systems, both old and new.

The seventh article, *Team Boundary Spanning: Strategic Implications for the Implementation and Use of Enterprise Social Media*, combines qualitative and quantitative studies to investigate boundary spanning behavior in enterprise social media. The paper studies three different types of boundary spanning activities, representational activities, information search, and coordination, but finds that social media use best supports representational activities that increase organizational visibility. The study also found that "hierarchical position plays a pivotal role" in the ability of stakeholders outside the team to recognize and support team boundary spanning activities, suggesting that an understanding of the relationship between new relationships and existing structure is important.

The eighth article, *Knowledge Entrepreneurship: Institutionalizing Wiki-Based Knowledge Management Processes in Competitive and Hierarchical Organisations*, is a longitudinal case study of wiki use in a division of NBC Universal. In order to explain successful knowledge sharing in this example of ESS, the study offers "a new archetype of project leadership called Knowledge Entrepreneurship that integrates managerial skills, technology affordances, and critical factors in knowledge management processes." Identifying new roles and responsibilities, such as knowledge entrepreneurship, is a potentially fruitful path for developing our understanding of ESS implementation and use in ways that are both theoretically robust and actionable for practitioners.

3. Reflections on ESS & Organisational Change

Reflecting on the articles above, it is evident that the topic of ESS and its relationship to work organisations is an emerging and exciting field for empirical study. Articles in this special issue cover three broad perspectives on organisational change, namely

a focus on ESS from the individual level, the group level, and from the institutional or organisational level. While for the purposes of this editorial we will briefly review potential areas for future research from the perspective of each level, in practice such perspectives are likely to overlap and complement one another.

At an individual level, articles explore business users understanding of ESS social paradigms, i.e. how employees respond to the open nature of sharing information within and outside the organisation, why they resist the introduction of an ESS implementation, what motivates them to share knowledge using ESS across the organisation, and finally how employees are engaging with the organisation through internal crowdsourcing. These research studies investigate the important topics of employees' (individual) perceptions of ESS-enabled change and the respective behaviours likely to be required of them from the implementation of such an initiative. At a macro level, such inquiries advance our understanding of how the introduction of these new systems affects people in organisations. However, perhaps more poignantly such inquiries start to prompt questions on how ESS-enabled change may influence organisational culture. As mentioned earlier, ES implementations have played a significant part in influencing organisational culture. For example, ES software packages, with their relentless pursuit of process standardization and generic forms of systems integration, often push employees towards new processes and ways of working. Accordingly, is it any surprise that a significant proportion of scholarly effort, and management consulting, has focused on organisational perspectives with regard to ES implementation? However, ESS-enabled change comes from the bottom-up. It is emergent, social, unbounded, and disruptive. Therefore, its influence on organisational culture, while perhaps not initially as coercive as traditional IS approaches for employees, has the potential to be even more dramatic. Future research, therefore, might explore ESS driven organisational cultural change. How effective are traditional IS-enabled change management tools and stratagems in coping with digital transformations? What factors are critical for successful digital transformation and what are the key organisational risks/benefits associated with such change? Is it possible for dual operational cores, one traditional and one digital, to coalesce with a single organisational culture? And how do process disruptions and innovations effect organisational culture?

At the group level articles in this Special issue explore how SME management are engaging digitally, how ESS is influencing group boundary spanning, and the role ESS software plays in supporting communication amongst geographically dispersed managers. Undoubtedly, the bottom-up and external orientation of ESS will significantly shape the work of groups within our organisations. A central question, therefore, in enabling groups to connect and work in a digital age relates to how management can facilitate this. Management teams engaged with traditional IS change initiatives typically adopt a top-down approach to implementation. In other words, management provides individual and group level users with a defined vision for the new system and provides support accordingly. However, ESS initiatives are often launched from the bottom-up, i.e. due to their disruptive nature employees, customers, and/or other stakeholders typically initiate the respective change.

Therefore, future research might consider reviewing the role played by different key stakeholders, i.e. top management teams, middle management teams and project management teams in supporting ESS-enabled change within the organisation. Can external stakeholders also shape the type of leadership support required for ESS transformation? How can traditional organisations successfully build capabilities that are digitally inclusive? What role does the chief executive officer and chief information officer play in digital transformations? How can organisations effectively foster talent that is digitally aware? How can employees and end users (customers, suppliers, external stakeholders) be effectively involved in leading organisation-wide digital change? How can organisations ensure that business and IS leaders create an effective shared understanding for the digital vision?

Finally, at an institutional level our article focuses on ESS driven knowledge management structures and processes. As previous research reveals, for successful projects the organisational structure and processes must be reviewed prior to large-scale implementation. Classic IS implementations are controlled and ordered, the key processes are identified and aligned to the system, and implementation occurs internally within the organisation. ESS initiatives break down organisational structures and look for both internal and external opportunities across functional levels and the value chain. From an organisational perspective, our classic view of IS-enabled change tends to see the "organisation" and the "technology" as two separate domains. Technology is deployed to make the business more effective and efficient. This view has permeated our understanding of technology within work organizations and has managed to polarize both domains. However, 'digital' and 'business' belong to the same domain, i.e. digital business strategy, where, 'organizational strategy are formulated and executed by leveraging digital resources to create differential value' (Bharadwaj et al, 2013). In other words, ESS implementations will go beyond viewing technology from a functional perspective but rather recognize the pervasiveness of digital resources across all functional layers of the organization. In turn, technology is no longer viewed as merely a tool used to drive efficiency and productivity metrics but rather as a strategic weapon driving competitive advantage and strategic differentiation (Bharadwaj et al, 2013: 472). In order to explore these perspectives further future research might consider the role strategy plays in ESS initiatives. For example, how can organisations strategically align processes and structures with the bottom-up driven nature of ESS disruptions? How can organisations ensure greater value and return on investment from ESS initiatives? And are life-cycle models for traditional ES initiatives relevant to ESS implementation?

This special issue has sought to shed light on the emergent field of enterprise social systems and their effects on work organisations, most notably the changes required to ensure successful individual participation, management support for teams and groups, and sustained development and growth for the organisation. The emergence of ESS is exciting for both researchers and practitioners and promises to play an important part in digitally transforming our work organisations.

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