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# *A reflection on information systems strategizing: the role of power and everyday practices*

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**Abstract.** We review the IS strategizing literature and highlight its main strengths and weaknesses. Strengths include an account given to the relevance of tensions between planned and executed strategy, and associated tradeoffs such as rigidity and flexibility, formal and informal strategizing and the exploitation of static resources vis à vis the exploration of novel capabilities. Weaknesses relate to a predominant focus on an organizational level of analysis and the lack of power considerations. In this paper we aim to build on these strengths and to ameliorate these weaknesses by proposing a comprehensive IS strategizing framework that uses extant IS strategizing research as a foundation, rejuvenated by insights from the emerging strategy-as-practice literature. The paper extends our understanding of IS strategizing in light of the practice perspective by providing a multilevel account and incorporating power considerations. © 2016 Blackwell Publishing Ltd

**Keywords:** information systems strategizing, strategy-as-practice, exploration, exploitation, power, case vignettes

## INTRODUCTION

Given that the 25<sup>th</sup> anniversary of the first issue of *ISJ* has recently passed, it is timely to review key themes that have been discussed since the journal's inception. In this paper we focus on the topic of information systems (IS) strategizing, building in part on earlier contributions to *ISJ* (Galliers, 1993; Galliers & Sutherland, 1991), the latter appearing in the very first issue of this journal. The concept of IS strategizing has developed since then in what is now an established theorizing of how organizations engage in the on-going processes and practices of strategy making involving IS and information technology (IT) (e.g. Chen *et al.*, 2010; Teubner, 2013).

Strategizing principles include a high level, holistic view of how IS strategy develops as a dynamic, iterative and knowing/learning set of practices, both formal and informal (e.g. Galliers, 2004).

Conceptualizations of IS strategizing take an explicit sociotechnical approach (e.g. Ciborra, 2000; Hanseth, 2004; Mumford, 2006). Following Green (1970) and Land (1976, 1982), scholars Q3 have noted that the focus of IS strategizing should not be solely on the IT artefact but also on how organizational actors are able to explore and exploit opportunities and challenges associated with IT (Chen *et al.*, 2010; Henfridsson & Lind, 2014). To this end, IS strategizing involves a number of tensions (Galliers, 2011); examples include those between formal and informal approaches,<sup>1</sup> between human and IT aspects, and between standardized procedures such as business process 'engineering' hand-in-hand with enterprise systems (e.g. Howcroft *et al.*, 2004; Wagner *et al.*, 2005), and flexible knowledge management systems (KMS) (e.g. Newell *et al.*, 2003). In addition, IS strategizing highlights dynamic processes that are conducted jointly by IT and business personnel (Ciborra, 2000; Hanseth, 2004; Mumford, 2006), thereby strengthening ongoing alignment, or better *aligning* (Karpovsky & Galliers, 2015; Wilson *et al.*, 2013).

In this paper, we provide a review of the IS strategizing literature and identify two major gaps. First, the IS strategizing literature tends to focus on high level (meso and macro) analysis of business processes at the expense of everyday organizational practices. Second, the construct of power has been largely under researched. Drawing on two field-based vignettes, we propose a comprehensive IS strategizing framework that builds on the extensive IS strategizing literature while incorporating insights from the emerging s-as-p literature (Jarzabkowski, 2005; Spee & Jarzabkowski, 2009, 2011; Vaara, 2010; Whittington, 1996, 2006) that is now being incorporated into IS strategizing discourse (Henfridsson & Lind, 2014; Huang *et al.*, 2014; Peppard *et al.*, 2014; Whittington, 2014). Q4

## IS STRATEGY AND STRATEGIZING: AN OVERVIEW

### Positioning the concept of strategizing within the IS literature

Strategy is a cross-disciplinary topic in business-related disciplines such as Management, Marketing, Economics and IS, and includes contributions from such eminent scholars as Henry Mintzberg (1979) and Michael Porter (1991), as well as practitioners such as Bruce Henderson, Founder of the Boston Consulting Group and initiator of the 'strategic consultants' idea. Additionally, authors of highly cited academic papers and books on strategy include Gary Hamel and C.K. Prahalad (e.g. Hamel & Prahalad, 1992; Prahalad & Hamel, 1994).<sup>2</sup>

Strategizing through IT has long been a 'hot' topic (e.g. Barney, 1991; Bhatt *et al.*, 2005; McFarlan, 1984; Porter & Millar, 1985) and has been a major concern confronting CIOs over four decades (e.g. Brancheau & Wetherbe, 1987; Luftman & Ben-Zvi 2011; Luftman & Derksen, 2012; Luftman *et al.*, 2013; Niederman *et al.*, 1991; Watson *et al.*, 1997).

<sup>1</sup>cf. Walsham's distinction between IS strategy formation and formulation (e.g. Waema & Walsham, 1990; Walsham & Han, 1993).

<sup>2</sup>Hamel has been called 'the world's leading expert of business strategy' by Forbes (Kneale, 2009) and was founder of Strategos, the strategy and innovation consulting firm (<http://www.strategos.com>).

IS strategizing 'provides a shared understanding across the organization to guide subsequent IT investment and deployment decisions' (Chen *et al.*, 2010, p. 239). Recalling Earl's (1993) 'organizational' view of IS strategy and reflecting the ongoing assessment of business needs to promote the ability (or capability<sup>3</sup>) to innovate (Chan & Reich, 2007; Shollo & Galliers, 2015), this is not without its tensions; a topic to which we now turn.

### IS strategizing and organizational tensions

The dynamic process of strategizing contrasts planned strategy with its execution, acknowledging that aspects of the actual strategy are emergent (cf. Mintzberg, 1979). This implies that tensions exist between exploiting existing plans, ideas and resources, and exploring new and emerging means to achieve organizational objectives (cf. March, 1991). In Table 1, we identify a number of strategic elements that have, over the years, appeared in the (IS) strategizing literature, and that are associated with exploitative and exploratory activities. While, for analytical purposes, we retain the distinction between exploration and exploitation, we should remember that these tensions are not to be seen as separate<sup>4</sup> but instead are mutually constituted and reinforcing, occurring at the same time. As an example, Galliers (1993, p. 201) points to the conflictual nature of strategizing processes by arguing that 'the one [is] creative and synthetical; the other mechanistic and analytical' – here referring to aligning issues between business and IT. The need to combine different approaches and philosophies thus becomes necessary to form(ulate) and execute a coherent strategy within organizations. This involves being 'ambidextrous' (Adler *et al.*, 1999; Gibson & Birkinshaw, 2004; O'Reilly & Tushman, 2008).

As can be noted from Table 1, planned strategies involve exploitation in line with existing cognitive beliefs, such as those related to managerial experience, market data and forecasts arising, for example, from business intelligence or 'big data' analytics<sup>5</sup> (Chen *et al.*, 2010; George *et al.*, 2014). In comparison, emerging strategies focus on the protagonists of strategizing – the *practitioners* (Whittington, 2006). Here, the focus is on *how* strategy is enacted in practice (Hackney & Little, 1999; Johnson *et al.*, 2003; Nolan, 2012), making it relevant to reflect on the concept of alignment (in a dynamic and on-going sense) between IT and business, as a key aspect of strategizing (Chan *et al.*, 1997; Chan & Reich, 2007; Hirschheim & Sabherwal, 2001; Karpovsky & Galliers, 2015). Moreover, planned and emerging strategy, as with exploitation and exploration, are not viewed as sequential but overlapping (Henfridsson & Bygstad, 2013; Merali *et al.*, 2012). Emerging practices are the outcome of the everyday 'doings' of strategy and can change the initial assumptions (inherent in planned strategy), in that they are constantly refined and adapted to new contexts, needs and circumstances (Jarzabkowski *et al.*, 2013; Mintzberg & Waters, 1990; Whittington, 2014).

In considering the IT artifact, it is not uncommon that the implementation of an enterprise system (ES), for example, creates efficiencies as it is intended to 'speed up business processes',

<sup>3</sup>Scholars have highlighted the relevance of exploring and exploiting IS/IT in organizational contexts by conceptualizing it as an 'IS capability' (cf. Bharadwaj, 2000) that 'is embedded within the fabric of the organization' (Peppard & Ward, 2004, p. 170).

<sup>4</sup>As for instance has been suggested by the early literature on ambidexterity, an example being the innovation cycle described in Utterback (1994).

<sup>5</sup>For a critical review of big data analytics and algorithmic decision making more generally, see Galliers *et al.*, 2015.

Table 1. Tensions and dynamics associated with the concept of strategizing

Tensions/focus	Exploitation	Exploration	Illustrative source references
Over-arching view	Planned strategy	Emerging strategy	(Mintzberg, 1979; Mintzberg & Waters, 1990; Nolan, 2012)
IT artifact	ERP systems (repository view)	Social media (network view)	(Hatami <i>et al.</i> , 2003; Huang <i>et al.</i> , 2013; Newell & Marabelli, 2015)
Hierarchical aspects	Standardized procedures and roles	Communities of practice, virtual teams, task forces	(Child, 1972; Daft & Macintosh, 1984) (exploitation)
Human resources	Individuals (attempt to) execute the planned strategy	Knowledge brokers, boundary spanners provide a link between the planned strategy and emerging circumstances that might deviate the planned strategy	(Ardichvili <i>et al.</i> , 2003; Erden <i>et al.</i> , 2008; Hansen <i>et al.</i> , 1999; Lave & Wenger, 1991; Newell & Edelman, 2008; Scheepers <i>et al.</i> , 2004) (exploration)
Organizational environment (organizational climate and culture)	Formal relationships, little or no strategy negotiations, top-down approach.	Informal relationships, bottom-up or interactive processes of negotiation. Clan control	(Kaplan & Norton, 1996, 2001) (exploitation) (Ardichvili <i>et al.</i> , 2003; Carlile, 2002, 2004; De Wit & Meyer, 2010; Verona <i>et al.</i> , 2006) (exploration)
Regulatory and competitive environment (e.g. institutional forces)	Maintaining supply-chain relationships; consolidating alliances; Taking advantage of experience and know-how in a static market	Responding quickly to unpredictable changes (e.g. the need to be compliant with a new law/regulation); Disruptive innovations can suddenly change an industry's equilibrium (see Kodak and its incapacity to adapt)	(Galbraith, 1974; Nonaka, 1994; Polanyi, 1962) (exploitation of existing knowledge) (Cetina <i>et al.</i> , 2005; Feldman & Orlikowski, 2011; Ouchi, 1981; Sandberg & Tsoukas, 2011) (exploration of emerging knowledge)

as argued *inter alia* by Cooper and Zmud (1990) and Davenport (2000). However, conversely and paradoxically,<sup>6</sup> it creates invisible barriers to informal knowledge sharing (Newell *et al.*, 2001), as ‘everything becomes codified’ with little room being left for improvisation, flexibility and individuals’ ability to deal with emerging contingencies (Ciborra, 2000). To this end, informal knowledge sharing systems can be implemented together with ES (Newell *et al.*, 2003) to mitigate the rigidity that is idiosyncratically embedded in such technologies (Elbanna, 2006). The tension between the repository view (static information, such as in a file server) and the network view (dynamic information such as a forum or a social media platform) has been recently illustrated by Newell and Marabelli (2014), while Huang *et al.* (2013) show how a network strategy can facilitate ‘bottom-up’ and ‘sideways’ strategy formation.

In terms of the hierarchical aspects of strategy and its execution, strategizing acknowledges the limits of considering it as an exclusively ‘top-down’ exercise, where execution follows planning in a relatively straightforward fashion (see, e.g. Lederer & Gardiner, 1992; Premkumar & King, 1994; Segars & Grover, 1999; Segars *et al.*, 1998). Strategy is a much more messy and emergent phenomenon than this (Mintzberg & Waters, 1990). For instance, Newkirk *et al.* (2003) note that too much planning constrains flexible execution, thus inhibiting innovation, while too little planning is not manageable as strategizing appears nebulous and ambiguous to those who attempt its execution. This suggests that a balance should be achieved between top-down planning and emerging strategies, tactics and practices.

The focus on human resources is also relevant from the point of view that strategists are constantly challenged by the conflicting demands of exploiting existing organizational knowledge to create efficiencies and, at the same time, exploring new knowledge in being innovative (Newell, 2015). Thus, while strategists are required to implement ‘codified solutions’ (Galliers, 2011, p. 331) – for instance those prescribed by Kaplan and Norton’s Balanced Scorecard framework (1996, 2001) as applied in Martinsons *et al.* (1999) – they often face the need to improvise (Ciborra, 2000) when the planned strategy cannot be accomplished in its entirety. So, for example, the stages of growth framework (Galliers & Sutherland, 1991, p. 112) provides means of asking pertinent questions as regards the likely feasibility of strategies *as they are being formulated* on the basis of the various elements contained therein,<sup>7</sup> while feedback facilitates strategizing processes involving review, ongoing learning and revisions of current strategy *in light of actual experience*.

Additionally, strategizing is a social process, often undertaken in teams. Teams, either physical or virtual (Ardichvili *et al.*, 2003), often face emerging, unpredictable issues associated with collaboration and trust (Jarvenpaa & Leidner, 1998; Ridings *et al.*, 2002) requiring things to be worked out ‘on the hoof’. This might require revising project deadlines or intermediate objectives, and even major changes in thinking.

Either explicitly (Galliers, 2011) or implicitly (Henfridsson & Bygstad, 2013; Nolan, 2012), the IS strategizing literature recognizes that a balance between exploitation and exploration is required (Durcikova *et al.*, 2011), viewing it as an *ambidextrous set of activities*. Drawing on

<sup>6</sup>It is a paradox that ES create barriers to knowledge sharing since these systems are designed to overcome, e.g. problems with inter-department information sharing (Davenport, 2000).

<sup>7</sup>The so-called 7 Ss of Pascale and Athos, 1981.



March (1991), the ambidexterity literature proposes that organizations are more successful if they can pursue both exploratory and exploitative activities at the same time (Durcikova *et al.*, 2011; He & Wong, 2004; Katila & Ahuja, 2002). To this end, using ambidexterity to explain tensions arising from on-going strategizing helps to reconcile the need for flexibility and efficiency when planning and executing strategy. How the balance between exploiting (cf. planned strategy) and exploring (cf. emerging strategy) occurs in practice requires an examination of practices themselves.

In sum, we propose considering notions of s-as-p within the umbrella of IS strategizing to improve our understanding of explorative and exploitative strategizing. The s-as-p literature concentrates on practices occurring at the micro level, in contrast to the macro level taken by most (IS) strategizing scholars.<sup>8</sup> Moreover, while power relationships have been relatively under-researched in the strategizing literature, they are considered in-depth by s-as-p scholars. We thus address these two shortcomings in the following.

## THE ROLE OF PRACTICE AND POWER IN IS STRATEGIZING

### Strategy-as-practice

IS strategizing contrasts the traditional 'grand vision' of strategy (cf. Porter, Prahalad, Hammer, for example<sup>9</sup>) by suggesting that it is iterative and emergent. S-as-p takes the idea further and highlights the importance of considering the *everyday practices* of those who enact strategy. Thus, s-as-p focuses mostly on the micro-level (Jarzabkowski, 2005; Spee & Jarzabkowski, 2009, 2011; Vaara, 2010; Whittington, 1996, 2006).

That strategy is constantly unfolding in the flow of practice is similar to what certain IS strategizing scholars have considered over the years (Galliers, 2004; Galliers & Swan, 1999; Hackney & Little, 1999; Henfridsson & Lind, 2014; Nolan, 2012). However, the IS strategizing literature tends to emphasize emerging processes that strategists undertake when 'the plan' (long term, top-down) cannot be executed in totality. To this end, as Chia and MacKay (2007) indicate, much (IS) strategy research has shifted its focus from a 'strategy content' to a 'strategy process' approach in recent times. The latter (e.g. Galliers, 2004; Galliers & Swan, 1999; Whittington, 2001) captures the internal reality of organizations 'in flight' (Chia & MacKay, 2007, p. 220) and highlights the relevance of reconfiguring processes (e.g. emerging processes) where circumstances change over time (cf. Mintzberg & Waters, 1990).

IS strategizing is, thus, clearly positioned as a dynamic, on-going construct focusing on how organizations deal with the conflicting demands associated with exploiting existing assets such as infrastructures, resources and expertise (based on past experience), and exploring new solutions and tasks through social interactions and creativity. IS strategizing examines these tensions not in terms of the outcomes produced but, instead, on *how these outcomes are accomplished*. However, the high-level perspective that characterizes most (IS) strategizing studies, albeit helpful to understand such processes holistically, devotes relatively little attention

<sup>8</sup>An exception being Henfridsson & Lind (2014).

<sup>9</sup>For example, Hamel & Prahalad (1992), Porter (1991) and Prahalad & Hamel (1994).

to how individuals deal with day-to-day exigencies that change and often disrupt planned strategy. As a result, here, we suggest that IS strategizing research should account for insights arising from s-as-p theorizing.

### Power considerations in IS strategizing

While the s-as-p literature acknowledges that practices necessarily involve power considerations (Mantere & Vaara, 2008; Spee & Jarzabkowski, 2011; Vaara, 2010), the IS strategizing literature provides very few accounts of how far power relationships and politics affect strategizing activities (an exception being Besson & Rowe, 2012). Nicolini (2012, p. 6) notes that the practice perspective foregrounds, 'the centrality of interest in all human matters and therefore put[s] emphasis on the importance of power, conflict, and politics as constitutive elements of the social reality we experience.'

We, thus, propose that power should be incorporated into a revised conception of IS strategizing. However, while the manner in which power is viewed by practice scholars (Foucault, 1980; Gherardi, 2000; Newell *et al.*, 2009) helps to explain how power relationships emerge through social practices, this does not entirely give justice to the strategizing idea that tensions exist between exploitation (in this case, hierarchical power) and exploration (as a performative accomplishment).

Drawing on Marxian and Weberian philosophy, power has been traditionally seen as a resource that can be used by 'the powerful' to achieve the strategic objectives that *they* set (Dahl, 1957; Emerson, 1962; Pfeffer & Salancik, 1974; Dahl, 1957; Emerson, 1962; Pfeffer & Salancik, 1974). More recent literature suggests that this resource view of power is quite limiting in that it requires the constant *exploitation* of organizational assets such as status, influence and the associated power to reward and coerce. Others (Clegg, 1989; Hardy, 1996; Lukes, 1974; Lawrence *et al.* 2005), however, argue that viewing power simply as a resource does not reflect the complexity of the construct (Dhillon, 2004). Q5Q6

While the IS literature has acknowledged both views of power (the coercive as well as the relational view) – see, for instance, Backhouse *et al.* (2006); Hart and Saunders (1997); Levina (2005); Pozzebon & Pinsonneault (2012); Silva and Backhouse (2003); Silva & Fulk (2012) – the IS strategizing literature provides little account of power considerations. Here, we take the Foucauldian idea that power is situated (Contu & Willmott, 2003), translated (Latour, 1986), and immanent in practice (Nicolini, 2012). However, we propose that recognizing (also) the ostensive (hierarchical) nature of power a) gives a more realistic interpretation of organizational dynamics associated with power that is 'possessed' (e.g. seen as a resource), and b) incorporates the idea that constant overlaps between exploitation (short-term effects) and exploration (promoting long-lasting changes) occur. This reflects the tension between (knowledge) exploitation and knowledge exploration and is in line with those scholars who see a complementarity between the 'ostensive' and the 'performative' nature of power (Clegg, 1989; Hardy, 1996; Marabelli & Newell, 2014; Marshall & Rollinson, 2004). Thus, we argue that the diffusion and the translation models of power both apply to IS strategizing. The diffusion model can be linked to knowledge exploitation when power/knowledge is used as a 'tool' to make things happen – a resource in other words. The translation model can be linked to knowledge exploitation, when power/knowing is enacted through practice. Q7

In sum, the strategizing literature on ambidexterity provides meaningful insights into how organizations deal with the conflicting demands of exploitation (planned strategy, pursuit of efficiency) *vis à vis* exploration (emergence, flexibility, agility). However, less attention has thus far been devoted to individuals' practices. Moreover, we note that power considerations, albeit thoughtfully unpacked by the s-as-p literature, have received limited attention in the IS strategizing literature. The s-as-p perspective examines power as produced and re-produced in strategy-making practices (Chia, 2004). Thus, here, we suggest that, to give justice to the tensions that characterize IS strategizing processes, it is worth considering both hierarchical power, which focuses on the exploitation of existing resources and assets (e.g. influence and 'official' lines of command) *and* a more 'practice-based' perspective that sees power as an emerging accomplishment that occurs while strategy is 'in the making'. This brings to the surface once again the main tension between planned and emergent strategy, clearly associating hierarchical power and exploitation of existing knowledge/resources, with that exercised by top management (e.g. in the setting up of long-term strategies), and performative power and exploration of new knowledge/opportunities (in the everyday practices that characterize the emergent aspect of IS strategizing). Below we collapse our insights into a comprehensive framework that extends our understanding of IS strategizing while preserving its 'core' characteristics.

### Rethinking IS strategizing: the role of practice and power

IS strategizing and the s-as-p literatures have similar views in terms of considering strategy-making as dynamic and unpredictable, albeit that planned (as in long-term planning) strategy needs to be constantly refined in line with particular circumstances and practices that arise. As a consequence, both views avoid the unthinking adoption of so-called 'best practice solutions' (Howcroft *et al.*, 2004; Wagner *et al.*, 2005) and provide a means of considering the emergence of practices and a set of non-prescriptive principles to examine IS strategizing activities in depth and *in situ*. For instance, Galliers (2011, p. 338) proposes an IS strategizing framework that can be used as a 'sense-making device (cf. Weick, 1995), meant more as an *aide memoir*, to be used to raise questions and facilitate discussion concerning the strategizing elements and connections that may or may not be in place in any particular organization'. However, IS strategizing and s-as-p differ in several aspects – as in the case of the IS strategizing literature's lack of focus on individuals and their day-to-day activities. Thus, some aspects of s-as-p can usefully be incorporated into IS strategizing theorizing.

IS strategizing tends to be focused at the *organizational* (or SBU) level<sup>10</sup> while s-as-p provides opportunities to account for *individuals* and their practices (Whittington, 2001, 2014). Spee and Jarzabkowski (2009) acknowledge that the emphasis put on individuals is a point of strength but also a point of weakness of s-as-p theorizing. Their concern is associated with the risk that too much focus on individuals might lead to overlooking the systemic nature of strategy making (Chia, 2003). Moreover, Jarzabkowski and Paul Spee (2009) report that very little s-as-p research combines different levels of analysis. Thus, incorporating this aspect of s-as-p theorizing into IS strategizing thinking would not only account for practice (at the

<sup>10</sup>This is not meant as a limitation of the ISS framework, as its intent is to provide guidance for understanding how strategizing processes unfold in organizations, however. Indeed, it is worth noting that Galliers' work has been used in studies on strategizing in SMEs and inter-organizational contexts, examples being Levy *et al.* (1999) and Finnegan *et al.* (1999).



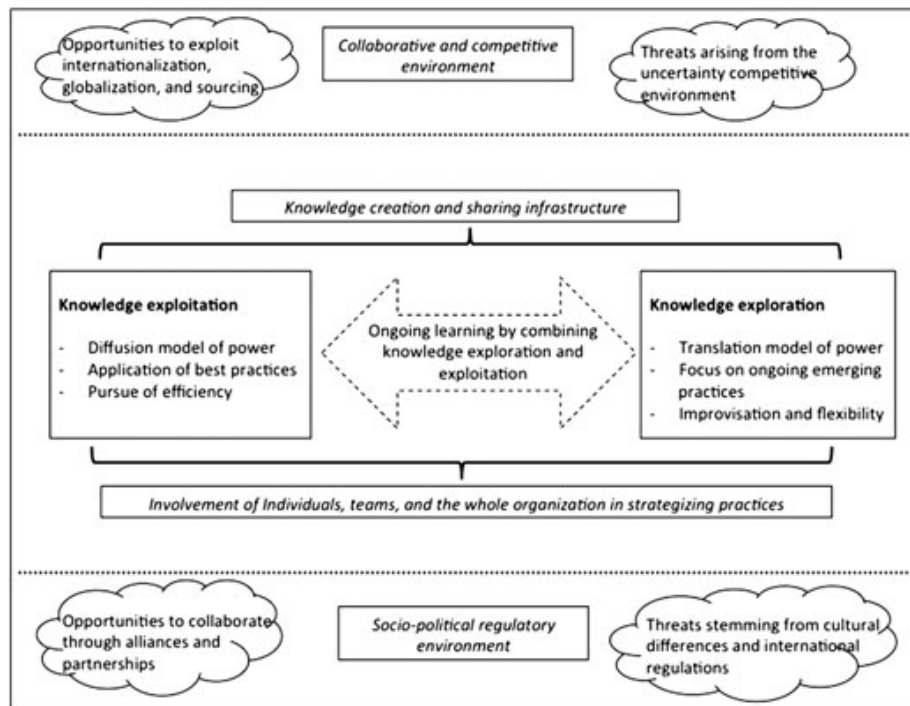


Figure 1. Rethinking IS strategizing (based on Galliers, 2011, p.331).

micro-level) but would give us an opportunity to expand on s-as-p research into the meso and macro levels in addition (ibid.). This, we argue, represents a twofold contribution to (IS) strategizing. First, it provides a framework that accounts for individuals' practices, and second utilizes s-as-p as a multilevel construct. Related to power, we draw on s-as-p in terms of acknowledging the relevance of the construct to strategizing activities. However, consistent with the *leitmotif* that characterizes IS strategizing (and distinguishes it from other strategy-related theorizing) we consider power, seen as a resource (e.g. see Latour's diffusion model) *and* in its performative considerations (e.g. Latour's translation model).

Figure 1 provides a graphical representation of IS strategizing – based on Galliers (2004, 2011)<sup>11</sup> – augmented to incorporate these two key elements: power as diffusion (top-down, planned strategy), and as translation (reflecting the messy unfolding of everyday strategizing practices). The former has previously led us to focus on decision-makers such as those in top management teams and other senior executives. Here, attention is also given here to those who enact strategy in practice, and face (internal) exigencies and (external) unpredictable changes, both requiring constant revision of planned strategies in a top-down/bottom-up discursive dialectic.<sup>12</sup> These tensions between power diffused and translated, and between

<sup>11</sup>The most recent version of the IS strategizing framework (Galliers, 2011, p. 331) is provided in the Appendix as Figure 2.

<sup>12</sup>It is, however, worth noting that new communication technologies create organizational settings where discourses around power can also develop horizontally, for instance when social media networks are used to create new organizational knowledge and support innovation processes (cf. Huang *et al.* 2013).

formulated strategy and strategy-in-action, underpin the ability to both explore and exploit organizational resources and capabilities, with a particular focus on knowledge, through practices, social interactions and on-going learning.

## APPLYING THE FRAMEWORK: TWO ILLUSTRATIVE VIGNETTES

In showing how the framework presented in Figure 1 can find application in practical settings, we provide two vignettes arising from qualitative and interpretive fieldwork (Walsham, 1993, 2006) conducted in recent years. The first vignette is about the implementation of a Customer Resource Management (CRM) system in a global high-tech company headquartered in the North East of the U.S. The second vignette considers efforts to change coordination practices in a Canadian healthcare network, resulting in a paper-based IS.

### CRM system implementation at Alpha: the strategic role of the IT department

#### **Synopsis**

This vignette is about top management's understanding of the relevance of committing its IT department to a complex CRM implementation. Alpha, prior to the decision to implement a CRM system, had several 'siloes' departmental systems (Human Resources, Marketing) or standalone software packages such as spreadsheets (Sales, Finance).

#### **Vignette**

Alpha is a global company located in the Boston area. Founded in the mid-1980s, by the early 2000s, Alpha had over 30 000 customers worldwide and operated in several countries in South America, Europe and Asia. Due to market pressures, in 2004, senior management made the decision to begin implementing a complex CRM system with the help of Omega, a large consultancy company. The system had to be implemented relatively quickly in top management's view – 'up and running' (to quote the CEO) – as most of Alpha's competitors were already using CRM systems. Prior to the system design phase, and following Omega's advice, top management decided to approve the attendance of a selected team of IT staff at a national conference to learn some basic system customization techniques related to an ES with a similar architecture and programming language to the CRM system. This was because IT staff did not have the necessary background knowledge. The staff received hands-on training on customization techniques at the conference. In addition, theory-based risk assessment was provided, highlighting the pros and cons of customization – with respect to business needs but also to technical challenges. The staff attending the conference returned to work very motivated, and assumed mentoring roles on behalf of their colleagues who had not benefitted from the training. Initially, those staff who had stayed behind were not keen to be taught by their peers – some of whom were their juniors and others, new hires. However, as the weeks unfolded, following encouragement from the CIO, knowledge sharing took place including via 'reverse mentoring' – junior staff mentoring senior staff – and IT staff began enjoying what the CIO called the 'joint experimentation of this new stuff', adding, 'these geeks are having a lot of fun learning about the new'.

Two months after the conference, Omega started to work together with Alpha's IT department. Weekly working committees (WWC) were institutionalized. Representatives of IT (Omega and Alpha) and the project manager (Omega) met with a number of Alpha's managers, process owners and VPs to make joint decisions about the CRM system, thus managing the configuration/customization tradeoff on a case-by-case basis. This practice of making joint decisions between representatives of different departments was a novelty for Alpha. Within six months, Alpha's IT staff were sufficiently knowledgeable regarding the technical issues and sufficiently sensitive to business needs. Omega left and Alpha's IT staff were able to take over the implementation process. The CRM system 'went live' soon after, and its implementation was viewed as a success. Customizations continued over the next few years, all undertaken by internal IT staff.

### **Co-creation and use of a paper-based IS at Beta**

#### **Synopsis**

This vignette is about a hospital's attempts to create a complex electronic medical record (EMR) system in a healthcare network to improve coordination. While the initial project failed, a 'work-around' was found (a paper-based IS) that was able to substantially improve healthcare coordination across the network (Beta).

#### **Vignette**

Beta is a healthcare network in Eastern Ontario whose 'hub' is a hospital dealing with children with complex care needs (requiring several specialisms). Prior to 2010, the hospital had significant communication and coordination problems: within the hospital (between specialisms) and across the healthcare network between the different agencies involved (e.g. social services, psychologists, external pediatricians).

Thus, in 2010, the hospital's CEO made a decision to create an EMR system containing up-to-date medical data that could be shared across the network. The hospital pressured the external agencies to implement the system to improve coordination. An advisory committee was created but it became evident by the following year (based on a literature review study as well as experience), that designing, developing and implementing the system would be expensive and interoperability problems would arise, given the existence of different platforms/systems across the network.

This realization led to the creation of a paper-based IS – a 'cheat-sheet' – that incorporated relevant items of information about individual patients. The cheat-sheet was given to each child's parents so that they could bring it with them when seeing different specialists (and, if needed, to ER – even in other hospitals). It was also sent via fax or email to relevant external agencies. The cheat-sheet kept parents up-to-date in terms of their child's medications/therapies and facilitated coordination of services/interventions across the network. All actors involved (including the children's families) had a say in the creation and use of the cheat-sheet – in form as well as content. By 2012, the cheat-sheet had become widely used by all of the agencies involved with the result that coordination improved substantially. Additionally, the wide adoption of the cheat-sheet led to a successful bid to the Province for additional funds to design and implement an ERM system. Design work commenced in 2014 with implementation following in 2015.

### Analytical implications of the revised ISS framework

The two vignettes involve very different contexts and industries. Moreover, the strategizing about IS includes an IT-based IS (at Alpha) and (initially) a paper-based IS (at Beta). However, both settings involved strategic initiatives where exploration and exploitation occurred. Power considerations were also present in both initiatives. Hierarchical power was used in combination with actions aimed at engaging and empowering – including key actors in decision-making. At Alpha, hierarchical power related to the mandatory decision to implement a CRM system initially, with a more performative enactment of power subsequently. This involved commitment and the identification of practices promoting collaboration such as the WWC and the institutionalization of joint decision-making. While an over-arching strategy was in place, micro-practices emerged that required organizational actors to explore new ways to collaborate. As an example, the initial resistance of some senior IT staff to be mentored by more junior colleagues was overcome through encouragement, learning and reverse mentoring. While top-management mandated the swift implementation of the system, the CIO was able to engage IT staff in a more collaborative fashion. Thus, diffused and translated power were both present.

Similarly, at Beta, the various agencies were at first unhappy with the hospital's decision to undertake system integration across the healthcare network, as this initiative was initially to

**Table 2.** Practical applications of the revised IS strategizing theory

Case/analysis	Alpha (examples)	Beta (examples)
Knowledge exploitation	Alpha relies on best practices learned at a conference (IT staff) and industry norms (top management).	Mainstream literature suggests that EMR systems improve coordination; designing, developing, and rolling out such systems seems straightforward.
Knowledge exploration	'Reverse mentoring' in the IT department is an emerging practice that initially does not work but eventually proves to be successful.	In practice, several barriers emerge (financial and technical, related to limited interoperability) leading eventually to the identification of a different and creative solution (the cheat-sheet).
Power (diffusion)	The mandatory 'order' to implement a new ES by top-management worked well to motivate senior management but not IT staff.	At the network level, the initiative worked only partially: the network was formed (steering committee) and agreed to implement a coordination system but a common IT-based solution could not be found.
Power (translation)	Engagement of IT staff occurred when they were sent to a conference and became motivated as a result, becoming fully involved in the ES implementation.	The cheat-sheet represents an artifact, which is continuously negotiated and translated by practitioners.
Micro-level	Micro-practices relate to WWC that included individuals from different departments, and reverse mentoring (within the IT department).	Different actors with the network contributed to the co-creation of the cheat-sheet.
Meso-level <sup>1</sup>	Active collaboration/commitment promoted by the CIO worked effectively at the organizational level.	The hospital's strategy to create a committee to discuss the steps involved in the creation and deployment of the cheat-sheet.
Macro-level	An industry analysis revealed that to remain competitive Alpha had to implement a CRM system. Top-management accessed market resources (consultant company).	Evidence of improved coordination allowed Beta to explore a variety of possibilities to access additional funding sources (e.g. from the Province).

<sup>1</sup>In this table, the meso level is represented by the organizational level (Alpha) and the network level (Beta).

be led by the hospital with little opportunity for the external agencies to have a voice. Subsequently, the cheat-sheet was co-created by participants from across the network and professional jealousies (between specialisms in the hospital and between the various agencies) dissipated. While the deliberate strategy to improve coordination was achieved, this happened only when micro-level practices were enacted by those involved. Hierarchical power gave the initial impetus for change – a committee was created and coordination problems were discussed – in part based on the exploitation of existing knowledge (including the literature review study). However, when financial and technical constraints emerged, resistance to major changes to existing IT infrastructures gave way to emerging practices that led to the identification of a ‘work-around’ (the cheat-sheet) to improve coordination, at a minimal cost.

In sum, while the diffusion model of power (Latour, 1986) has limited (and often short-term) effects, as it aims at leveraging a dominant position to achieve specific purposes, the translation model of power (*ibid.*) reflects the co-production of outcomes, which unfold through practice. Yet, both the diffusion and the translation models should be accounted for in IS strategizing: hierarchical power is needed to define strategic objectives (albeit in a general way), but performative power is more effective to make changes durable, given that it involves the active engagement of those who enact strategy (Marabelli *et al.*, 2015). More importantly (as we show in Table 2, below), hierarchical and enacted power do not occur ‘in sequence’; instead, they co-mingle and reflect the exploration/exploitation tension that characterizes strategizing actions. Table 2 below provides an analysis of the two vignettes in light of these theoretical claims.

T2

## DISCUSSION AND CONCLUSIONS

In this paper, we have argued that IS strategizing is a dynamic and complex accomplishment of everyday practices. We revisited the IS strategizing literature and identified core contributions, particularly in regard to strategizing activities that account for the tensions at play in exploiting existing assets and resources (planned strategy) while exploring new ways to gain and maintain a differential advantage, through improvisation, flexibility, informality and communication/collaboration practices (emerging strategy). Thus, organizations are necessarily developing capabilities that involve both the achievement of efficiencies while retaining a degree of flexibility – a point that echoes Thompson’s (1967) conceptualization of basic organizational tradeoffs, which is both challenging and topical (Benner & Tushman, 2015).

We also noted that the construct of power has not been discussed by prior IS strategizing literature – at least, not explicitly. Thus, we brought this to the surface by embedding power considerations into a revised framework of IS strategizing. We did so by referring to the s-as-p literature, which highlights how strategizing is an on on-going unfolding of practices, and points to the relevance of power discourses. These discourses reflect negotiations and dialogue that occur in everyday social interactions between strategists, when planned strategic initiatives require refinement because of contingencies (Whittington, 2006, 2014). We drew on Latour’s (1986) models to illustrate the difference between hierarchical power (which we argue can help in launching strategic initiatives), and performative power (that generally leads to more durable strategic changes).



We link the diffusion model to 'exploitation' – as exercising hierarchical power necessarily involves exploiting a dominant position (Pfeffer, 1981). Likewise, we link the translation model to 'exploration', since the *token* (in Latour's terms) – the CMR system (in Alpha) and the cheat-sheet (in Beta) – is constantly shaped, reshaped and appropriated by users through back-and-forth practices that are illustrative of the co-development of an IS (Boudreau & Robey, 2005) leading to innovation (Scarbrough *et al.*, 2015; Swan *et al.*, 2007).

Our theorizing and the two vignettes provide relevant insights and implications for IS strategizing scholars. First, with respect to the tensions involving knowledge/power, the vignettes illustrate how, in practical settings, tensions emerge, and these require that organizational actors to engage in exploratory and exploitative activities. Were we to assume that knowledge can be treated (exclusively) as a tangible asset, the likely outcome is that learning processes (exploration) do not occur (cf. Newell *et al.*, 2009). In this regard, Levinthal and March's (1993, p. 95) paper on the 'Myopia of Learning' highlights how organizations need to balance 'the competing goals of developing new knowledge (i.e. exploring) while exploiting current competencies in the face of dynamic tendencies to emphasize one or the other'.

Second, the vignettes highlight how power spreads (or attempts to spread) from powerful individuals to the whole organization (Alpha) or network (Beta). However, when an attempt to exercise power is made without empowering those who will put strategies into practice (the practitioner strategists), limited effects are achieved. In other words, this type of hierarchical power – here conceptualized using Latour's (1986) diffusion model – is less effective. Instead, engagement and empowerment of practitioners (cf. the translation model) result in more durable effects, as back-and-forth interactions between executives (those who 'give the orders') and practitioners (those who execute them) allow the latter to negotiate and revise strategies, during execution. This translation perspective is illustrative of why planned strategy cannot always be executed *in toto*, given emerging, often unpredictable issues. However, while the s-as-p literature conceptualizes power in a way that is similar to Latour's translation model, here we argue that both the diffusion and the translation models are helpful to understand strategizing processes (see Figure 1): while the diffusion model reflects exploitation (of power *and* knowledge), the translation model is more related to exploration (again, of power *and* knowledge). A tension between the diffusion and the translation models exists because, in practical settings, it is not always possible to exercise power in a way that gives voice to those who 'practice' the strategy.

Third, the vignettes point to the relevance and applicability of the ISS framework in practical settings. Although neither case study was conducted with the specific aim of highlighting power episodes, it was a simple matter for us to do so by rereading the interview transcripts. These power tensions reflect the over-arching tradeoffs between (knowledge) exploration and exploitation that has been the *fil rouge* of most of the past IS strategizing literature. Our interpretation of these tensions is that they are illustrative of a never-ending process of *becoming* where strategy is pursued by the constant effort to reach a balance between exploratory and exploitative practices – always in need to refinement, because of the unpredictable and emerging issues being confronted.

In conclusion, while our revised IS strategizing framework can provide guidance to strategists, at any organizational level, it does not aim to provide specific recommendations on how to plan and manage strategy in organizations. While it does provide a set of non-

prescriptive principles that are helpful in better understanding the messy unfolding of practices involving strategic initiatives, it is better for strategists to be aware that strategizing is an emergent and emerging process, and that it needs to be treated as such. Like the ‘stages of growth’ framework introduced in the first issue of *ISJ* (Galliers & Sutherland, 1991), the revised ISS framework is there to pose questions, and provides an inclusive means of doing so – amongst all ‘the strategists’ involved.

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## Biographies

**Marco Marabelli** is an assistant professor at Bentley University, USA. His research philosophy involves a critical and practice-based approach to social dynamics

associated with knowledge management and innovation, mostly at the network level. His primary focus is on the adoption, use and exploitation of information technology in a variety of settings including Enterprise Systems, Electronic Medical Record systems, social media networks and sensor-based devices. Marco's most recent research concentrates on sociomaterial practices in networks, with a particular focus on the strategic role of power dynamics, from a longitudinal perspective. Before joining Bentley, Marco was a research fellow at The University of Warwick (Warwick Business School) where he currently holds a joint appointment as a teaching associate. He obtained his B.sc, M.Sc. and PhD from Cattolica University of Milan, Italy. Marco's research appeared in such outlets as *Organization Studies*, the *Journal of Strategic Information Systems* and the *International Journal of Management Reviews*, among others.

**Robert D. Galliers** became The University Distinguished Professor at Bentley University, USA in 2009, having served as Provost since 2002. He also holds a fractional appointment as Professor of Information Systems in the School of Business and Economics at Loughborough University in the UK. Previously, he served as Professor and Research Director in the Department of IS at the LSE, Lucas Professor of Business Management

Systems and Dean of Warwick Business School, both in the UK, and earlier as Foundation Professor and Head of the School of IS at Curtin University in Australia. He received the AIS LEO Award for exceptional lifetime achievement in IS in 2012 and was awarded an Honorary Doctor of Science degree by Turku University, Finland, in 1995. He is a Fellow of The Royal Society of Arts, the British Computer Society and the AIS. He has been a keynote speaker at more than 60 major international conferences and symposia including the Australasian, European, Mediterranean, Scandinavian and UKAIS Conferences on IS. He has over 300 publications on his name, including over 90 journal articles and 12 books – the most recent of which being *Critical Perspectives on Business and Management: Management Information Systems* (Taylor & Francis, 2015) and *The Oxford Handbook of Management Information Systems* (Oxford University Press, 2011). His work has been cited over 8500 times according to Google Scholar and is trans-disciplinary in nature, focusing primarily on organizational innovation/transformation, the processes and practices of IS strategizing, knowing in organizations and the intra-organizational and extra-organizational impacts of ICT. He is the editor-in-chief of *The Journal of Strategic Information Systems* – one of eight journals in the AIS Senior Scholars' 'basket' of eight leading IS journals.

## APPENDIX

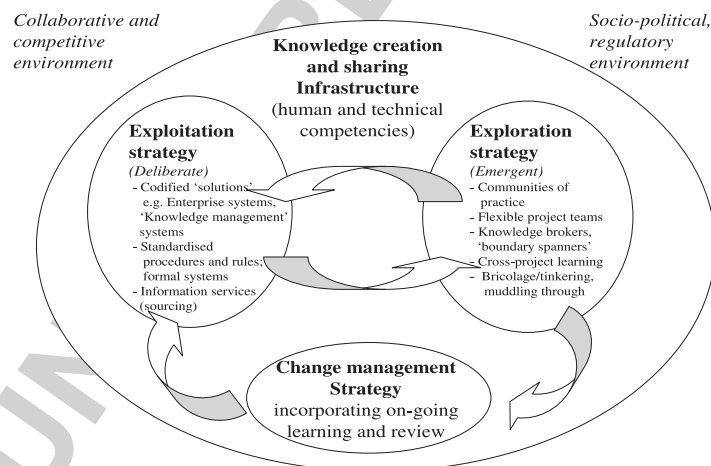


Figure 2. A revised IS strategizing framework (amended from Galliers, 2011, p.331).