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Sociomateriality and strategy-as-practice: taking technology seriously and applying actor-network theory

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Abstract
This paper responds directly to the call for strategy-as-practice research to more intently focus on ‘the stuff of strategizing, the material artefacts, objects, tools and technologies which are part and parcel of the social practice of strategy’ (Sub-theme call for papers). In taking the ‘stuff of strategizing’ seriously, and in deepening the accounts of ‘practices’ (Jarzabkowski and Whittington 2008) offered by strategy-as-practice approaches, we argue that technology is especially important. In the process of considering how technology might best be understood in strategy-as-practice research we advocate a sociomaterial lens. We seek to demonstrate the potential utility of a sociomaterial approach to strategy-as-practice research through the analysis of an empirical case of strategic change at a manufacturing organisation in which strategizing activity was mediated by technological artefacts. We explore the implications of the analysis, and of sociomaterial approaches to technology implementations more generally, for strategy-as-practice research.

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Sociomateriality and strategy-as-practice: taking technology seriously and applying actor-network theory

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Sub-theme 05: (SWG) Strategizing Activity and Practice: Connecting the Material to the Social

Introduction

This paper responds directly to the call for strategy-as-practice research to more intently focus on ‘the stuff of strategizing, the material artefacts, objects, tools and technologies which are part and parcel of the social practice of strategy’ (Sub-theme call for papers). In taking the ‘stuff of strategizing’ seriously, and in deepening the accounts of ‘practices’ (Jarzabkowski and Whittington 2008) offered by strategy-as-practice approaches, we argue that technology is especially important. In the process of considering how technology might best be understood in strategy-as-practice research we advocate a sociomaterial lens. We seek to demonstrate the potential utility of a sociomaterial approach to strategy-as-practice research through the analysis of an empirical case of strategic change at a manufacturing organisation in which strategizing activity was mediated by technological artefacts. We explore the implications of the analysis, and of sociomaterial approaches to technology implementations more generally, for strategy-as-practice research.

In analysing the ‘stuff of strategizing’ in this case we see sociomaterial assemblages of actors, technological artefacts, discourses, narratives and associated logics, procedures and recurrent practices as decisive. In this case we analyse these sociomaterial assemblages as actor-networks. In so doing we highlight some of the strengths and weaknesses of an actor-network theory (ANT) approach in this case, and as a specific example of a sociomaterial approach. We contend that actor-network theory can be usefully modified in various ways that enhance its contribution to sociomaterial studies of technology and organizing. We also see the potential for learning from actor-network theory, and related approaches to technology and organizing, in ways that might help strategy-as-practice approaches strengthen their analysis of technology as a vital and inevitable part of strategizing activity.
We see the paper as directly addressing at least two of the questions posed in the call for papers:

- What role do artefacts, technologies and other objects play in enabling and constraining the occurrence of strategizing across time and space?
- How can we better conceptualize sociomateriality and its various interpretations in the field of strategy-as-practice?

**Foregrounding technology in sociomaterial practices**

In terms of the dominant conceptual framework for analysing strategy-as-practice (Jarzabkowski, Balogun and Seidl 2007), the call for greater focus on the ‘stuff of strategizing’ implies the need for more attention to ‘practices’ and their role in mediating, shaping, enabling and constraining the strategizing work of ‘practitioners’ through ‘praxis’. It might be argued that, traditionally, strategy-as-practice work, even when it has taken practices seriously, has not always done a good job at adequately recognising the role of technology and technological artefacts as practices. It is notable that while the call for papers explicitly recognises ‘technologies’ and while Jarzabkowski and Whittington (2008) explicitly refer to ‘more material technologies and artefacts’ as ‘practices’, the original framework (2007: Figure 1) did not actually refer to ‘technologies’. Defining ‘practices’ as ‘Cognitive, behavioural, procedural, discursive, motivational and physical practices…’ (2007: 11) might, of course, be taken to imply the inclusion of technologies and technological artefacts, but it does not highlight them. This is somewhat unusual given the pervasiveness of technology in organisations and organising. As soon as the concept of sociomateriality is invoked, of course, technology is immediately foregrounded.

Technologies and technological artefacts should receive significant attention as key practices in strategy-as-practice studies. Moreover, strategy-as-practice research might benefit from greater consideration of the research informed by the concept of sociomateriality undertaken in the fields of IS, IT, and new technology at work. Coming from this tradition, Orlikowski and Scott (2008: 454) argue that ‘all organizational practices and relations always entail some sort of technological (or material) mediation’. The ubiquitous nature of technology in organising suggests its absolute centrality to the study of strategizing as well.

But what does it mean to adopt a sociomaterial approach to practices such as technologies? Rather than seeing actors and objects, such as technological artefacts, as ‘self-contained entities that influence each other’ Orliokowski and Scott (2008: 455) urge us to see actors and
objects as ontologically fused into ‘assemblages’. The implication is that it is impossible to see actors acting separately from the technologies and objects that constitute their practice. When a manager does something and engages in strategizing she is only able to do this through, and with, technologies of various kinds – information and communication technologies being the most obvious. This ontological fusing of actor and object, central to a sociomaterial approach, might be seen as a threat to the conceptual distinctions drawn in Jarzabkowski et al’s conceptual framework between praxis, practices and practitioners. However, we see the framework as an analytical device, and clearly the intent for strategy-as-practice is to examine strategizing as something that happens at the intersection or nexus of all three. In this sense we see strategy-as-practice as consistent with a sociomaterial approach to practices.

Orlikowski and Scott are also clear that sociomaterial assemblages, that are at the heart of their analytical framework, should not be seen as fixed or static but as shifting and emergent. This is consistent with strategy-as-practice’s emphasis on praxis as ‘flows of activity’ and also consistent with strategy-as-practice’s aspirations to broaden the range of practitioners beyond senior managers formally charged with ‘Strategy’ to include in the analysis a wide variety of actors within and beyond the organization (Jarzabkowski, Balogun and Seidl, 2007: 21). The idea of sociomaterial assemblages that are always being remade and reconstituted through ongoing practice and activity seems open to the inevitability of different actors and objects being more or less involved in strategizing.

**Toward a sociomaterial approach to the analysis of strategizing**

While sociomateriality might be consistent with and useful for strategy-as-practice what might it imply for the study of strategizing? Just as strategy-as-practice might best be understood as an approach rather than a discrete theory, and defined more by the problems it seeks to explain than the theoretical models it applies, so too sociomateriality needs to be understood as an approach defined by its analytical orientation to actors and objects, and most particularly, to technology and organization. In other words, sociomateriality is something of an umbrella term within which a number of more distinctive theoretical approaches can exist. One of the most prominent, and we contend, one of the most promising for strategy-as-practice approaches seeking to more intently focus on ‘the stuff of strategizing’, is ANT.
ANT privileges neither the social nor the material, but rather recognises that the social and the material are mutually dependent in the constitution and dynamism of actor-networks, which are seen as the key formations in the practice of organizing. For ANT, the central process through which forms of organizing are constituted is understood as ‘translation’ – the range of practices, actions, relations and processes through which actor-networks are formed and reformed. The most influential depiction this translation process identifies four moments of actor-network formation: problematization, interessement, enrollment and mobilization (Callon, 1986). During problematization the network initiator frames an opportunity and persuades other actors, despite their diverse interests, to devote resources to developing a solution to the problem. Interessement is the process by which the problematization is confirmed and other actors become interested in the proposed solution, thereby disrupting competing associations. This creates the conditions for the third moment of actor-network formation, enrollment. Enrollment involves ‘the definition of roles of each of the actors in the newly created actor-network and … involves a set of strategies through which the initiators seek to convince other actors to … be an active part of the whole project’ (Mahring et al., 2004). The final moment of translation is mobilization in which the actor-network becomes durable and the relations between actors become irreversible allowing the network to behave as if it were a single actor, or to use Latour’s (1987) phrase, a black-box. While this presentation of translation implies it is linear and sequential, as Elbanna (2008:90) points out, ANT proponents regard successful translation of an idea or project into a stable actor-network as a rarity and see network formation as a highly fluid and contested process.

Perhaps the most well known, and controversial feature of ANT is its treatment of actors according to ‘generalized symmetry’, meaning that little or no distinction is drawn between human and non-human actors. Latour (1991:117) argues that: ‘Contrary to the claims of those who want to hold either the state of technology or that of society constant, it is possible to consider a path of an innovation in which all the actors co-evolve’. Thus studies that adopt an ANT framework focus on the formation of heterogeneous actor-networks that may include amongst other things people, objects, technologies, agents and organizations. Far from seeing actor-networks as fixed and unchanging, an ANT perspective regards actor-networks as subject to constant pressures for change both because of the ongoing potential for changes in the actors in the network and the relations between them (Callon, 1986).
We see ANT as potentially very useful for strategy-as-practice approaches that are seeking to more clearly focus on the enactment of the ‘material artefacts, objects, tools and technologies’ informed by sociomateriality. First, agency is foregrounded in ANT approaches. The role of actors (or more correctly ‘actants’) in shaping relations, interrelations, networks and organizational forms as well as their enactment of objects, technologies, processes and policies is critical to ANT explanatory accounts of organizing and (potentially) strategizing. The emphasis on agency in ANT implies the virtue of providing empirically rich and detailed micro accounts of actors acting in the constitution, formation and reformation of dynamic and diffuse networks. We see this as entirely consistent with SAPs emphasis on agency: ‘strategy is something that people do’ (Jarzabkowski and Whittington 2008: 101).

Second, the category of ‘actors’ is broadened in ANT beyond human actors to include non-human actors such as objects, animals and technological artefacts. While this is an understandably controversial feature of ANT, the point and intention here is that we resist the temptation to change ‘register’ when analysing the role of human and non-human actors in networks (Callon 1986). In analytical terms, then, human actors and technological artefacts, for example, are afforded some analytical equivalence in the sense that they are both analysed on the same analytical terrain. This needs to be understood in the context of actor-networks. Actors’ agency, or capacity to act, is constituted by the network (Bruun and Hukkinen 2003: 104). We see this analytical image of human and non-human actors as constituted and connected in an actor-network as ANT’s expression of sociomateriality. It is, therefore, one way in which strategy-as-practice researchers might be able to adopt a sociomaterial approach in which the agency of a diverse range of actants, including technologies, is realised in the form of sociomaterial assemblages referred to as actor-networks. ANT should not be taken, in our view, as suggesting that human actors and technological artefacts act independently or even interdependently. Rather, ANT sees all the actors (human and non-human) in a network as co-evolving (Latour 1991). In any event, the broadening of the scope of actors and objects that are included within ANT’s analytical category of actors, is very well suited to strategy-as-practice’s aspiration to broaden the range of practitioners analysed. Even if it makes no sense to think of objects as practitioners, ANT implies the value of seeing objects and actors in the same analytical register.
Third, the core ANT category of translation is particularly well suited to strategy-as-practice’s focus on strategizing and might be able to give greater depth and explanatory purchase to analyses of strategizing. Translation emphasises the formation and reformation of networks as a process which is social, material, akin to praxis, political, contingent and emergent. It is social in the sense that relations, interrelations and connections between actors are critical. It is material in the sense that objects, artefacts and tools are explicitly included in the actor-networks and are accorded some analytical equivalence to human actors. It is akin to praxis in the sense that it encourages a focus on ‘the sheer labour of strategy’ (Jarzabkowski and Whittington, 2008: 101), what is involved in the often mundane and routinized ‘doing’ of strategy. Translation can also be seen as political: initiators are actively involved in problematizing certain problems requiring solutions through the deployment of resources, disrupting other networks to consolidate their own, enrolling other actors into the network and mobilizing to establish the network as stable and dominant. Consistent with this political analysis, translation is contingent, rather than determinate; the outcomes of translation are never certain and networks are emergent, in the sense that, in our view at least, they are never fully settled or stabilised. In these senses, then, we see translation as a potentially rich framework through which strategy-as-practice can deepen its account of strategizing from a more explicitly sociomaterial perspective.

Case and research methodology

We test these claims through an analysis of an empirical case of strategic change in a medium-sized Australian diversified manufacturing organisation. ‘MFC’ has operations in Australia and New Zealand and currently employs approximately 3500 employees across four main businesses. In recent years, MFC’s strategy has focussed on the rationalization of its traditional conglomerate structure primarily through the sale of business divisions, but also through the centralisation and standardisation of business functions. This strategy was largely driven by market feedback suggesting that the conglomerate structure was too complex for investors and was compromising the market value of the organization. By the beginning of 2011 almost $2 billion of assets had been sold and the organization positioned in the market as two separate and more focussed businesses “each with the flexibility to pursue their own distinct strategies” (Chairman’s address to shareholders, 2011). This restructuring process enabled MFC to strengthen its balance sheet, retire all debt, return more than funds to
shareholders through dividends and share buy-backs and capital return, and establish a simplified structure for global growth.

In 2008, when MFC was a more diversified industrial conglomerate, the new Group HR Director commenced a process of evaluating (with a view to upgrading or replacing) its legacy HRIS. The focus for our study was the social process of strategizing occurring at the organisation, with a particular focus on their HRIS strategy.

Data collection and analysis

We examine the contribution of ANT to the analysis of a case of strategic change using an interpretative case study (Walsham, 1995). A longitudinal single site case study enables systematic collection of information about social settings, events and individuals (Berg, 2009) allowing researchers to ‘…study the experiences of real cases operating in real situations’ (Stake, 2006:3). In addition, this approach allowed us to track and examine changes to the key technology (an HRIS) as well as broader strategic and organizational changes and changes to the HR function (Pettigrew, 1990).

Data were gathered over a four-year period, between 2008 and 2011, and included semi-structured interviews, observations of the HRIS in use, internal company documentation and publically available information about the company and its HRIS implementation. In total 32 semi-structured interviews were conducted with at least two interviewees present at each interview, with one interviewer consistently present across all interviews.

The data and other sources of text was then subjected to a detailed and systematic examination and interpretation using content analysis (Berg, 2009). This process involved coding at two levels. At the first level, we applied a lexicon of terms that emanated from the data itself and which related the HRIS implementation and strategy. It was during this process that the themes such as risk, organisational structure, IS management, and IS skills were revealed. At the second level we applied a priori constructs (Eisenhardt, 1989) which were grounded in the existing literature. For example, we identified statements that related to the HRIS implementation process, the process of translation, HR strategy, business strategy and alignment. The key themes that emerged from this stage of analysis were explored, discarded and further refined (Miles & Huberman, 1994).
Each iteration of the content analysis was undertaken by at least two researchers who contributed their own double hermeneutic interpretation of manual notes, interview transcripts and additional data. As these themes emerged and coalesced around intervals in the story we were able to identify junctures where there were shifts in the relevant actor-networks including the problematization of specific issues, the interessement and enrollment of actors, and the mobilization of actor-networks.

The analysis made it possible for us to construct a story of strategizing, focusing on the development and implementation of MFC’s HRIS strategy, using the text generated by the actors themselves. In this way we were able to capture contested positions, alliances and the process of negotiation of spaces within the broader organizational context. This practice of story-telling is consistent with event history (Van de Ven, 1989; Van de Ven & Poole, 1990) and we were careful to document the process of strategy implementation as well as who did what and when, as well as reflect upon and note which actor was being represented during the process. This focus on event history is consistent with the approach adopted by others who have applied an ANT framework to the analysis of IS implementations. By capturing and analysing the data as a chronological story we question both the organizational context at the same time as illuminating how the actors “define their respective identities, their mutual margins of manoeuvre and the range of choices which are open to them” (Callon, 1986:4).

An established actor-network: the legacy HRIS

In 1986 MFC invested in its first HRIS in order to gain efficiencies in the recruitment and training processes of one of their major manufacturing businesses. Frontier’s “CHRIS” technology was selected and implemented primarily to store information on employees, manage leave, streamline the salary review process, log licences and certificates of qualified staff, and to manage aspects of health and safety. Frontier CHRIS was a stand-alone IS that drew data from a range of organizational databases to populate the HR software for reporting purposes. The implementation program was managed by MFC using in-house dedicated resources and expertise based in the HR department. Further development and management of the system was supported by the HRIS team which was complemented by the addition of an IS technician from Frontier who joined MFC late in 1986. As the HR Services Manager explained, MFC took the Frontier CHRIS system and adapted it to their existing HR processes:
…fairly early in the piece, we had bought the CHRIS system from Frontier lock, stock and barrel. So we had the source code. And very early in the piece, one of Frontier’s technical people, who was assisting me with the implementation, decided that he didn’t want to work for Frontier any more, he wanted to work for us. [T1a: 5]

The HRIS technical team (3 fulltime staff) was located in the Human Resources department rather than in Business Information Systems (BIS) as it was considered that the dedicated focus of this team working with the stand-alone Frontier CHRIS system would deliver more specific capabilities for the HR function.

In 1987 a Frontier CHRIS upgrade incorporated payroll and was designed to eventually centralise MFC’s 63 different payroll systems into a single system and then to add analytical and reporting functionality that would potentially enable both HR and business unit managers to manage their people more effectively. Increased functionality requirements, along with the need for broader accessibility, resulted in the introduction of a web-based system (‘WebCHRIS’) in 2008. Over time with upgrades and modifications (made possible through the ownership of the source codes) to meet HR process requirements, the CHRIS system was barely recognisable as the Frontier vendor product and had essentially become an MFC proprietary system.

The WebCHRIS system at MFC was largely traditional and transactional delivering standard HR data such as staff records and regulatory information) and facilitating on-line HR transactions such as leave applications, time sheets, expenses. While the system had the potential to provide data and reports for more strategic activities such as projections and decision-making, these reports were relatively simplistic and the main focus was on the more traditional and transactional HR practices.

The actor-network at this time was relatively durable and robust. Through a process of translation over 20 years an increasing range of actors had been enrolled into the network, originally initiated by the HR Services Manager and constituted by the HRIS technical team, the Frontier CHRIS software, the relevant HR data and transactional processes. The HR Services Manager, through waves of successfully problematizing new opportunities and imperatives, expanded the network to include web-based functionality and accessibility, more users, the centralisation of payroll, and the extension of employee and manager self-service capabilities (ESS and MSS). Critical to this process was continuous improvement in the usability of the system. Over the years, the HRIS had gained a reputation as being extremely
user-friendly and reliable. In the words of the Shared Services Manager: ‘You can’t get away from the fact that CHRIS was highly customised, but also presented in a very user-friendly way which, over 23 years had been totally refined and refined and refined’. [T7:5]

A key feature of the HRIS was that it was highly customised and enhancements were proactively focussed on improving the service to users. According to the HR Services Manager,

My experiences with going down the track with CHRIS has been that you always go to someone and say ‘what do you want?’, and they’ll say ‘well, heck, what can I have?’ So we’ve always gone to them and said, ‘well look, here’s something. Have a look at that, and tell us whether or not that meets your needs, and how we need to change it, and what we [need to] add to it’. [T6: 24]

The strength and durability of the CHRIS actor-network was in large part due to the mobilisation of an expanding range of actors who were faithful users attracted by the appeal of high quality HR service.

The actors and the network were, however, less engaged in the more transformational capabilities. The transformational capabilities available in Frontier CHRIS suggested that opportunities existed to effectively problematize more strategic opportunities and enrol the actors in ways that could potentially deliver transformational HR activities. However, the actor networks became less stable at this level, particularly among the more strategically-focussed HR and line managers, who were seeking more advanced analytical capabilities from the HRIS and felt that those offered by Frontier CHRIS were limited. Thus the enrolment at this level was less unified.

While the CHRIS actor network was clearly delivering high levels of HR service, there was less stability in the network with respect to delivering a strategic HR capability, such as HR planning, HR development, and risk management. The network had evolved to provide some enhanced strategic capacity for managers in terms of reports which generated some basic HR metrics (turnover, absenteeism, overtime rates) but there was little exploitation of the strategic potential of other data. In particular, informants regularly referred to the need to develop greater strategic capacity regarding risk management (specifically using health and safety data on injuries, incidents and hazards), succession planning and talent management.
Problematization: the emergence of risk

The recognition that the existing legacy CHRIS system was not fully delivering on its strategic potential might have served as a problem that could be used as the focus for a new actor-network based around a new HRIS. However, while the Group HR Director recognised that realising a greater strategic capacity in HR was an ambition, he did not necessarily see a new HRIS as the solution.

So what we’ve got to do is find a way, whether it’s a bolt-on, I don’t know, where we can have that same kind of functionality [as exists in CHRIS] within an HRIS so that if we’ve got a line manager who wants to fiddle around to understand what is his or her cost of labour, or where the utilisation is, so that there’s much more power in the desktop for our line guys. I think that based on experiences in other lives and a couple of demonstrations that I’ve attended here already for the new system. I think that’s going to be problematic. That is certainly a concern in the back of my mind. (Group HR Director T1b: 18).

Rather than focussing on strategic capacity, the Group HR Director as the initiator of a new actor-network, problematized risk. The problematization of risk was accomplished through three main lines of argument: risk associated with the imminent retirement of the principal architect and custodian of the legacy CHRIS system, the HR Services Manager; risk associated with the complexity of the highly customised CHRIS system; and risk associated with not having an HRIS which was relatively standard, generic and well-known.

The HR Services Manager had been with the company for more than 30 years and was primarily responsible for the design, implementation, successive refinement and management of CHRIS. His HR team had assumed primary responsibility for the HRIS and its upgrades. The HRIS team was also long serving, the newest member of the team having seven years of service. All customisation, upgrades, training and support for the HRIS were undertaken by this team with minimal contact with BIS other than the provision of hardware. The current WebCHRIS was largely built on the personal knowledge of the HR Services Manager and his two programmers. The imminent retirement of the HR Services Manager allowed the HR Director to raise questions concerning the vulnerability of the system and the capacity of the organization to maintain it after his departure.

The issue with that, of course, as [the HR Services Manager] touched on, is the knowledge that’s within the group of people that’s been their modus operandi. So organisationally, that’s a problem, if perish the thought, [the HR Services Manager] got hit by a bus, or his team – [to the HR Services Manager] you’re
not going on any team outings by bus! – so that’s one element that struck me. (Group HR Director T1b: 17)

The second aspect of the risk problematization was the complexity of the CHRIS and its integration with several other bolt-on systems that collectively constituted the legacy HRIS. These bolt-ons included: a time and attendance system (Chronos); a domestic travel expense approvals system (Promaster); Employee Self Service (Pay Global); financials (SAP); recruitment (People PageUp); psychological testing (SHL and ACER); and recruitment media advertising (Ad Control). While these systems were delivering very effective HR services according to all interview respondents, they relied heavily on the small HRIS team’s knowledge to manage and maintain them.

The third dimension to the risk problematization was the appropriateness of such a highly customized, idiosyncratic HRIS for the company given the prospect of major structural change to the business in the future. It is important to note that this dimension of the argument, while clearly influential for the Group HR Director, was somewhat concealed and implied rather than explicit. In discussions (in which the HR Services Manager was present) the Group HR Director hinted at the possibility of major structural changes and changes to staffing, presumably including the HR function.

I guess the challenge for MFC now is what the world looks like going forward and whether the staff within the current operation are the necessary fit to what the mission looks like going forward. (Group HR Director T1b: 9)

In the same discussion, the Group HR Director later linked the need to think about the future of MFC to the consideration of the HRIS:

I see it’s pretty critical for us to focus on when looking at a new system, how we future-proof it in our thinking as much as possible rather than just assuming that what we’ve done for last period of time as an organization is going to see us through (Group HR Director T1b: 19).

Having problematized the HRIS in terms of risk, the Group HR Director then embarked on a process of establishing, influencing and constructing the interests of a number of key stakeholders around the possibility of a new HRIS as a solution, and enrolling these stakeholders into a new actor-network. We conceptualize these strategic moves in terms of the next two phases of translation: interessement and enrollment.
Interessement and Enrollment: the new HRIS

As initiator of the new actor-network the Group HR Director started a process to evaluate the HRIS and make recommendations concerning its upgrade or replacement. The Group HR Director engaged a specialised HRIS external consultant, and set up two committees: a steering committee (consisting of the Group HR Director, CIO, General Manager HR, Business Service Centre Manager, and a Business Unit CFO) and an evaluation user team (consisting of representatives from HR including the HR Services Manager, Learning and Development, Occupational Health and Safety and Payroll). The user team was asked to give their views on the relative advantages and disadvantages of two options: upgrading CHRIS to the new version CHRIS21, or implementing the HR module of SAP. While HR functionality factored significantly in the deliberations of the user team, the current and future needs of the organization were clearly prioritised by the steering committee. The HR Services Manager, as the key figure in the user team, commented that, in his view the two systems were ‘line-ball’. It was apparent that, in his view, CHRIS21 had better HR functionality and was much more user-friendly (as well as being much more familiar for HR users), while, on the other hand, the SAP HR module had the advantage of being more easily integrated with the SAP FICO (Financial Accounting and Controlling) modules already being used in MFC. He also commented that the implementation costs for SAP were ‘considerably higher’.

Ultimately the steering committee recommended the adoption of SAP HR. The Group HR Director justified the decision in terms of what he saw to be the superior ‘strategic functionality’ of the SAP option, advantages associated with integration with SAP FICO, and the fact that SAP was more ‘future-proof’. The overall rationale was framed in terms of risk:

If we’d continued on an in-house solution, so to speak, we would have had a group of people working out... what needed to be done and cutting the code. Whereas now you just simply take it off the shelf and bung it in. So there’s clearly a less risky element to that because it’s been tested and verified by the provider as opposed to having to build it yourself so it’s just a different way of doing it (Group HR Director T7: 4)

The Group HR Director was prepared to concede that SAP was seen to be less user-friendly, but that argued that its more generic character made it more appealing and easier to upgrade:

Yeah, I think there’s no question that the average user who’s using the employee self service would say its inferior – SAP’s inferior to CHRIS – because the guys had built a really impressive self-service within CHRIS. It
was bloody good but, of course, the knowledge of all that was with a small group of people who wanted to go off and do different things, then you’re left with you hands in the air. So that; the trade-off and the fact that now [SAP] is upgraded automatically as part of licensing and is a generic tool (Group HR Director T7: 5)

The selection of SAP also meant that the management of the HRIS could be shifted from HR and placed in the Business Information Systems (BIS) team where there was existing SAP expertise, thus enabling MFC to leverage SAP support resources and manage the system more easily within the context of the corporate IS strategic goals. The clear implication of the selection of SAP was that this IS platform would be more attractive to a future purchaser of any of the divisions. Given that IS costs are recognised as one of the highest hidden costs in mergers and acquisitions, any moves to minimise these costs were likely to be favoured by senior management. The introduction of SAP also presented an opportunity for the Group HR Director and senior management to restructure, consolidate and standardise processes, across the organization.

By mid 2009 MFC was preparing to go live with the new SAP system. At this point a new instance of problematization was initiated by senior management: the payroll function was identified as a problem and the new SAP system was defined as its solution. For 30 years MFC had a centralised payroll department located in a provincial location in a different state from Head Office. The payroll office was a team of 10 payroll clerks all with long company service and a very high level of familiarity with the MFC business. Payroll was a complex activity with a multiplicity of union-based collective agreements across 3 countries and 5 businesses. The payroll clerks were also very experienced in using the CHRIS system, and had been very involved in the development and re-development of the functionality of CHRIS. The Group HR Director argued that centralisation of payroll was now imperative for cost purposes, and that the SAP implementation represented an opportunity to relocate this function to Head Office.

The decision to establish a new payroll department resulted in all the existing payroll clerks taking redundancy payouts and a new SAP-skilled team employed in Head Office. The loss of payroll staff with extensive knowledge and experience of MFC and its payroll complexities, might have been constructed as a risk for MFC. However, in the new actor-network, this potential risk had been reframed as a ‘challenge’ of transferring that
organisational memory and knowledge to the new payroll team. The HR Services Manager reflected on the challenge in the following terms:

When (we) look back on that, it was a highly challenging 12 months in that regard because we actually did have to manage across some highly emotive periods. I don’t actually think that’s all to do with the SAP thing though. Some of that was to do with the move. Some of that was “why didn’t we choose to retrain those people in SAP and leave them there?” There was all those organizational decisions which come into it as well. (HR Services Manager)

By mid 2010 the SAP HRIS was embedded into the organization and while the old system was still available for historical data access, it was no longer accessible for current use. The transition, however, had not been smooth and there was significant resistance from users as a result of loss of functionality and the adaptation to a new technological environment. While management could see the benefits of risk minimisation and a more centralised, standardised IT platform, for the user it was hard to come to terms with a new system that gave them less functionality, was more difficult to use and appeared to result in the prioritising of SAP skills over organizational knowledge:

It [CHRIS] had satisfaction ratings over 80 per cent consistently. The next one [SAP] was lucky to get 50… You can't take something that's so successful and so loved, for whatever reason, and then replace it with a big monster that you're going to have to build and get people on board with. There's always going to be a challenge. (BIS Executive).

Despite user resistance to the new HRIS, the Group HR Director, through the process of translation, was able to align the interests of key stakeholders outside the HR department to a new HRIS which, while inferior as an HRIS in many respects, was, from an organizational strategy perspective, less risky and more valuable and durable as an asset. The new HRIS was also seen and used by the Group HR Director as a catalyst for broader changes: the re-engineering and standardization of various business processes, the relocation of responsibility for the HRIS from HR to IT and the rationalization and centralization of the payroll function.

Mobilization: the consolidation of the actor-network

During the course of the implementation, as the actor-network was becoming established, discussions with potential buyers of one of the largest MFC divisions were taking place. This had further implications for decisions around the new HRIS and the organizational structure. While these plans were being discussed at a senior management level, they were clearly
confidential although the divestment of some MFC businesses had long been the subject of open speculation. The Group HR Director described some of the responses after the eventual de-merger was announced and the rationale for some of the HRIS and HR structural decisions became clearer:

One of the CHRIS support guys said to me after the announcement of the company demerger, the plan to demerger, ‘it now all makes sense, I now understand why we were going down this path’ - because obviously we couldn’t make that public – ‘and I can see why you were doing it, so I’m going to shut up about my grizzling. (Group HR Director).

By 2011, the Group HR Director had left MFC and the organization was moving into a period of consolidation. The previous Associate HR Director, who had many years of SAP experience, took over the HR Director role. All the previous HRIS team had taken redundancy and the management responsibility for the HRIS was now totally with BIS. While the HRIS still had a largely traditional and transactional role, BIS was beginning to work with HR to look at improved MIS reporting and thus more strategic HR capabilities. However, the focus largely remained on compliance and standardization of HR processes. With the HRIS managed by BIS and an internal transfer pricing mechanism in place, any increased HRIS capabilities were negotiated and typically rejected if any customization of the system was required. On reflection the new HR Director acknowledged the loss of strategic HR functionality in the HRIS but overall this was outweighed by the corporate strategic benefit of having a globally recognized and supported system:

Also in the future to be able to bring people on - not people, but other businesses on, if they so desire to purchase, and bring them into a system… the reality is that a 25 year old legacy system couldn't keep going. So whilst I do think that that was one of the drivers, I still probably get back to the fact that the biggest single driver for this was to de-risk our environment.

Corporate restructuring and the introduction of the new HRIS was associated with substantial changes to the role and power of organisational actors, most particularly, HR and BIS. The role of BIS, which now controlled the HRIS, was substantially elevated and HR and line managers were required to conform to SAP standards and BIS internal cost accounting requirements, as the following example illustrates.

I guess there was the classic example yesterday with (a request from one of the divisions) ... where you, essentially sacrifice two weeks of your salary in order to get two weeks extra leave. It was something that they had in CHRIS. It was stamped out when SAP was introduced because it was too much
customisation...also, not many people availed of it so it was one of those things that just got jettisoned. One of the guys - one of the businesses came yesterday and say oh, we've just offered someone an extra two weeks leave to reduce their salary. It came to me and my team. I said okay, it's going to be at least a day's work - which we have a [bill] model for anything that's over half a day. They have to give IT money. They didn't take (the option) ... turned around and said we're not doing it anymore”. (BIS executive).

Overall the management of HR and BIS considered the new HRIS a success. While they recognized that elements of the change management process could have been improved, in their view the new HRIS placed the organization in a stronger strategic position for the future.

Discussion

MFC’s highly customized legacy HRIS was a critical actant at the centre of a stable actor-network that had remained durable for two decades. The stability of this actor-network and the positive role that it played in enhancing the HR function in MFC was reinforced by the location of the HRIS and the specialized team that worked with it in the HR department. This robust actor-network not only protected the HRIS from other actors, such as BIS and its SAP system, but also ensured that the appropriation and further customization of the system was aligned with the ambitions of the HR function and its perception of the HR service needs of users, rather than the broader strategic priorities of the business as whole. The stability of the actor-network was further reinforced by the absence of certain non-human actors including operating manuals and detailed documentation relating to the customized HRIS. This meant that anyone wanting to use the HRIS was dependent on members of the HR team and in particular the HR Services Manager. In ANT terms, HR, its specific role, its key personalities and its extensively customized HRIS were all tightly networked and effectively ‘black-boxed’ as a stable actor-network.

A number of key strategic interventions, engineered by a new Group HR Director, disrupted this stable actor-network and initiated a process of translation that led to formation of a new actor-network. This new network included the new SAP HRIS, the senior management team, new ideas about the purpose and nature of the HRIS and new actors, many of whom were previously excluded from the legacy HRIS actor-network. These interventions were associated with the change in strategic direction of the organization as management prepared for divestment of parts of the business. The new HR Director was charged with the
responsibility of making HR look more attractive to potential buyers and a number of characteristics were identified by him as problematic: the opaque, highly customized HRIS; the dependence of the organization on an HR Services Manager who was about to retire; and, the need to cut costs and rationalize processes.

It is possible to identify evidence of movement through each of the four moments of translation identified by Callon (1986) in the case study. First, the introduction of the new actors and changes in the relationships between actors in the traditional actor-network introduced a new moment of problematization where the characteristics of the HRIS and the role of HR were re-defined. The formation of evaluation and selection committees to look at what form MFC’s HRIS should take in the future, created an opportunity for the Group HR Director, who had previous experience working with SAP and privileged understanding of the broader strategic ambitions of MFC, to bring in the interests of actors that had been largely excluded from the legacy HRIS actor-network and to ‘frame’ the solution the system was designed to provide. While the customized HRIS and its proponents from the HR function were present in these discussions, it facilitated a process of interessement that aligned the interests of BIS, Finance and the broader strategic ambitions of MFC with the SAP HRIS in a new actor-network. Through the process of interessement the Group HR Director was able to draw on the imperatives of IT standardization and managing the business risk associated with the legacy system to confirm the problematization and encourage BIS, Finance, and MFC more generally to see their interests as being met by the solution represented by the new HRIS.

Enrollment took place through this definition of the roles of BIS, Finance, and MFC as an organization with a particular strategic future, and through the addition of new actors including the HR modules of SAP, an external consultant with experience working with SAP, the relocation of responsibility for the HRIS from HR to BIS. Finally, the offsite payroll team, closely aligned to the legacy HRIS, was replaced with a new team with experience working with SAP and located in head office. Key here was the new definition of roles for these actors: BIS replacing HR as the owner of the HRIS, the elimination of the role for the offsite payroll team, and SAP as the primary technology subsuming the HRIS functionality.

Through each of these moments not only did the highly customized legacy HRIS have its role in the actor-network restricted to historical reporting of data, but the HR function gradually lost the central role it had in the original HRIS actor-network. By the time the translation
process was completed and the new actor-network was mobilized, HR had lost much of its power and status as an actor in the network and had instead to work through BIS if it was to derive any strategic value from the new HRIS. Mobilized around the idea of the standardization of the IT system and its location within BIS, the new network was stabilized. The HR functionality that the new SAP based HRIS provided to the business was reduced according to the reports of users, and, largely excluded from the actor-network surrounding it, the ability of HR to realize their strategic ambitions was significantly constrained and rendered contingent on its ability to conform with the requirements of SAP.

Implications and conclusions

We contend that as strategy-as-practice work seeks to deepen and extend its account of practice, and the stuff of strategizing, a reconsideration of the contribution of ANT approaches might be warranted. A focus on actor networks highlights the agential, relational and political nature of strategy work. It also offers a more compelling approach to the understanding of technology and technological artefacts in the implementation of strategy.

While ANT offers a promising approach for strategy-as-practice approaches there are a number of dimensions to the theory and elements of its characteristic form of analysis that might be usefully re-evaluated.

While some critics of ANT, such as Whittle and Spicer (2008), have argued that ANT remains captive to its material orientation, and ends up arguing that ‘man-made artefacts have certain ‘real’ properties’ (2008: 614) and that this weakens ANT’s capacity to contribute to a ‘critical theory of organization’ (2008: 611), we see ANT as being able to accommodate the idea that technological artifacts can be enacted in different ways in different contexts (Orlikowski 2000). Indeed, in keeping with Law and Singleton (2005), we see technological artifacts as “enacted into being” through practice and that this an important part of the process of translation. It is through translation that a technology is invoked as a certain type of artifact, and is understood as an actor in the network, and ascribed certain qualities and characteristics. In our case we saw this as critical: the original legacy HRIS had been understood in the original actor-network as an IS capable of delivering high-quality HR services to users; the new SAP HRIS was invoked in the new actor-network as an organizational asset which was more attractive to potential purchasers of the business. Technological artifacts do have a material character and particular characteristics, however in
practice they are inevitably constructed by actors and invoked by actor-networks in specific ways and effectively put to work in the practice of strategy.

Another controversial aspect of ANT concerns the supposed linear nature of the four stage model of translation understood as moving through problematization, interessement, enrollment and mobilization (Callon 1986). While this four stage model has been routinely adopted in several ANT studies, we see this model as more usefully employed as an ‘analytical heuristic’ (Whittle and Spicer 2008) which alerts us to some of the strategic moves common in translation, rather than as a rigid linear structure. Indeed, the empirical evidence in the case of MFC does not suggest translation as typically being a neat, perfectly sequential process. For example, in our case the ‘stage’ of problematization was returned to a number of times as new organizational problems were introduced (eg: the problematization of the payroll function, sometime after the problematization of the legacy HRIS as a business risk), and processes of enrollment occurred at different times as different actors were introduced or removed from the network (eg: as the new payroll team replaced the old). We see no reason why translation and its elements cannot be used as an analytical framework while still allowing for the possibility of moments occurring ‘out of order’, simultaneously or returned to many times as part of the development of the actor-network.

ANT has also been traditionally associated with a claim concerning the irrelevance of context. Latour (2004, 2005) for example argued that, from an ANT perspective, researchers should just describe the state of affairs at hand and that that ‘contextual explanations’ are ‘mere ornaments’ and that context cannot explain anything (Latour 2004: 68). In light of our experience in studying IS implementations such as the one reported here, we reject the notion that context should be eschewed as an explanatory category. Rather we see organizational and environmental context as often important in understanding the course of IS implementations, as illustrated by the MFC case. Firstly, the business context in which MFC became implicated by 2008 was seen as critical by the initiator of the new actor-network. Secondly, context can be explicitly introduced into the actor-network, but it need not be fully or completely introduced. The initiator of the actor-network, the Group HR Director, relied on this broader business context to inform his problematization of the original HRIS as a business risk. However, the full dimensions of this context – the fact that senior management was preparing parts of the business for sale – were not revealed and were therefore not fully introduced into the actor-network. This suggests that context can play a role both explicitly in
an actor-network as well as potentially being hidden from view from at least some members of the actor-network.

The case of MFC is easily readable from an ANT perspective and provides an illustration of how a sociomaterial lens can be instructive. In this case, the Group HR Director, in order to implement his strategy, needed to disrupt an existing established actor network and translate a new actor network based on a new technological artifact. The practice of strategizing here involved the construction and elaboration of a specific problem – the risk represented by the legacy system (probematization), the alignment of interests around that problem and its potential solution in the form of the new HRIS (interessement), the inclusion of some organisational actors and the exclusion of others (enrollment) and the construction of the new technology as the established way of doing things despite its technical shortcomings (mobilization). While not analysed at the micro, ethnographic level often associated with strategy-as-practice studies, we see this as an illustration of the practice of strategy.

The analysis of the case also suggests the value of sociomaterial approaches. Throughout the case it was apparent that the role of actors was often bound up closely with the technology and the relevant actor-network. For example, the role and significance of the HR Services Manager could not be understood other than by reference to WebCHRIS technology – it was largely his creation, his strategy of providing responsive HR service was based on its extreme customisation, and his power was constituted by the technology and realised through the process of engaging in the network a wide range of actors who used and relied on the technology. So too the Group HR Director relied heavily on the invocation and enrollment of the new SAP HR module into a new actor network as the basis of his strategic accomplishment.

Finally the case demonstrates that strategy implementation and strategy work is often achieved through and with technology. However, that technology is not simply utilised as a fixed object with clear material qualities. It is socially constructed and actively constituted as part of an actor-network and plays a critical role in strategy implementation and strategy work.
References


