Making qualitative research accessible and acceptable in the scientific management arena: a life-world perspective

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Making Qualitative Research Accessible and Acceptable in the Scientific Management Arena: a Life-world Perspective

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Abstract

Western organizational culture, in part founded on the scientific management (Taylorist) techniques employed by Henry Ford, tends to emphasize the capture and control of explicit forms of knowledge, and technological advancement has encouraged this tendency. This is apparent within hegemonic business practices (e.g. ITIL IT Service Management processes) which emphasize quantitative data collection. In contrast, managers are often frustrated by an inability to take control of tacit forms of knowledge, embodied within the worker and acknowledged as important for organizational success, yet resistant to effective quantitative data collection.

As a business school researcher I was faced with the challenge of deciding upon a research method that would enable my interpretations to be both credible within the academic community and accessible and acceptable within the IT Service Management practitioner community.

By close observation of specific work activity as it is experienced by the IT support worker, recording as much data as possible relating to the cerebral and sensory experience of the worker, the research attempts to draw diagrammatic patterns that provide some clarity for managers over the forms of knowledge that are used by a worker or team.

The paper reflexively considers this qualitative research from the different life-world perspectives of the researcher-perceived academic and practitioner recipients of the research, seeking credibility, accessibility and acceptability across these life-worlds whilst maintaining researcher integrity.

Introduction

This paper emerges out of a conundrum faced by IT service managers working within organizational systems that are founded upon the principles of scientific management or Taylorism. The success of such systems, made up of inter-related subsystems and processes, relies upon the collection of

quantitative metrics to be used to inform managers and guide them towards advantageous decision-making. The management conundrum stems from the reality of the organization's reliance on the worker's very humanity: their thoughts and imaginings, and their sensory experiences in their work practice. Management enthusiasm for the control of the system, its subsystems and processes using metrics tends to play itself out in IT Service Management (ITSM) practices that seek to control the productive practice-based thoughts and imaginings of workers via techniques: notably the use of structured Knowledge Management Databases (KMDBs), designed to capture workers' tacit knowledge in an explicit format for reuse by others.

In carrying out social scientific research within a business school setting there is often an implicit pressure upon the social scientist for the research to be applicable to the business world generally, or for it to be pragmatically relevant to specific business communities. As a researcher who has worked within a very specific business community, that of ITSM, the reflexivity I have brought to my research on the IT service support worker has included an understanding of the typical IT service manager mindset. This mindset is dominated by quantitative reasoning, founded upon scientific management principles. It has also included a recognition that systemic weaknesses were often apparent in those areas that were resistant to quantitative reasoning: notably the tacit thinking of the worker as they go about their work. Such weaknesses might be revealed through qualitative consideration using ethnographic methods. For example, in the field of ITSM, worker productivity might be quantitatively measured and processes engineered for greater efficiency, but it is through observation and interpretation of the human actors' behaviours that a rich understanding of the processes as they operate in real time might be achieved.

This paper begins by placing the ITSM occupational sector in an industrial historical context, noting the powerful influence of Taylorist thinking. The Taylorist paradigm, as typically employed by IT service managers, is then discussed in terms of its impact upon how organizational capability/knowledge is controlled. This is then contrasted with an alternative management paradigm, whereby a more relaxed approach is taken.

The paper then introduces ongoing research to test a schema, inspired by the writings of Alfred Schutz (1899-1959), and designed to provide for IT service managers explicit and easily discernible management information in the form of diagrammatic patterns about the nature of the productive knowledge used within IT service support teams. This information is shown to emerge from an analysis of data collected using the qualitative technique of participant (i.e. worker) observation when carrying out productive work.

IT Service Management and its Taylorist Roots

By the end of the first half of the twentieth century a managerial ideology had developed that justified the authority of management to remove from artisan workers the right to define their own jobs, their own skill level, their own standards of quality, and place them under management control (Bendix, 1956). It was this striving for efficiency that undermined the communities of skilled artisans and created new communities of semi-skilled workers working within tightly controlled working practice parameters. With this management control came the right to measure performance as they saw fit and to specify what measurements constituted satisfactory performance (Stinchcombe, 1990). Numbers are the language of such measurements. Thus, quantitative data is the food of this ideology of efficiency, as espoused by Frederick W. Taylor (1856-1915) in his argument for the benefits to be gained by the systematic observation and study of work to establish predictability of job performance and control through discipline (Huczynski and Buchanan, 2001). Taylor's influence on the transformation of the US steel industry from being craft-based into a bureaucratised system (Drucker, 1974) was followed by Henry Ford's (1863-1947) similar transformation of motor car manufacturing (Huczynski and Buchanan, 2001).

The legacy of Taylor's 'Efficiency Movement' includes popular organizational management frameworks such as Lean Management, ISO standards and a stable of 'Best Practice' management guidance that is the intellectual property of the UK Government's Office of Government Commerce (OGC) including the hegemonic framework of ITSM practice: the IT Infrastructure Library (ITIL). As Huczynski and Buchanan observe:

> *'One only needs to look at the current interest in total quality management, ISO9000 and the other management techniques for bringing greater discipline into... work to realize that Taylorism is alive and well and thriving at the start of the twenty-first century.'*
>
> *(Huczynski and Buchanan, 2001, p. 413)*

ITIL has gradually established itself as the most widely accepted approach to ITSM in the world (Taylor, Iqbal and Nieves, 2007), providing the core principles for the ISO/IEC 20000 standard (Van Bon, Polter, Verheijen and Van Selm, 2008). ITIL shows its Taylorist underbelly by way of the attention it gives to the breaking down of processes into activities and then into tasks that can be optimised for efficiency and intensification. Another key marker of ITIL as modern-day Taylorism is the diktat that each defined process be 'owned' solely by an appointed 'Process Owner' (Taylor, Lloyd

and Rudd, 2007), thus confirming workers as 'servants' of the processes, who are denied any formal ownership of their working practices. Effectively, workers are dehumanized and objectified as resource assets to be measured, configured and controlled in much the same way as technological resource assets. Also, ITIL evangelises measurement as the path towards ever greater efficiency, generating amongst managers a hunger for numerical data in order to: validate management decision making; set direction for worker activities in order to meet management-set targets; justify (to higher-level management) why courses of action are to be taken, and identify those points where workers (or technology) should intervene (e.g. to take corrective action) (Taylor, Case and Spalding, 2007).

In adhering to the adage 'you can't manage what you cannot measure' (Arraj, 2010) and in its adoption of a metric-fuelled 7-step Improvement Process (Taylor, Case and Spalding , 2007), ITIL idolizes the power of numbers and, by comparison, pays scant interest in the important role of language in achieving organizational success. Notably, attempts to implement KMDBs to capture the knowledge of workers for reuse by others, and to measure their effectiveness as a step to improvement, have tended to be undermined as much by their inherent reliance upon the quality of the written input of time-pressured technicians (Dawson and Richardson, 2007) as by the innate difficulty of capturing in written code the tacit dimension of human practical knowledge.

In its continual drive for ever greater efficiency, the modern ITSM workplace, working under the influence of ITIL practices, can be seen to reflect the observation of Baldry, Bain and Taylor (1998) that the modern office has witnessed an intensification, mechanisation and Taylorisation of white-collar work that mirrors the factory. This has clear implications for the workers employed in these workplaces, exchanging their intellectual and sensing capabilities for payment. Rikowski (2007, p. 260) argues that, 'in the knowledge revolution in the modern developed world... it is largely the intellectual work that creates the additional value to sustain capitalism, and it is the intellectual work that exhausts the labourer.' Likewise, and significantly, it is also the very nature of this human intellectual work that undermines the effectiveness of quantitative metrics, so venerated within Taylorist thinking, in the knowledge management realm. This leads us to a discussion about the control of knowledge within ITSM settings.

Knowledge Control: The Taylorist Paradigm

The controlling inclination of Taylorism is to strive for converting tacit knowledge into an explicit codified form (McKinlay, 2002): to extract from the

minds of technicians their experientially acquired expert knowledge ('knowing how') and to capture it so that it might be shared and reused by anybody authorised to do so at the bequest of management (rather than the worker from whom it originated). In advocating the use of KMDBs to store knowledge and convert tacit into explicit knowledge, the distinct ITIL v.3 process of Knowledge Management (Taylor, Lacy and Macfarlane, 2007) advocates an objectivist epistemology to knowledge and such an approach is clearly in line with the centralising and standardising tendencies of Taylorism (Scarbrough, Swan and Preston, 1999). Further, very much in the spirit of Taylor's Efficiency Movement, ITIL overtly states that 'reduced dependency on personnel for knowledge' is a key performance indicator for the Knowledge Management process (Taylor, Lacy and Macfarlane, 2007, p. 153). The implication, beyond the consideration of the cost of labour, is that an explicit knowledge asset maintained within a technological repository is controllable in a way that a human is not. Thus the controlling instinct draws the manager towards capability in the form of the technological solution and away from capability in the form of a thinking human worker.

Within the business literature there are two broad epistemological camps debating the characteristics of knowledge: those who take an objectivist perspective and those who 'eschew the idea that it is possible for organizations to collect knowledge into a central repository' and alternatively adopt a practice-based perspective (Hislop, 2005, pp. 36-37). In the pragmatic terms of business knowledge management strategy (either explicitly expressed or implicit within, for example, IT and human resource management [HRM] strategies) this manifests itself in two alternative approaches. These focus either on the objective and disembodied nature of knowledge through codification and classification strategies underpinned by the use of IT, or the socially constructed, multi-dimensional and particularly embodied nature of knowledge through personalization strategies typically enacted via HRM practices (Hansen, Nohria and Tierney, 1999; Hislop, 2005). In ITSM organizations the belief in the efficiency of the benefits of IT (Bhatt, 2001) and the historical influence of Taylorism (Hockey and Allen-Collinson, 2009) have tended to place codification strategies founded on an objectivist epistemology in the foreground with personalization strategies founded on a practice-based epistemology pushed into the background.

Attempts to implement knowledge management as a process within ITSM settings, with a focus on the use of technology, often result in management frustration that the results are not as advantageous as they were envisaged to be upon implementation. Capturing tacit knowledge often proves to be problematic because workers 'find it hard to express [their knowledge] in words' (Tsoukas, 2003, p. 412) or decline to engage with knowledge sharing

initiatives (Scarbrough et al., 1999; Beaumont and Hunter, 2002). They also tend to be resource-wasteful and prone to failure (Newell, 1999; Dawson and Richardson, 2007). This management frustration is alluded to by Mohamed, Ribière and O'Sullivan (2008) who, after noting that the adoption of technology when implementing ITIL processes is critical, add that it is imperative that managers fully understand that there are things that computers and technology do well, and things that humans do well, and that management attempts to repeatedly 'force' the operation of an inappropriate paradigm is unlikely to reap efficiency rewards. The point they make is similar to that made by Davenport and Prusak (1998, p. xi) who note that 'the assumption that technology can replace human knowledge or create its equivalent has proven false time and again'. These assertions are supported by a broader body of literature that emphasises the importance of acknowledging the human element of knowledge assets (e.g. Orlikowski, 2000; Huber, 2001; Mohamed, Stankovsky and Murray, 2006; Sveen, Rich and Jager, 2007; Adelstein, 2007; Ravishankar, 2008). Yet the primary focus of ITIL, rooted in Taylorism, is on the efficiency and control of the system rather than on the people within the system. As one adherent to systems thinking puts it:

> *The system is the method by which you achieve results... Without conscious attention to systems, we will focus on people... [People] work in systems, but the systems existed before most of the people were hired and will continue after the current employees are gone... When a system is changed, people need to change what they do.*
>
> *(Scholtes, 1998, p. 23 – emphasis in original).*

The assumption is that people are resources that will freely bend to the changing demands of a managed system and are substitutable. Such a mindset potentially undermines the roles of management to understand the complexity of workers' experiences within the system and nurture the tacit skills driving the system.

Relaxing Knowledge Control: The Alternative Paradigm

The dominant paradigm of managers operating out of the scientific management mindset is that of the 'cultural agoraphobic', to use the term coined by Boyle (2008). This paradigm overemphasizes the downsides of openness and lack of central control, and overvalues the virtues of order and authority. To illustrate his argument Boyle (2009) turns to the recent past and contrasts the control offered by Ceefax or Minitel with the openness of the

Internet. By comparison with Ceefax, the Internet is a ‘free-for-all’ network upon which incorrect and offensive information can be published, and yet it has revolutionised the way we live and work offering many benefits. Similarly, he contrasts the control available to an editor tasked with publishing a comprehensive encyclopaedia written by respected experts with the openness of Wikipedia. The success of Wikipedia is, to a large extent, built upon the efforts of a trusting community who willingly share knowledge.

Boyle’s illustrations illuminate the debate about the effectiveness and efficiency of Knowledge Management techniques employed within teams tasked with resolving IT service failure incidents. On the one hand there is a suggestion that management can gain control by insisting that the workers use and rely upon a KMDB (an insistence that we have already noted is likely to meet with resistance). On the other hand, the alternative paradigm of openness offers greater respect for the worker in its sensitivity to their humanity. Humans are social beings who, through socialization, become ‘self-aware [and] knowledgeable... skilled in the ways of [their] culture’ (Giddens, 1989, p. 60) and naturally engage in informal knowledge exchange to meet their needs or the needs of others. Depending on their autonomy, workers choose different communication mechanisms (e.g. face to face discussion, telephone dialogue, e-mail, instant messaging, wiki question and answer, telling others about an experience etc.) for different knowledge exchanges, based on various factors (e.g. appropriateness of mechanism for the task, availability of mechanism, personality type, knowledge of others’ preferences etc.). As well as being social beings, humans operate as individuals, thinking both logically and creatively. Whereas a computer might offer logical processing performance it cannot offer human creativity or the ability to create and refine knowledge through practice.

The sociologist Richard Sennett (2008, p. 113), contemplated the work of IT technicians before suggesting that ‘the surrender of control [is] a recipe for good craftsmanship’. He observes that workers such as IT technicians, who are grappling with problems, become experimental and excited and are willing to risk losing control of their work. The difference between technology and the human worker faced with the circumstance in which control is relaxed is clear to him: ‘machines break down when they lose control, whereas people make discoveries, stumble on happy accidents.’ The implication is that by applying control to machines (e.g. regular maintenance as advocated by ITIL) they are less likely to break down, but by applying excessive control to human workers, and particularly to the way they create and express their knowledge, management risk hampering their ability to resolve the problems faced by the organization.

In adopting an alternative paradigm of acknowledging the benefits of relaxed control of knowledge, a new opportunity emerges for managers to gather accessible (i.e. easily comprehensible) codified data about the nature of the productive knowledge in use within work teams (as opposed to gathering representations of the productive knowledge itself in codified form).

Qualitative Approach for the Quantitative Mindset

Whilst the scientific management approach, and its espousal of the importance of measuring, can provide the IT service manager with data that might be converted into more easily discerned charts, the task of management remains, in large part, an art, requiring the human capability to qualitatively assess and interpret.

To understand the human dimension of workplace knowledge, an interpretivist perspective asserts that a different logic of collecting data is required from that associated with the natural sciences: one that reflects the distinctiveness of humans against the natural order (Bryman, 2001). Typically qualitative data tends to be concerned with words rather than numbers (Bryman, 2001) and relies on the subjective interpretation of those words.

Gaining an understanding of the ITIL-influenced IT service system (and its sub-systems and processes) tends to involve adopting a positivist epistemological position, using quantitative methods to collect numerical data for analysis. This tendency applies to analysis of knowledge, typically focusing on the effectiveness of a KMDB, even though it might be regarded as a repository of objective knowledge codified using combinations of subjectively selected words: for example, notes on how an incident was resolved. As well as wanting a KMDB to hold explicit knowledge objects for future use, an IT service manager will also look to the KMDB to sate their hunger for metrics to assist in their decision making (Taylor, Lacy and Macfarlane, 2007). The number of pieces of ‘knowledge’ added to a KMDB during a specific timeframe can be measured, with perhaps numerical grades assigned to indicate quality and utility. However, the KMDB cannot report numerical data on information shared in conversations across the desk or communicated via instant messaging tools, etc., or on what a worker learns in the course of their productive activity. Such sensory and cerebral experiences are ephemeral and resistant to management control, yet they feed and build the knowledge of the IT support worker and by extension they ensure the capability of the organization to carry out its business including fulfilling service level agreements.

The acceptance of not being in control of knowledge is anathema to the

Taylorist mindset. A strong part of its tradition is the transferral of knowledge from workers to management through management-imposed standardization of working practice (Jones, 1997) and it drives towards greater and greater work intensification. As Braverman states:

> *...if the first principle is the gathering and development of knowledge of the labour process, and the second is the concentration of this knowledge as the exclusive province of management... then the third [step] is the use of this monopoly over knowledge to control each step of the labour process and its mode of execution.*
>
> (Braverman, 1974, p. 119)

Where there is clearly a reliance, for work quality, upon workers using experientially learnt knowledge (be they brain surgeons, fighter pilots or IT support technicians), management control needs to become less that of Braverman's first principle of 'gathering knowledge of the labour process' and more of 'understanding the labour process' as a human experience so that that the fruits of that human experience might be optimised for the benefit of the organization. By taking a qualitative approach, particularly participant (i.e. worker) observation, managers might achieve a deeper understanding about the contextual and technological complexity of the knowledge being used by IT service support workers. Thus to assist IT service managers to better understand the human dimension of the knowledge being used within their teams, it is proposed that data needs to be collected from an interpretivist, hermeneutical perspective, whereby the observer of worker activity records their interpretation of that activity using words.

After analysing such qualitative data, it is important, from a pragmatic business perspective, to present the findings in a format that will appear credible and acceptable to the IT service manager community working from the Taylorist mindset that ITIL imposes. The devised method is designed to enable this by presenting the findings in an easily discernible, diagrammatic format that has a quantitative dimension and mimics the patterns of charts produced from quantitative data. These resulting diagrams are intended to minimise the interpretative effort required by the manager, and thereby the extent to which decision-making based on them risks being flawed.

It is asserted that the information produced via this method will provide ITSM 'process owners' with a deeper understanding of the nature of the knowledge used by their workers in productive activity within their process. From this they will be better placed to develop a knowledge management strategy for the process under their ownership, such that the capabilities

required by the process are protected and nurtured.

The Worker Experiential Knowledge Form Analysis Model

Inspiration for Model

In order to create useful diagrammatic patterns that reflect the nature of the knowledge forms being used by workers in productive activity, a model (the Worker Experiential Knowledge Form Analysis Model [WEKFAM]), which was inspired by Schutz's conception of knowledge, has been developed. The model focuses not so much on knowledge objects but rather on human experience. The interest becomes one of phenomenology rather than epistemology. In creating (and analysing) patterns based on this model, an attempt is made to demonstrate that the inherent 'sticky' and contextualised nature of workplace knowledge (Szulanski, 1996), and particularly embodied and embrained forms (Blacker, 1995), does not preclude management from gaining an understanding about its nature in an accessible format.

Phenomenological sociologists commonly cite the formative influence of Schutz's work that applied the phenomenological philosophy of Husserl and others to the social sciences, and particularly to Weber's concept of Verstehen (Bryman, 2001). Such sociologists place their interest in the social construction of knowledge that tends to be taken for granted (Abercrombie, 1980). In closely observing how IT support workers routinely go about their work of resolving IT incidents and fulfilling service requests, the ongoing research is interested in the experiential forms of knowledge (including those, which are 'taken for granted') that combine over a period of productive work-time into a conceptual entity of 'activity knowledge'. The worker is conceived as the entity that connects these forms through their human experience. This worker experience is partially cerebral (i.e. thinking experiences during this timeframe) and partially sensorial (i.e. experiences of listening, seeing, touching and so on).

Cerebral Experiential Knowledge Forms

In his discussion of the everyday life-world, Schutz effectively offered his own typology of knowledge which is reformulated for this research into a structural form that allows for data analysis. The epistemological stance taken reflects Schutz's argument that we each possess a stock of knowledge that serves us as we go about our everyday lives. Schutz argued that objects and events confront this stock of knowledge:

> *'Each step of my explication and understanding of the world is based at any given time on a stock of previous*

> *experience, my own immediate experiences as well as such experiences as are transmitted to me from my fellow-men... All of these communicated and immediate experiences are included in a certain unity having the form of my stock of knowledge, which serves me as the reference schema for the actual step of my explication of the world. All of my experiences in the life-world are brought into relation to this schema, so the objects and events in the life-world confront me from the outset in their typical character – in general as mountains and stones, trees and animals, more specifically as a ridge, as oak, birds, fish, and so on.'*
>
> (Schutz and Luckmann, 1974, p. 7)

From this, we are directed towards paying attention to the experience of the IT support worker as she seeks to understand and complete the task in front of her: to study and interpret the stock of knowledge she is relying upon, and the objects and events that confront her along the journey towards task completion.

The task of interpreting the worker's stock of knowledge is problematic. The observer cannot possess the same 'stock of knowledge' as the worker being observed, because clearly this resides in the thinking mind of the worker. Nonetheless, as Schutz notes:

> *'I take it for granted that other men also exist in this my world... endowed with a consciousness that is essentially the same as mine. Thus... my life-world is not my private world but, rather, is intersubjective; the fundamental structure of its reality is that it is shared by us.'*
>
> (Schutz and Luckmann, 1974, p. 4)

The schema makes the theoretical assumption that if the observer and the observed both have experience of working within the field of ITSM then to a significant extent they will share an ITSM 'life-world' perspective. This is perceived to be related to Polanyi's (1969, p. 375) concept of 'superior knowledge [that] relies blindly on a whole system of [accepted] collateral facts and values'. The assumption asserts that by observing the worker's outward behaviour the 'shared life-world' researcher might deduce the thinking of the worker's mind (Wilson, 2002) and gain knowledge of the tacit dimension of such knowledge (Polanyi, 1966; Tsoukas 2003). Thus, as the worker takes a specific action, the observer, using 'superior knowledge' from a 'shared ITSM life-world', might 'see' what the worker is 'seeing'. Similarly conversations can

be heard and listened to by the researcher as the worker has them. The researcher is assisted in the act of interpretation by his experience of working in similar work settings but nonetheless this may at times be hampered by their unfamiliarity with context-specific language and exclusion from one half of telephone conversations. Thus the terms 'shadow-spotting' and 'echo-listening' are used to indicate the interpretative nature of the data gathered: the data reflects the sense/thought processing of the researcher who is observing the worker and who through that observation is interpreting their sense/thought processing. Figure 1 shows the 'worker mental and physical activity process' by which the observer can gather data relating to the tacit dimension of an IT support worker's cerebral and sensorial knowledge experiences. Table 1 shows an illustration of this model through one iteration as the worker attempts to resolve an IT incident.

Figure 1: IT support worker mental and physical activity model

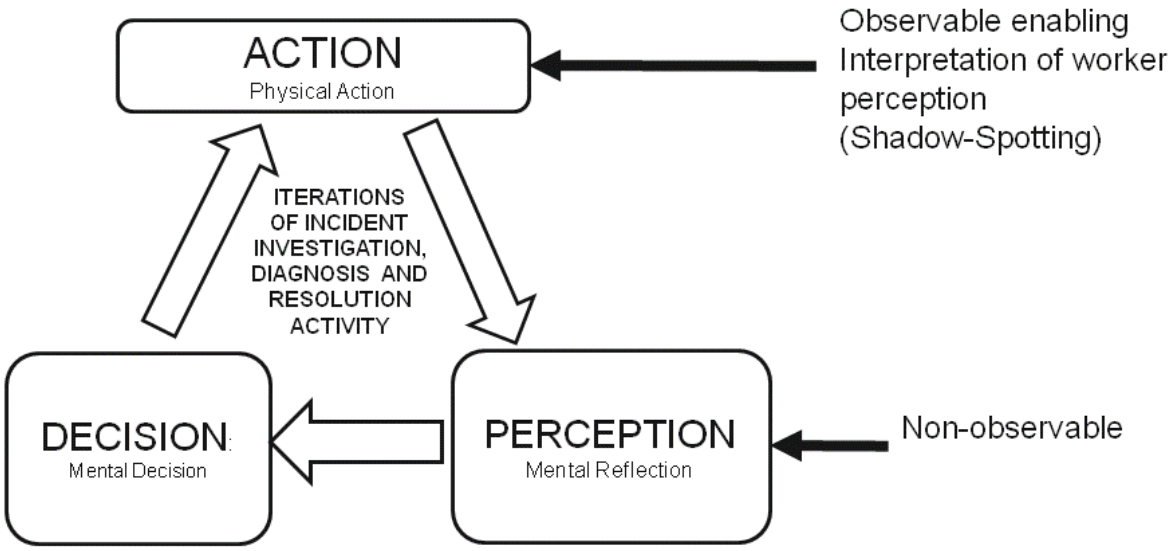
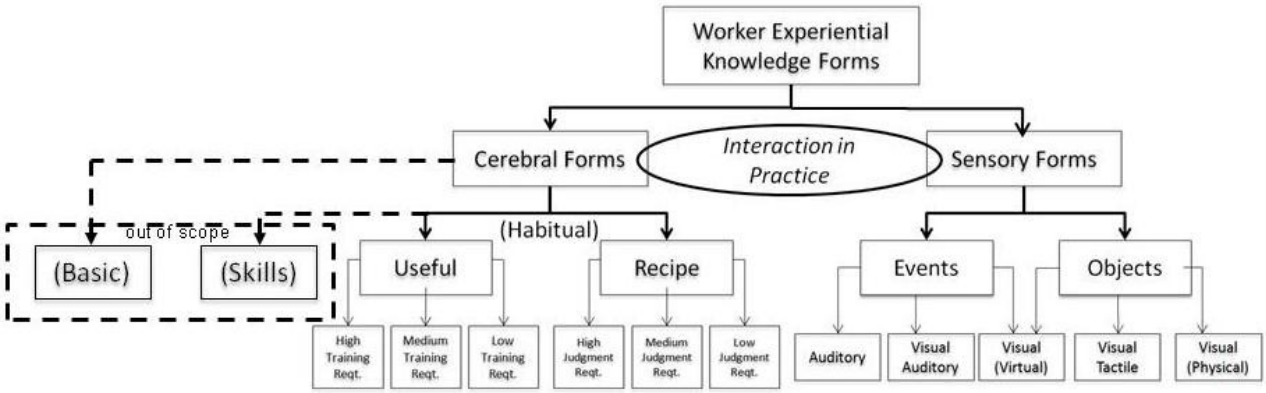


Table 1: Example iteration of IT support worker mental and physical activity model

Step	Iteration Stage	Observable to Researcher?	Worker Thought	Worker Activity
1	Perception: reflection upon service request	No: worker internal question	'How do I restore this document to an earlier version?'	-
2	Decision using 'stock of knowledge'	No: worker internal answer	'I'll use the archiving tool to search for versions of the document that have been archived'	-
3	Action	Yes: worker activity	-	Worker searches for versions of the document using the archiving tool

In attempting to interpret the cerebral experience of the worker, the observer pays close attention to the objects and events in the worker's life-world that confront her via her senses of sight, hearing and touch: physical objects such as technical manuals, cables and computers; virtual objects such as computerised incident records, web pages and e-mails, and events such as the reporting of an incident by a customer, an instruction from a manager or an error message encountered whilst attempting to resolve an incident. Thus it can be seen that at the first level, the WEKFAM model differentiates between cerebral forms of experiential knowledge and sensory forms of experiential knowledge (see Fig. 2) whilst acknowledging that these are intrinsically interwoven.

Figure 2: Hierarchical Representation of Worker Experiential Knowledge Form Analysis Model



Schutz defines two types of knowledge: 'basic' and 'habitual'. He reduces 'habitual knowledge' down to 3 forms: 'skills', 'useful knowledge' and 'knowledge of recipes'. 'Basic knowledge' is that knowledge, which is fundamental to human nature with no social variants, such as the knowledge that something is in reach (Abercrombie, 1980). 'Skills' are described by Schutz (Schutz and Luckmann, 1974, p. 107) as: 'such habitual, functional unities of bodily movement... as have built upon the fundamental elements of the usual functioning of the body... e.g. swimming'. Within the model, 'habitual skills' is extended to include skills common to all IT workers (e.g. how to use a mouse). 'Basic knowledge' and 'skills' are disregarded within the model, which assumes all IT workers possess and use these in fairly equal measure. For the sake of the model, cerebral forms are conceived as comprising those forms of habitual knowledge that most differentiate individuals in activity: 'useful knowledge' and 'knowledge of recipes'.

Schutz defines 'useful knowledge' as 'skills... in the work zone... [where] it is completely "self-evident"... to us that we "can do" this or that' (Schutz and Luckmann, 1974, p. 107). The model refines this definition such that it refers to the application of skills that have been learned and reinforced over time to the extent that the conscious mental effort (including judgment) required is

minimal. Typically, this knowledge will have been learned formally through training or through repeated use and will be used frequently in various contexts and for different purposes. The model attempts to reflect the extent to which the acquisition of identified 'useful knowledge' skills will have been challenging for the worker. It does this by assigning an attribute of 'high', 'medium' or 'low' training requirement.

Schutz writes about 'knowledge of recipes' or cookbook knowledge as having 'many areas overlapping with... useful knowledge... [T]his knowledge is... no longer associated with the basic elements of the stock of knowledge immediately concerning skills. But it can [still] be on hand as a "self-evident" implication'. Within the model, this definition has been refined to refer to the fine-grained application of 'useful knowledge' skills: the observational evidence that a worker can address specific questions posed within the task (e.g. what might cause a specific model of server to overheat?). Thus examples of 'knowledge of recipes' are interpretatively identified either by the application of intuitive expertise (i.e. 'gut feeling [as] the payback for years of learning, practice... and mistakes': Sadler-Smith, 2010, p. 24) or by significant conscious mental effort and judgment, providing incidental learning as a by-product (Marswick and Watkins, 1990). In this form, knowledge is similar to Tsoukas and Vladimirou's definition (2001, p. 973): 'the individual capability to draw distinctions, within a domain of action, based on an appreciation of context or theory'. The extent to which the worker is required to apply their professional judgment is reflected within the model by the assigning of an attribute of 'high', 'medium' or 'low' judgment requirement. Since the research takes an interest in the extent to which workers use personal knowledge of marketable value outside of the organization, the model has been designed accordingly. An additional attribute is assigned that distinguishes between vocational IT (or occupational) knowledge and institutional knowledge that has little or no value outside of the organization. This reflects the importance of the distinction between theoretical and contextual knowledge for the management of expertise (Tam, Korczynski and Frenkel, 2002).

Sensorial Experiential Knowledge Forms

Within the model, 'sensory events' are defined as being 'interruptions in the flow of experience' (Schutz and Luckmann, 1974, p. 128) that may or may not be useful for the task at hand to be completed, but cause the worker to consider the implications of the event and make a decision accordingly. Events are conceived as being ephemeral and transitory, demanding that the worker makes an immediate decision. In this respect, an event asserts control over the worker's present time, thus restricting their autonomy. Typically

events will be sensed auditorially (e.g. a phone call), visually (e.g. an error message) or by a combination of both (e.g. a colleague interrupts the worker).

By contrast, 'sensory objects' are entities encountered by the worker during the timeframe of working on a task but which exist across a variable time-frame. Objects do not demand that the worker takes action at the time of a sensory encounter and therefore do not assert control over a worker's present time in the same way as an event. Nonetheless, a worker encounters an object as a relevant entity in the pursuit of her objective to complete the task. Typically objects will be sensed visually (e.g. an email or a technical manual) or by using a combination of vision and touch (e.g. a hardware item under repair).

Data Collection Method

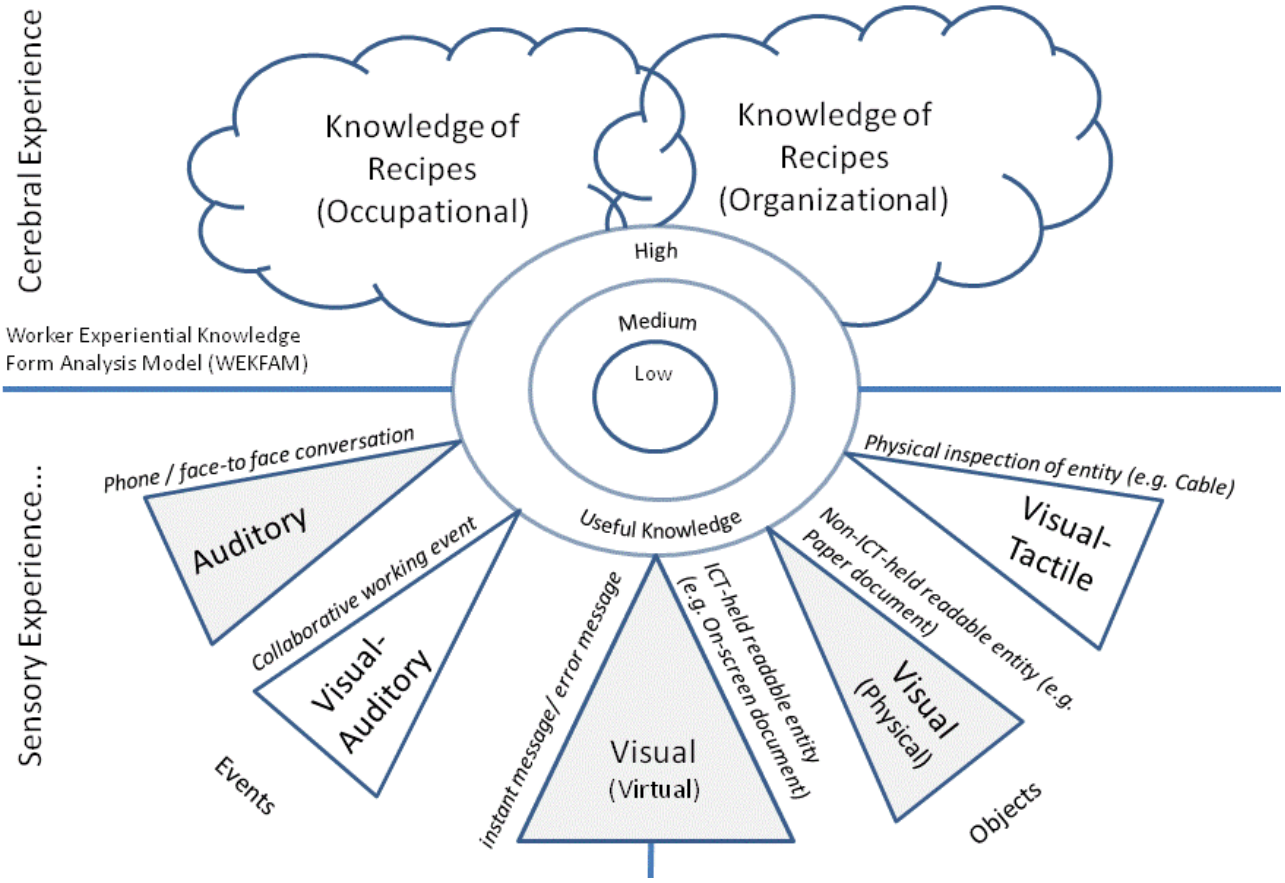
The ongoing research involves the close observation of front-line and back-office IT support workers in multiple IT service support teams, and follows a process:

1. The researcher sits alongside and observes the technician investigating, diagnosing and resolving incidents and fulfilling service requests. As the technician works, the researcher, from a shared ITSM life-world perspective, records his interpretation of the technician's experience: what she is looking at, hearing, doing etc.
2. Away from the workplace the researcher revisits his record and completes analysis sheets designed to complement the WEKFAM schema.
3. The data from these sheets is transferred to a team level sheet.
4. The data is analysed noting the different cerebral and sensory forms used. This analysis takes account of both the quantity of examples of each form recorded and also the content and attributes (i.e. level of training requirement or judgment). In this way the researcher forms an impression of the structure of the knowledge forms used by each team.
5. Shaded patterns are created within the model template (see Fig. 3) to reflect the judgment made.
6. The patterns created are compared across teams

Within the entire 'activity knowledge' entity reflected in the model, the sensorially-experienced events and objects provide the input and impetus to the learning and creative process: hence these are shown on Figure 3 as darts piercing the surface of the habitual knowledge. These sensorial

experiences guide the way in which the habitual knowledge is exercised in order to fulfil productive work tasks.

Figure 3: Worker Experiential Knowledge Form Analytical Model Template



Discussion

Key questions that constantly emerge in any research story are: 'who am I doing the research for?' and 'who am I writing for?' These questions have been particularly pertinent to this research. I have not received any corporate funding for my research and so there are no expectations of me in that regard. My academic supervisors have very different academic backgrounds and so, whilst they might be considered to share the life-world inhabited by business school academics, they imply in their guidance to me different expectations that they consider will assist me in writing for the different academic communities to which they belong. My response is to interpret their guidance and adapt, in order to make my research and my writing acceptable to them. More broadly, I make assumptions about an anonymized academic readership and its expectations regarding academic rigour and style. I might also consider different schools of thought and different academic communities within that broad anonymized academic readership, and reflect upon how my research might be considered as being compatible with, or in contrast to,

such imagined typical thinking. I similarly anonymize and typify a practitioner readership and their expectations. Specifically, in regard to this research, I have typified the ITSM community as being hungry for quantitative data and resistant to language-based qualitative interpretation. Such typification may truthfully (in a rational sense) be inaccurate, but may contain an element of 'truth' when giving consideration to the Schutzian life-world perspective. Business school academics share aspects of a secondary life-world, as do Social scientists and ITSM practitioners. Each of these life-worlds 'has a particular meaning and relevance structure' (Schutz, 1953, p.3) and to the inhabitants of these life-worlds 'the world ... is intersubjective because we live in it as men among other men, bound to them through common influence and work, understanding others and being understood by them' (Schutz, 1953, p.7). Aspects of these different life-worlds overlap (i.e. where meanings are shared). As a researcher who perceives that he is writing for participants in each of these life-worlds simultaneously, I reflect that I am writing for readers inhabiting this theoretically-conceived overlapping area. In doing so, I inevitably engage in an ongoing internal dialogue that involves negotiation and compromise, such that the product (i.e. the writing) is accessible within each of those identified life-worlds and yet also retains the integrity of my intended meaning. In this final point the answers to the two questions posed at the beginning of this discussion emerge. Ultimately, I am doing the research for myself and I am writing for myself, so as to gain understanding in the process of writing and to be understood across multiple theoretical life-worlds. If I had chosen to ignore the quantitative-biased mindset of the ITSM community simply because I identified myself as a qualitative researcher, then I can have little expectation that the ITSM community might choose to invest their time and effort in understanding me. If I want to be understood by them, then it is incumbent upon me to enter their life-world. If I want the intrinsic reward of there being meaning or purpose to my work then I must sense that I have been understood and valued by real people in the typified communities I have identified (in the process of writing) as the recipients of my work. And if I want the extrinsic rewards commensurate with a successful academic or writing career then I must convince such communities that I am worthy of publication within their community (i.e. life-world-situated) journals and thus prove that I am deserving of such rewards. In striving to achieve those rewards, it is perhaps inevitable that, for the most part, the methodological preferences of the perceived recipients will, at the very least, be considered. Where, having made such considerations, such preferences are not adhered to, then the researcher might be seen to be 'going against the grain' in making a free choice for the sake of their personal integrity and/ or sense of academic curiosity. In carrying out qualitative research in the field of ITSM it might be considered that I have made such a choice. In attempting

to present the research in a format that might be acceptable to the ITSM community I am in effect attempting to engage the community in discussion, so that the qualitative dimension might be given greater consideration.

Conclusions

This paper has discussed how the IT Service Management industrial sector has a penchant for Taylorist methods of driving efficiency through the collection of primarily quantitative data. It has further discussed a fundamental weakness in underplaying the benefits of collecting qualitative data, particularly that which relates most directly to workers: their everyday human experiences of sitting at their desks or working in the field carrying out IT support duties.

Boyle's (2008) concept of 'cultural agoraphobia' has been applied to the Taylorist practices prevalent within ITSM environments and its implications discussed. It has been suggested that ITSM managers might benefit from giving greater consideration to adopting an alternative paradigm: such that they manage capability by relaxing control in respect to the tacit dimension of worker knowledge.

The WEKFAM model, inspired by the writings of Schutz, has been suggested as a contribution to a rapprochement between scientific management practice, which emphasises the control of knowledge as explicit objects, and social scientific theory, which emphasises the tacit dimension of organizational knowledge. This model is designed to analyse data collected by the close observation of IT support workers in productive activity. The data is analysed by giving consideration to both the qualitative nature of the data (e.g. interpreting the words used by the observer to describe what the worker was doing) and the quantitative nature of the data (e.g. the frequency of types of data observed according to the classification system suggested by Schutz).

Although the model is fuelled by fundamentally qualitative data, it can nonetheless be seen to be in the tradition of Taylorism due to its adherence to the belief that work should be systematically observed at the micro level (Huczynski and Buchanan, 2001) and in its acknowledgement that the interpretation of qualitative data will often entail quantitative considerations.

The pragmatic requirement for clarity of data presentation has been discussed such that observational data can be presented in a format that is easily discernable by managers working from a Taylorist mindset. Such a mindset stems from a specific life-world perspective and it has been asserted that to be understood by a readership the researcher must 'enter' this Schutzian life-world perspective, with the researcher reflectively considering

the question of who they are researching and writing for.

Finally, it is suggested that the method offers IT service managers the opportunity to collect data from the human realm considered to be resistant to collection. Such data is important for managers wanting to make good HRM decisions, thus assisting them in driving efficiency of the system and its sub-systems and processes. Some examples might include:

1. Recruitment to a team might be enhanced by finding the best fit for a role if the nature of that role can be defined better using data collected and presented using the outlined method;
2. If making redundancy decisions, such data might ensure the retention of staff with contextual knowledge that might not be available in the jobs marketplace in a future upturn;
3. Team-level learning and development budgets might be spent to enhance the skills used most in productive activity;
4. Potentially wasteful cultures might be more clearly identified so that more productive cultures might replace them: e.g. a culture that encourages multiple workers to address a task.

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References

Abercrombie, N. (1980). Class, Structure and Knowledge: Problems in the Sociology of Knowledge. Oxford: Basil Blackwell.

Adelstein, J. (2007). Disconnecting knowledge from the knower: the knowledge worker as Icarus. Equal Opportunities International, 20(8), 853-871.

Arraj, V. (2010). ITIL®: The Basics. OGC White Paper, May 2010. Sourced by APM Group Ltd and published by TSO. Retrieved December 1, 2010, from http:// www.best-management-practice.com

Baldry, C., Bain, P., and Taylor, P. (1998). Bright satanic offices: intensification, control and team Taylorism. In Thompson, P. and Warhurst, C. (Eds.), Workplaces of the Future. Basingstoke: MacMillan Press.

Beaumont, P. B. and Hunter, L. C. (2002). Managing Knowledge Workers. London: CIPD.

Bendix, R. (1956). Work and Authority in Industry: Ideologies of Management in the Course of Industrialization. New York: John Wiley.

Bhatt, G. D. (2001). Knowledge management in organizations: examining the interaction between technologies, techniques and people. Journal of Knowledge Management, 5(1), 68-75.

Blacker, F. (1995). Knowledge, knowledge work and organizations: an overview and interpretation. Organization Studies, 16(6), 1021-1046.

Boyle, J. (2008). The Public Domain: Enclosing the Commons of the Mind. New Haven: Yale University Press.

Boyle, J. (2009). Cultural Agoraphobia and the Future of the Library. First Arcadia Lecture given at Cambridge University 12th March, 2009. Podcast retrieved August, 14, 2009 from http://arcadiaproject.lib.cam.ac.uk

Braverman, H. (1974). Labour and Monopoly Capital: The Degradation of Work in the Twentieth Century. New York: Monthly Review Press.

Bryman, A. (2001). Social Research Methods, Oxford: Oxford University Press.

Davenport, T. H. and Prusak, L. (1998). Working Knowledge: How Organizations Manage What They Know. Boston, Mass: Harvard Business Press.

Dawson, R. and Richardson, N. (2007). “What’s in it for me?” - implementing knowledge management to give value for the individual. In: ECKM07, 8th European Conference on Knowledge Management 2007, 6-7 September, 2007, Barcelona.

Drucker, P. (1974). Management: Tasks, Responsibilities, Practices. New York: Harper & Row.

Giddens, A. (1989). Sociology. Cambridge: Polity.

Hansen, M., Nohria, N., and Tierney, T. (1999). What’s your strategy for knowledge management? Harvard Business Review, 77(2), 106- 116.

Hislop, D. (2005). Knowledge Management in Organizations – A Critical Introduction. Oxford: Oxford University Press.

Hockey, J. and Allen-Collinson, J. (2009). The sensorium at work: the sensory phenomenology of the working body. The Sociological Review, 57(2), 217-239.

Huber, G. P. (2001).Transfer of knowledge in knowledge management systems: unexplored issues and suggested studies. European Journal of

Information Systems, 10(2), 72-79.

Huczynski, A. and Buchanan, D. (2001). Organizational Behaviour – An Introductory Text (4th Edition). Harlow: Prentice Hall/ Pearson Education.

Marswick, V. J. and Watkins, K. (1990). Informal and Incidental Learning in the Workplace. New York: Routledge.

McKinlay, A. (2002). The limits of knowledge management. New Technology, Work and Employment, 17(2), 76-88.

Mohamed, M., Stankovsky, M., and Murray, A. (2006). Knowledge management and information technology: can they work in perfect harmony? Journal of Knowledge Management, 10(3), 103-116.

Mohamed, M. S., Ribière, V. M., O'Sullivan, K. J., and Mohamed, M. A. (2008). The re-structuring of the information technology infrastructure library (ITIL) implementation using knowledge management framework. The Journal of Information and Knowledge Management Systems, 38(3), 315-333.

Newell, S. (1999). Ebank: a failed knowledge management initiative. In Scarbrough, H. and Swan, J. (Eds.), Case Studies in Knowledge Management. London: Institute of Personnel and Development.

Orlikowski, W. (2000). Using technology and constituting structures: a practice lens for studying technology in organizations. Organization Science, 11(4), 404-428.

Polanyi, M. (1966). The Tacit Dimension. Chicago: University of Chicago Press.

Polanyi, M. (1969). Personal Knowledge: Towards a Post-critical Philosophy. London: Routledge and Kegan Paul.

Ravishankar, M. N. (2008). Rewarding end-users for participating in organizational KM: a case study. Journal of Organizational and End User Computing, 20(1), 35-49.

Rikowski, R. (2007). Knowledge Management: Social, Cultural and Theoretical Perspectives. Oxford: Chandos Publishing

Sadler-Smith, E. (2010). Instinct messaging, People Management, 25th February, 2010

Scarbrough, H., Swan, J. and Preston, J. (1999). Knowledge Management: A Literature Review. London: Institute of Personnel and Development.

Scholtes, P. R. (1998). The Leader's Handbook: Making Things Happen, Getting Things Done. New York: McGraw-Hill.

Schutz, A. (1953). Common-sense and scientific interpretation of human action. Philosophy and Phenomenological Research, 14(1), September 1953.

Schutz, A. and Luckmann, T. (1974). The Structures of the Life-World. London: Heinemann Educational Books.

Sennett, R. (2008). The Craftsman. London: Penguin.

Stinchcombe, A. L. (1990). Information and Organizations. Berkeley: University of California Press.

Sveen, F. O., Rich, E., and Jager, M. (2007). Overcoming organizational challenges to secure knowledge management. Information Systems Frontiers, 9(9), 481-492.

Szulanski, G. (1996). Exploring internal stickiness: impediments to the transfer of best practice within the firm. Strategic Management Journal, 17 (Winter 1996, Special Issue: Knowledge and the Firm), 27-43.

Tam Yeuk-Mui, M., Korczynski, M., and Frenkel, S.J. (2002). Organizational and occupational commitment: knowledge workers in large corporations. Journal of Management Studies, 39(6), 775-801.

Taylor, S., Case, G., and Spalding, G. (2007). ITIL: Continual Service Improvement. Norwich: The Stationery Office.

Taylor, S., Iqbal, M., and Nieves, M. (2007). ITIL: Service Strategy. Norwich: The Stationery Office.

Taylor, S., Lacy, S., and Macfarlane, I. (2007). ITIL: Service Transition. Norwich: The Stationery Office.

Taylor, S., Lloyd, V., and Rudd, C. (2007). ITIL: Service Design. Norwich: The Stationery Office.

Tsoukas, H. and Vladimirou, E. (2001). What is organizational knowledge? Journal of Management Studies, 38(7), 973-993.

Tsoukas, H. (2003). Do we really understand tacit knowledge? In Easterby-Smith, M., and Lyles, M.A. (Eds.), The Blackwell Handbook of Organizational Learning and Knowledge Management, Malden MA and Oxford: Blackwell Publishing.

Van Bon, J., Polter, S., Verheijen, T., and Van Selm, L. (2008). ISO/IEC 20000 An Introduction. Norwich: Van Haren Publishing.

Wilson, T.D. (2002). Strangers to Ourselves: Discovering the Adaptive Unconscious. Cambridge, MA and London: The Belknap Press of Harvard University Press.