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# **Knowledge Management and the Contested Ground of the 'Professional' within a Professionalised Call Centre**

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## **Abstract**

*We are said to be living in a new and global 'knowledge economy' where individuals and organisations are urged to change their way of working, learning and living. Nevertheless there are limitations and contradictions when it comes to managing knowledge, let alone making sense of knowledge management in the context of organisational practice. This paper traces the development of a knowledge management project within a publicly funded UK based call centre offering health advice. Discussions of knowledge management have been dominated by prescriptive and managerialist approaches that ignore organisational politics and the impact of knowledge management on the labour process. These issues are placed at the centre of the account. In this the tensions between the need to enrol professional expertise in the workplace matched against changing managerial practices which may be argued to lead to the degradation of this expertise and consequently be severely limiting to the sustainable development of knowledge management as a durable tool of organizational development.*

Keywords: Knowledge management, professionalism, managerial control, call centres.

## **1. Introduction**

Over the last decade a pivotal theme, within management and organizational research, has been the identification and development of new industrial methodologies and technologies which allow for the creation of greater workforce commitment and flexibility. The distinctive issue confronting contemporary business we are told is not the centrality of knowledge but rather the opportunities there are to intensify its production and utilization (Castells 1996). This would be exemplified by 'empowered' semi-autonomous units of production where a highly trained and skilled workforce can exercise freedom and authority within a decentralised mode of control and coordination (Hayes 2001). To support this perspective a number of managerial techniques such as emergence of the 'learning organisation' and 'knowledge management' (KM) have arisen which claim to describe the ways in which organizations may provide this autonomy while increasing productivity. KM is often presented as a common-sense way of thinking about one's organisation, and having everyone 'pitch-in' through sharing knowledge is meant to ensure the company's commercial future. Thus developing reflexive labour processes through enhancing the ability of individuals and work-groups to routinely assess and alter work organisation has become common sense among contemporary management (Brown and Duguid 1991; Nonaka and Takeuchi 1995). However a parallel theme has been a development of

critical approaches to these events which suggest that the use of such techniques rather than providing radical alternatives to the precepts of scientific management merely reinforce it. Central to this perspective is the proposition that while increasingly powerful computer-based systems coupled with KM methodologies may, in the short term, provide enhanced control over workforce activities and provide management with improved surveillance and disciplinary mechanisms, at the same time such technologies may be extremely detrimental in terms of erosion of the real professional skills and knowledge upon which long term organisational viability so depends.

In this paper, the concept that KM is an unquestioned good is analyzed and examined. More specifically, concern is shown with the highly instrumental ways in which knowledge is being constructed and how this influences workplace subjectivities. Using the example of a recent development in call centre technology this paper contends that many of the new flexible forms of both production and organizational structure, which are exemplified by the concept of the KM, may be shown to be dependent upon increasingly centralized systems and disciplinary mechanisms for their essential integrated command, control and communications operations which in turn creates a fundamental contradiction in the KM project. At issue is the contested terrain between managerial desires for authority and the professional interests of a highly skilled workforce where long-term organisational success must rely on the use of these skills and where excessive control of a working environment may be leading to the degradation of these skills and result in organizational errors of considerable consequence.

## **2. The Rise of Knowledge Management in the Work Place**

The promotion of the concept of a 'post-industrial' or 'information society' has resulted in many authors providing evidence of increases in the service sector of the economy and concomitant reductions in primary and secondary sectors, changes in the occupational structure and work skills, and the growing significance of information technology (Simpson 1999). In recent years the emergence of knowledge management has commanded relatively broad interest amongst corporate managers and academics as an important issue with regard to the need to diffuse innovations across much wider constituencies than individual work-groups. Advocates of KM propose the necessity of developing cross-functional approaches to the design and delivery of goods and services. The argument of KM proponents is that Tayloristic and bureaucratic control activities distort and displace workplace reflexivity and tends ignore its presence, while team working limits the scope of innovations in the working practices to specific contexts. KM accepts the inevitability of existence of a dimension of tiny innovations in extensions of the formal and appreciates that far from being damaging, they made Taylorised working practices viable. Thus, the aim of KM is to diffuse small scale, incremental innovation across the organisation as swiftly as possible. In this sense, KM raises important issues of managerial control namely how to legitimise organisation-wide applications of essentially local innovations. A polarisation in the debate of how KM may achieve this has led to a strong divide between the 'technology' and 'people' sides of KM. McAdam and McCreedy (2000) point out that the great trap in KM is in using information management tools and concepts to design KM systems without adequate attention to the needs of people. In this it aims to appropriate and codify not only the specificities of individual experience but also the reflexive self-understanding of work-groups and their collective activities and perceptions. KM accepts that this reflexivity is inevitable and cannot be fully appropriated by Tayloristic practice or utilised by team-working. In achieving this the concept of involvement and 'empowerment' of the

individual worker together with the removal of layers of bureaucratic control become important themes of KM development.

Coupled with the development of KM concepts has been the increasing use of network linked computers to allow organizations to decentralize information provision and improve technical communication links between the organizational membership. This functional emphasis is traceable in its lineage to the popular belief, characterized by Nonaka and Takeuchi (1995), that tacit knowledge can be converted into explicit knowledge *through* IT systems. By capturing knowledge, it can be more widely replicated and shared. By inserting human agency into the equation, these authors see possibilities to sort, convert, retrieve, and share knowledge actively. Henceforth, knowledge is transformed into a more tangible commodity. The interest in the information and communication technology/KM linkage has promoted the concept of a 'virtual' organization in which employees may engage with each other and share information over networked-supported information technology and thus obviate the need for traditional location (Wilson 1999). The result of the combination of these developments has opened up the perceived possibility to convert the tacit or covert knowledge of individuals and work-groups into managerially defined knowledge deployable for further iterations of organisational practice. The tacit 'hidden' knowledge of the workforce is no longer understood as inaccessible and oppositional but as a resource to be willingly shared by all, not to be prised from reluctant employees but treated as a common resource. In this way, personal knowledge, which includes propositional knowledge along with procedural and process knowledges, is assumed to add value to the organization. One can turn oneself (and be turned) into a 'knowledge worker'. Indeed, organizational structures and processes, as well as institutional norms, beliefs and values, exert a strong influence on information technology 'by shaping the perceptions of individuals, their understanding of an information system and its potential, and the ways in which they would try to implement and use new information technologies and applications' (Fountain 2001: p.ix). However as Fountain notes the proliferation and complexity of these types of systems has unexpectedly led to new problems of information overload and of accessibility. A significant challenge for KM (and its accompanying systems) is therefore: how to get personal knowledge into systems (and products) that organizations (re)create and use without further overloading end users. At the same time there are legitimate concerns over any exploitation of an individual's tacit knowledge.

In the following case example professional knowledge is identified to be constructed from a combination of training, personal experience and reflection. However under the desire to excel in the workplace professional staff can be perceived to have 'reinvented' themselves by effecting transformations from being part of a professional grouping to becoming organizational 'knowledge workers'. The new offerings of KM systems are, in part, intended to help manage such intellectual assets. The transformation may well be desirable for many organizations and occurs through the appropriation of tacit knowledge (von Krogh et al. 2000). But it is not innocent, and discourses and technologies of KM result in contention with regard to the possible erosion of professional expertise and action where the individual is subject to new managerial and systems definitions of both the meaning of work and who one is within that context.

### **3. The Case-Study Organisation**

The article is based on a still continuing longitudinal study of a public funded call centre here

referred to as Wellbeing Direct. Wellbeing Direct operates a 24-hour nurse advice and health information service, providing confidential information on various health matters. Twenty-five semi-structured interviews with managers and their call-centre operatives and IT systems designers have been completed. The key themes investigated were the rationales of the designers of KM systems, and the challenge pose for established professional work-groups from the health care sector and organisational identities. In support of this was a series a non-participant observations in different types of team meetings and project review sessions. Third, a survey of the impact of organisational and technological change on technical and managerial staff. The survey of the clinical areas covered a range of professional nursing skills and used closed questions to analyse how these are deployed in the call-centre environment. Here aspects of the respondents' perceptions of the relative importance of tacit and codified knowledge in determining individual and group effectiveness are presented.

Wellbeing Direct consists of a system of information dissemination upon health issues through the call-centre and internet based resources. A central function is to allow health professionals to be accessed by the general public to enable initial contact between the patient and the health service. Based on the medical diagnostic principle of triage, conversations between health professionals, usually a nurse operative, and the caller are structured to determine the level of caller needs before referring them onto further actions, these may for example be encouraging the callers to see their own doctor or reassurance that their ailments are not serious enough to warrant further attention.

The call-centre staff consisted of teams of both medically skilled nursing staff and operators trained to a basic level of handling initial enquiries routing callers to appropriately skilled staff. Call centre teams were based in three different national locations in the UK. Central to the technology of the call centre was the use of a computer-based support system which consisted of a series of screen based prompts and scripted conversation that were to take place between callers and staff. A typical operational exchange between a caller and the centre would consist of a caller being transferred to a nurse operative by non-medically trained operatives. The nurse operative would then conduct an interview using the automated support system together with his/her professional expertise. In terms of reliance upon the automated support system a divide between the nursing professionals and non-medically trained staff was immediately apparent in terms of usage and trust of the system. The contrasting assessments of the relative importance of formalised screen-based information and professional knowledge in terms of effectiveness of communication with callers to the centre was also related to length of service of the nursing staff. Those with lesser periods of job tenure equated competence with mastery of the codified information and procedures of the screen-based more experienced staff discounted explicit knowledge in favour of tacit knowledge derived from professional experience. It was commented on that in times of stress 'Knowing what not to do is even more important than following the book, with my experience you don't have to work through all the sensible solutions to find the best one. I spent many years working on (hospital) wards which is where my excellence comes from.' (Interview, Nursing Team Leader).

Survey results revealed that professional expertise and knowledge was perceived as twice as relevant 'to your current role as a call centre operative' as explicit information generated by the computer system. This reflected the use of knowledge by the nurse operatives that, in principle, could be codified but remained tacit in practice because of professional resistance and, more importantly, its transient, contextual nature in relation to the nature of the caller requirements

and their perceived needs. Two distinct types of knowledge could be identified as of key importance in the call centre. Those of programmable clinical actions as reflected in the structured scripts available through the call centre computers and professional practice of relating to callers needs as individuals and definable as the professional expertise of the nurse operatives. Clinical knowledge, the protocols associated with medical diagnosis, was highly formalised through the CBS. Professional nursing practice knowledge and was of much greater value, particularly during the high-stress periods. For the majority of the nurse operatives, the prime source of professional practice knowledge was their immediate team (nurses) and the key dissemination mechanism was face-to-face exchange. In this sense, professional practice knowledge was context-specific, generated and bounded by interpersonal professionally based relationships (Hedlund 1994). System development through the technologies of codification would compromise the tacit nature of the form of knowledge it was designed to capture (Preston, 1991). This form of knowledge was considered by the nurse operatives to be a primarily a professionally based resource with no effective means of diffusion between the different team and national locations.

Within Wellbeing Direct the system development of KM took two main forms. The first form of KM was a highly orchestrated debriefing process for each work-group at the end of each major phase of the project development process identified as 'Best Practice'. Under this routine nurse operatives were encouraged to discuss their handling of callers and the amount and levels of interaction they had in using the scripts and screens of the call centre system. Compiling Best Practice documentation and reports was major part of the system development process for project managers of the call centre as it was hoped that improvements could be made to the active system through making operational comparisons between nurse operative teams. Initially there was no method for organisational archiving or rendering Best Practice in real-time, and as a consequence, there was a widespread acknowledgement amongst the project managers that there was a considerable loss of operational knowledge. Best Practice had become a highly routinised process with extremely uneven results. Although some nursing teams rigorously deployed the Best Practice process, for most it was a secondary activity compared to completion of their call centre tasks. Similarly, internal surveys revealed that for most staff Best Practice simply highlighted gaps in scripts and operating procedures rather than critical reflections on the procedures themselves. Inevitably, this process was geared to generating, at most, incremental innovations from the current practice of handling callers. The Best Practice process became a ritualised affirmation of routine rather than a profound rethinking of procedures. One interviewee, a nurse operative, felt there was no point in making any serious contribution to the process as: 'All that emerges from it [Best Practice] is what I know are the faults in the formal system which I skip over anyway. When the (systems developer) guy comes round we tell him what he wants to hear and goes away happy.'

As a consequence of these perceived inadequacies system developers devised a second KM methodology through the development of a computerised database which was designed to consist of the Best Practice team debriefings within Wellbeing Direct. This database known as the 'Best Practice Repository' was an attempt to integrate the social and technical dimensions of KM. Based on the 'Best Practice' debriefings, the Repository was developed as an organisation-wide group-ware package and as such to facilitate coordination and collaboration across nursing call centre team through shared access to common repositories, discussion forums, and communications facilities. Such network and communication tools unlike more traditional management information systems that automated formal, hierarchical data flows,

network technologies allow for the possibility of horizontal communication between much broader organisational constituencies (Hayes 2001). Repository, was designed to capture not just the initial caller problem and eventual clinical solution. but, importantly, the details of the consultation and decision-making processes (Ciborra 2000). By developing an on-line archive of process knowledge, Wellbeing Direct project managers sought to codify and diffuse tacit knowledge beyond the individual nursing team. The data in this electronic warehouse was hyper-text linked to enable individuals to search for specific themes or events across the call centre development programme. For Wellbeing Direct management, Repository's legitimacy derived from its utility, immediacy, and impact on call centre routines. The system designers envisaged cumulative managerial gains in terms of learning and control. The instrumental rationality of Repository formed the common ground of system designers and senior health consultants, and corporate executives. Repository offered the possibility to transform the heterogeneity of professional clinical practices and tacit knowledge into a single system. However in its attempt to capture the professional consultation capabilities of the call centre nurse operatives through the construction of norms and standards many interviewees (nurse operatives) considered that Repository data presented a misleading presentation of the professional skills they considered as necessary for effective nurse operative / patient consultation. Perceived pressure from developer led attempts to encourage nurse operatives to incorporate such data into patient communication resulted in a nurse operative commenting: 'If I have to spend the call hunting through loads of screens of information the patient could be dead by the time the system has told me what I know is probably wrong [with the patient] already. I think the information may be of use to none nursing staff but for me it is too cumbersome.'

Thus while formalisation of detached knowledge from the social context of the traditional form of health care practice opens up the inviting managerial possibility of enhanced organisational learning and centralised monitoring of previously hidden professional nursing practices at the operational level it was considered to be too wieldy for use in day-to-day patient interactions by the nursing staff. While Repository was conceived of by the system developers as an archive of collective memory rather than as a method of reshaping work organisation it was hoped that information derived could not only lead to 'best practice' among nursing staff but also act as a training aid for none medically qualified staff. The collection and use of this information offered the possibility for none nursing staff in some situations to take a role in diagnosing the clinical needs of the patient caller without reference to the personal professional expertise of the nurse operatives. Central to this activity was the ability to capture and manipulate information effectively. Thus it becomes possible to identify the importance of (computer-based) systems which could further increase the efficiency and effectiveness of this activity. As a nurse operative commented: 'most of the information (on the system) I know as a trained nurse already and I think the danger lies in allowing non-professional staff access to it which might adversely lead to incorrect decisions being made by them. A little knowledge can be a dangerous thing.'

#### **4 . Discussion**

In tracing the cultural and political contexts in which the use of data sharing and automated systems within call centres a central observations is that the codification of clinical knowledge which has become a central feature in the development of 'managing knowledge' within Wellbeing Direct was perceived by many of the nurse operatives to incur upon fields of

expertise which they considered to within their professional prerogative. The importance of KM within the computer-mediated communication environment of the call centre may be observed in the managerial hope that such a set of techniques may assist them in the 'management of meaning' (Smircich and Morgan 1982) within such environments. The agenda of the KM developers now seems to be to draw personal knowledge from professional employees and to incorporate it in the explicit, systematized knowledge of the organization. The concept of KM organization reinforces the need to commodify the complexities of social situations to allow for the exchange of 'socially engineered' meaning across space and time. Thus through the use of Best Practice reports combined with a shared data repository the former tacit elements of the nurse-operative's professional expertise become exposed to the scrutiny and analysis of the call centre designers. The aim being the use of this information to align the lesser skilled and unskilled (nursing) operatives with the professional capabilities of the nursing staff. The KM philosophy supports this need with the belief that the individual's and the group's interests are finally one. Under the KM ideal the nursing professional can, in this way, have his/her work-based learning and professional knowledge almost entirely integrated into all aspects of organizational activities. Conceptually this can happen through the reductionist approach of treating discrete skills as *part* of knowledge rather than as separate from it. Coupled with the use of data models to depict the formal 'reality' of an organization KM within the call centre become regarded by its implementers as a suitable technical strategy for uniting individual views of Wellbeing Direct. At the same time, new managerial discourses that spoke of 'KM', 'culture', 'excellence' and 'enterprise', etc. were presented in the anticipation of permeating nurse operative ways of thinking about and conducting their work. Management and organization techniques broadly construed are, in this way, constitutive of the 'moral technologies' (Foucault 1991) that govern psychic dispositions and structures of recognition constitutive of subjectivity. How aspects of corporate culture are designed and personnel respond will often be a result (at least in part) of specific strategies of discursive formations. As an example of Foucault's (1979) notion of governmentality at work the concept of self-management, the combined presence of CBS and KM methodologies provides key features of contemporary 'regimes of detail' (Foucault 1979). For Foucault, regimes of detail, or the political anatomy of detail, are those disciplinary standards and values that produce and closely attend to the production of normative 'useful individuals.' Individuals are controlled through the power of the norm and this power is effective because it is relatively invisible. In the case-study example attempts to isolate professional working practices as part of the KM development process have eroded and distorted the concept of what it formerly meant to be a nursing professional. The structured systems of Wellbeing Direct may be perceived of as tending to distort the traditional practices of nursing based upon the external norms of professional methods for controlling what nurses do and how they do it coupled with the nurses' own culture and values towards an internally generated norm of the organization based upon standardised conversations between nurse and patient ('client'?). Through an analysis of actual contacts between caller and nurse operative through the support of computer based communication new standards of what is termed 'Best Practice' become established as the behavioural norms of the call-centre to which all staff, both nursing professionals and unskilled operative must subscribe.

In the call-centre, the behaviour of personnel is regulated not through overt repression but through a set of standards and values associated with normality which are deployed by a network of ostensibly beneficial and scientific forms of knowledge. Thus when people perceive, and act in, the world only through habitual KM inspired regulative logics and categories, the result may be a situation of 'transforming compliance into cooperation, consent into



commitment, discipline into self-discipline, the goals of the organization into the goals of the employee' (Hollway 1991: p.94). Employees within the call-centre may come to discipline themselves as KM induced norms predominate and as the digitalization of work activities creates a qualitative change in the scope, speed, deployment and depth of what were professional practices. It provides employees within the call centre with a homogenized 'recipe book' of cultural values that enables them to relate to both the technology and their 'networked colleagues'. Through it 'individuals can be made to train themselves, maintain themselves and "produce" themselves to fit a social norm which is pre-programmed by the auto-production technology that they use.' (Gorz 1990: p.27). Thus KM may be regarded as being predominantly an effort to rationalize the network of personal interactions that constitutes the supposedly informal relationships and tacit skill elements of formerly professional. However the case study revealed that the problem of distortion of meaning and ultimately action remained within the call centre in which the nursing teams continuing professional practices and mores may not confirm and reinforce the authority of systems based technology. That nurse operatives were prepared to 'short-circuit' the system and deviate from script-based responses in pursuing what they believe to be the patients best interest is, perhaps, an example of how the system has become a site of a struggle for interpretative supremacy about what nursing is and how it should be done. The dangers inherent in over-reliance upon computer-based systems by both medically qualified staff or the incorrect use of it by unqualified staff is currently overridden by the continuing deployment of professional skills by nurse operatives. The difficulty is that there remains a dichotomy between the system designers and its users with regard to the degree with which this form of autonomy should be continued to be allowed to override the essential structures of the system design. Professional nursing autonomy, in this perspective, may be realized though the 'contestation of thought and the social practices in which it is embedded' (Owen, 1994: 210). Such contestation has significant implications for both professional self-representation and resistance to erosion of this through systemic reductionism.

## 5. Conclusions

The UK Health Service (in similarity with many other modern organisations) would like to be able to control and bureaucratise professionalised working practices (at least, more than they have been able to historically.) Nursing is trying at the same time to contest this action through the defence (or enhancement) of its professional status and autonomy. While this struggle over what the nature of nursing professionalism is and what it will become takes place in a variety of different settings, one of these sites is the example of Wellbeing Direct. Thus scripts and automated systems endorse the concept that managing organisational information and its accessibility may 'shepherd' the lesser trained nurse operators or even unskilled staff into making the 'correct' decisions. The perceived difficulty for the proponents of KM system use in call centres in their aim to formalise, standardise and rationalise responses with the use of scripts is that there remains a resistance from non-compliant users actively or otherwise failing to act out the 'script'. From the perspective of this research this perceived difficulty is considered to be one the systems advantages. Thus from a theoretical perspective recognising potential contradictions 'enables understanding of points of conflict and instability in organisations and how these may interact to change and transform organisations' (Orlikowski 1992). One of the themes that emerges from this study is not that nurses are resistant to the described call centre technology or even that they are particularly resistant to computers, but that

they are resistant to some of the concepts and notions that the systems embody (conformity to scripted conversations, contributing to the shared database), and that they resist the managerialist project of the systems designers in attempting to control and bureaucratise what they do and in doing so erode their professional status and skill. From the perspective short-term managerial of the organisation the designer led attempt to impose order on the pattern of information usage in the organisation may provide advantages to managers in terms of being able to control of clinical and diagnostic activity more effectively than had ever been possible before the development of the system. In terms of the long-term sustained viability of the operations this control strategy needs to continually be tempered with the allowance for professional staff to make skill based decisions possibly at odds with the systemic information structures. The danger may come when those who consider themselves managers of this knowledge prevent this professional 'over-ride' from occurring and in doing so force the abdication of responsibility for medical care to a formalised set of database supported, automated diagnostic screens and 'conversations' which is at odds with the true needs of someone who may possibly be in a life-threatening situation.

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