

Enactments of 'Knowledge' and 'Community' in Computer Mediated Organization

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Introduction

It is a truth universally acknowledged that we now live in a 'knowledge economy' where value is increasingly the product of 'knowledge workers'. Against this backdrop, 'communities of practice' (Lave and Wenger, 1991; Wenger, 1998) have since the early 1990s, been identified as key loci where the labour of knowledge creation, sharing and utilization should be studied. It is not our intention here to either recapitulate or critique the various claims and counter-claims made in this by now voluminous literature (e.g. Davenport and Prusak, 1998; Lesser and Prusak, 1999; Brown and Duguid, 2000; Lesser et al, 2000; Hildreth and Kimble, 2004). Let's just note in passing that definitions of communities of practice, -whether descriptive, prescriptive or critical - typically involve extended exegeses on the similarities and differences between such 'communities' and various other types of groupings such as formal work groups, project teams, task forces or informal networks (e.g. Forestell, 2003). Indeed, the very identification of 'community' as a key agent of organizational knowing has provided a new site for the re-articulation of many of the well-worn problematics of social theory: questions of part versus whole; individual versus collective; inside(r) versus outside(r); all issues which empirical research on communities of practice (CoP for short) is now gradually taking on¹. Here we argue for an analytical focus on the performances of various notions of 'community' as ways of understanding the enactment of 'business knowledge' in contemporary organizational settings. Our focus is on 'members' own narrations of their experiences as participants in the production and circulation of knowledge and expertise and the ways in which these affirm, negotiate and dispute the nature and boundaries of their 'community'.

The material presented this paper is drawn from an ongoing ethnographic investigation of the ways in which standardised software packages mediate knowledge and knowing in business organizations. The organization discussed in this paper is a UK based multinational manufacturing firm (pseudonymously) called Alchemica Plc. More specifically we focus on the members of a particular group working in a department of Alchemica called the 'Competency Centre'. The organizational 'mission' of the Competency Centre is to ensure the successful functioning and management of the company's Enterprise Resource Planning (ERP)

system. As is well known, standardised software packages such as ERP have, over the last decade or so, been widely deployed across a wide range of organizational and national contexts. Before the age of ERP, so conventional wisdom would have it, each division and department in the organization operated its own stand-alone (legacy) system(s). ERP attempts to replace this discordant bricolage with a single integrated software platform. An ERP system is divided into different modules that mirror the functional departments of a company. Thus a full ERP suite is used by those working in areas such as finance, sales and distribution, production planning, managing human resources, warehouse management, etc. to perform tasks like processing invoices, recording goods as they are produced and moved around between factories, warehouses and distribution centres and so on. ERP systems are thus proposed as *the* means of integrating the operations of disparate divisions of an organization by instituting a unified regime of co-ordination, visibility and inspection – the answer as Davenport (2000: 6) puts it, ‘to the Information Age’s wildest dreams’.

In this context, competency centre staff are employed in the first instance to respond to calls which came through either by telephone or by email from users of the technology. Requests took three different forms – requests for assistance when the user either didn’t know how to use the technology or when the technology wasn’t functioning properly, requests for improvements to the IT system to be made, and requests for changes to access authorisation. The legitimacy of the competency centre staff’s knowledge was dependent on the extent to which they were able to effectively respond to requests for help. These relationships of assistance were articulated to us in the first instance as cases of knowledge transfer or translation. The first kind of requests (questions about how to use the technology) would usually result in the member of the competency centre simply providing an answer to the question based on their own experience or consulting another member of the competency centre team for an answer. When users had a problem where the system was not functioning properly the competency centre staff had to decide whether the technical problem lay in the ERP system itself or in some other technology such as the network or the hardware before they could attempt to resolve it. In terms of the second kind of assistance required, changes to the system, people in the competency centre often found themselves having to translate requests from the language of the business, into terminology which would make sense in terms of the ERP system. As we spoke to

people in the competency centre about their work and their responsibilities in their jobs, the accounts of their work that they gave were articulated in terms of categorical distinctions which were set up between IT and the Business (cf. Williams, 2000; Bloomfield et al, 2000). At first these distinctions seemed to be simply descriptive categories through which people could talk about the knowledge that they had. These categories enabled employees to describe what areas of knowledge were necessary for doing their jobs. Why knowledge of both the areas of 'IT' and the 'Business' was important was explained through descriptions of the purpose of the technology itself and its strategic role within the organization.

Narrating the relationship between the system and organization

ERP systems are supposed to be abstractions of organizing principles. That is to say, ERP technologies are commonly described as encoding 'best practice' in terms of the functions that an organization needs to perform. ERP systems are only successful to the degree that an organization is willing to ensure a correspondence between its activities and the design of the technology. In theory, in those circumstances where the processes dictated by the ERP system are unsuitable for a particular organizational process for one reason or another then the system will be changed to fit the organization. More often than not, it is the implementing organization that is expected to re-engineer its activities and structure in order to fit in with the "best practice" design of the system (e.g. Gardiner, 2002; Gattiker and Goodhue, 2002; 2004; Kallinikos, 2004). Either way, whether it is the system or the organization which undergoes change, the technology has a role as a gatekeeper, limiting members' ability to develop their own ways of doing things (Kallinikos, *ibid.*). In Alchemica this was talked about in terms of the institution 'global processes'. ERP systems are thus seen to enable the creation of a global organization with standard procedures based on a notion of 'best practice' which can help the gathering of information about the organization.

This view of ERP meant that people who were working in the competency centre did not just see themselves as providers of technical support, but simultaneously considered themselves to be advisors of ideal forms of business organization, and custodians of the universality of practices (global processes) within the organization. Competency centre staff were intimately engaged in debates about the effects of

putting in the system (and its various upgrades) as a way of turning the company into a global organization, and how this could best be achieved. Their workplace experiences were informed by a notion of what one might call shifting global contexts, which inhered in the design of the technology itself, the changing nature of manufacturing in a globalising world, and the transformation of the company into a global organization.

Competency centre staff glossed their contribution as not merely the provision of technical support to the users of the technology through their knowledge of the 'domain' of IT, but also –crucially - as drawing upon and contributing to knowledge about the functioning of 'the business'. At times the perspective of competency centre staff and their understanding of the business meant that they were not only able to assist them but were also able to make suggestions as to how ideas that the business had might be improved upon. We were told by Joanne:

“a number of reports we have questioned their logic and that has prompted them to go away and think oh yeah, you're right. Or I think you've got that wrong.”

Being wrong was not a negative feature of this relationship but was part of a learning process whereby through the interaction they could claim to be gaining a better understanding of the business and enhancing their credentials as having the best interests of the business at heart.

Strategic justifications for the introduction of an ERP system were thus experienced through people's workplace activities in ways which replayed and even reinforced the categorisation of IT and 'the business' into separate areas of knowledge. As already noted these categorisations were in turn used by people to describe their work to us. However the more that people described to us issues they faced in the course of their work, it became clear that these categories were not just descriptive of knowledge but were in fact constitutive of politicised claims to expertise. By looking at organizational structure and the form of relationships it produces, we can see how these categories of IT and the Business were contested and relationally defined (through disputes over expertise), rather than convenient agreed upon labels for different kinds of knowledge.

In Alchemica, staff who were responsible for developing and looking after the ERP systems, were situated in a separate department, outside any one of the ‘businesses’ (defined as the money making units of the organization) and in part of a large 1960s headquarters. In a recent spate of cost cutting, accommodation at HQ was rationalised, and people moved into the tall tower at the centre of the site; all except IT. To their chagrin, they had to stay put as the complex of equipment made it too expensive to move. This symbolic isolation was a major worry and another issue to be overcome in demonstrating their involvement with the ‘business’. The people in the competency centre, who supported the ongoing use of the ERP system were a supplier of services, briefly in their recent history they had been called a shared service centre, which the different businesses of the organization would buy in. Being both a separate department, and being seen to sell their services to the businesses, the competency centre might potentially have been seen as an outsourceable resource – both in terms of the work they did for Alchemica being outsourced to other companies to produce a revenue stream and in terms of their function in Alchemica being outsourced to other dedicated support companies which would potentially be cheaper than the full time running of a dedicated support team and full time employment of 30 members of staff. The head of the Competency centre told us;

“My challenge at the moment is that I don’t want to become an outsourceable technical ERP team. I want to be a team that is valued as part of the business”.

In 2001, early in its history, this manager had already successfully fought off a plan to move the incipient centre offshore to Prague. The knowledge of the competency centre staff and their ability to resolve issues facing the businesses needed to be objectified as ‘expertise of the ERP system’ in order that it could be ‘sold’, but it then ran the risk of appearing as a commodity which could be equally bought in from elsewhere. In order to differentiate the service which they could provide from that of an outside provider, the competency centre staff had to do more than simply support the ERP system, in doing so they had to also demonstrate their inalienability from the business. This functional separation of the IT and the business was therefore more than just a question for people, of having knowledge of one or other domain (Bloomfield and Danieli, 1995: Bloomfield et al, 2000).

Alienable possessions

Under capitalism labour power is a commodity which workers are able to exchange in the market for a price. In volume 1 of *Capital*, the status of labour power as an alienable commodity, is described by Marx as the product of a socially and historically instituted process:

Labour-power can appear upon the market as a commodity only if, and in so far as, its possessor, the individual whose labour-power it is, offers it for sale, or sells it as a commodity. In order that its possessor may sell it as a commodity, he must have it at his disposal, he must be the free proprietor of his own labour-capacity, hence of his person. (Marx 1976: 271)

In this proposition the act of alienation that takes place in the process of exchange lies at the level of the person, whose labour power is able to be alienated from their persons and thus enter the enormous/monstrous (ungeheurer)ⁱⁱ world of commodities (Marx, 1976: 125). Anthropological studies of commodities remind us that the processes of ‘alienation’ *qua* rupture (Miller, 1987) describe culturally specific labours of division (Cooper, 1997; see also Hetherington and Munro, 1997). Alienation depends on people’s capacity to sever commodified objects from the relationships through which they are produced (Weiner, 1992). However, as Adkins (2005) argues, labour power cannot be fully detached from the person *in the same way* as other property “Labour power therefore always requires the presence of its owner and hence cannot be disentangled like other forms of property”. In the case of the competency centre staff then who see themselves as a potentially outsource-able resource, what was it that was in danger of being alienated and by what means were such processes of alienation called into question and resisted?

The risks and possibilities associated with these categories were experienced through negotiations over the question of knowledge-ability and expertise which were enacted in and through the work that members performed in the competency centre and the relationships that they produced. Clearly, we might expect resistance to take the form of the production and entanglement of ties. The very notion of ‘expertise’ ties the value of labour to an inalienable quality of the person and the invocation of an expertise specific to that business ties it to the organization. But neither can the person simply sell their labour elsewhere for the same amount of money as they sold it in this organization, for their expertise about the organization itself cannot be easily

detached and sold. The interest in transferable skills is precisely about this problematic of how to make alienable localised experiences so that they can be abstracted in order to be sold in the market.

In the case of the competency centre, ensuring the inalienability of their knowledge from the business was a matter of negotiating the relationships so that their knowledge of the business might be recognised as effective and entangled. One of the most obvious ways in which such entanglements were explicated to us, was through the importance attributed to the occupational backgrounds of staff working there. Despite the competency centre's organizational separation into a discrete department and its spatial separation into a distinct site, most of the staff who worked there in a support role had previously worked on the development of the technology, in the role of representative of "the business", and prior to that in a non-IT related position in "the business".

In order to make this business knowledge active rather than latent, that is, in order that they might be recognised externally to have knowledge-ability about the business, they needed to more than simply have past experience, but needed to demonstrate the effects of this experience in a way that revealed it as expertise. One way this was achievable within their work was through activity of producing reports. The point of putting in an ERP system, apart from unifying business processes, was to capture information about the activities of the organization in a uniform way so that it could be analysed and on the basis of that data, strategic decisions be made. The main way in which management had access to this information was through reports. Though it was possible for managers to produce their own reports, where they set the parameters of what they wanted to know they were more likely to use pre-defined reports which they could draw off the system. It was not unusual for people in the competency centre to be involved in the designing of new reports – this was a common improvement request that would be made, and in doing so, they found themselves having to act not only as technical experts but also having considerable understanding of the specificities of the business. Responding to these requests required a great deal of conversation and interaction with the people who made the request. It was in the relational dimensions of understanding these specificities that their business knowledge was revealed and business expertise potentially recognised.

One member of competency centre staff in particular had negotiated this question of expertise through the possibilities that the indeterminacy of the boundaries between these two domains of ERP and the business had afforded him in his ability to be seen as having effective, expert knowledge in both these domains. Donald had been working for Alchemica for several years starting in his youth as a production assistant in one of the plants, and gradually moving through the organization, into the role of assistant warehouse manager, changing roles periodically until he had become planning and warehouse manager in one of the plants in the UK. He was in this position when he had been invited to join the development team for the ERP system when it was first set up. After working on the development he moved into the competency centre to support the ERP system. More recently, due to more organizational changes, he had been given a position of greater responsibility as far as his knowledge of ‘the business’ was concerned

“I am now empowered to get more benefit to develop processes or to see development to benefit the business. I still fix things. But I moved a little bit, to get more on the business side and to talk to the business managers.”

This was a considerable achievement and a source of pride for Donald who enthusiastically demonstrated to us the influences he felt he had had over the business, through his work on the ERP system.

Of all the people in the competency centre that we spoke to, Donald probably had the strongest claim to expertise in ‘the business’ and though he was still based in the competency centre, his job was now categorised by his colleagues and his bosses as being on the business side rather than the ERP side. However, the value of Donald’s expertise of the business was not always recognised outside the competency centre itself. Though Donald was seen to be very knowledgeable about the ERP system and highly expert at interrogating the data within the system, his ability to realise the relevance of this data in the eyes of business people was questioned. One of the board members used Donald’s enthusiasm for the system as an example of the problems of technological solutions which did not engage properly with the business;

“if you got Donald Green in here, he never ceases to amaze me telling me where every pack of glass has moved over its life in the stock room for two

years and every little movement is there well, so? Very good, thank you Donald, go away and tell me something useful.”

Derek, who worked supporting the plant maintenance module of the ERP system, also told us of his frustration at lack of appreciation of the understanding he had of the business

“Some people think we do a different job to what we do here. That we tell them what transaction code it is. I don’t think that the level of help and support we give the business in a business sense is appreciated. I have to advise engineers on project planning. Half of my job is what the business should be doing. Monitoring, policing, reporting, noticing problems. Etc. Any number of more trivial things like that.”

Derek’s point relates to questions of recognition. The need to demonstrate that they were doing more than an IT support role was a desire for recognition of their expertise in understanding ‘the business’ and furthermore their role in shaping it. As people related to one another within the competency centre, and as they interacted with the technologies, producing reports which revealed information about the organization they experienced their own knowledge of the business but just as important was the need that others would recognise their effects.

The way in which expertise, that is, socially recognised knowledge and experience, served to make these categories of IT and the business appear and disappear was through relationships which working practices shaped and framed. The effect of knowledgeability was more than just a matter of knowing something or not; of being an expert or not, but rather was the means through which claims to ‘membership’ were staked. Knowledge-ability was a way in which people experienced their work, constituting a source of pride, a route to promotion, a way of producing value and achieving recognition for so doing within the organization.

Concluding remarks

Our objective in this discussion has been to better understand how ‘membership’ and ‘community’ are – or fail to be – performed in specific enactments of expert knowing. This has involved something of a shift in emphasis from the role of community in the production of knowledge, (the main focus of the CoP literature), to the role of knowledge in the production of community. As we have seen, among Alchemica’s

competency centre staff, invocations of ‘business knowledge’ were at the same time claims to commonality with and membership of the community of ‘business’ experts. This of course reflects a well-established theme in sociological research. Harold Garfinkel (1967) in particular has drawn attention to the ‘knowledgeability’ required for effective performances of membership. We have focused in this paper on a particularly persistent theme that arose in the conversations we had with our interlocutors: the categorisation of different areas of an organization’s functions in order to explore how this might reveal something about the ways in which the meanings of business knowledge and community are worked out. In Alchemica we have seen that the categories of IT and ‘the business’ were more than simply descriptive terms. Rather they were discursive moves positioning subjects in specific ways, ways that provoked questions and concern. By interrogating the way in which people negotiated these categories, we have suggested that we can reveal how people are engaging with their futures, and their place in wider organizational and marketplace conditions. The implications of having an IT role as opposed to a business role and the means available to people for dealing with the constitutive effects of categorisation, tell us something about the ways in which the experience of membership was related to, amongst other things, business expertise and its effects.

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ⁱ For example Ole Dreier (1999) has investigated the role played by multiple memberships and individual trajectories of participation in different communities of practice. His work shows how subjects and identities are stabilisations of a more complex processual becoming, in part the product of these contextual forces, but also a contributing agent that shapes the texture, quality and operation of context. Similarly Etienne Wenger (2000) has re-focused on the ‘constellations’ formed by such communities.

ⁱⁱ This double meaning of the word is lost in the more common translation ‘‘immense’’ (see Langenscheidt German Dictionary, 1987).