PRACTICING COMMUNITIES OF PRACTICE: TRANSLATING STRATEGY INTO SITUATED LEARNING

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Abstract:
By investigating sixteen different types of professional community (which encompass approximately 16,000 employees) within an IT Services company, the explicit objective is to analyze how the communities of practice concept can help to explain work-based practices that shape situated learning, and all which that entails for identity and participation within a contemporary and complex organization. Data include a questionnaire (n=1206), as well as 40 interviews, reviews documents and observational data collected over 18 months. Findings suggest for situated learning in contemporary organizations the concepts of 'communities of practice' has currency, provided focus is given to practices rather than communities.

Keywords: Strategy Practice, Situated Learning; Identity.

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1. INTRODUCTION

Given the constant search for solutions to competitiveness, and the recognition that 'knowledge resources' reside in human capital, the result has been that communities of practice (thereafter CoP) have been adopted as a tractable management tool (Duguid, 2008b). Indeed, Wenger (1998), and others, have advocated the adoption of CoP in order to harness the power of workplace innovation. Communities are proposed as a solution to all manner of organizational problems, and the term has come to signify a strategy for knowledge management and human resource development (Hughes et al., 2007). Central to the concept is the idea that collective learning is achieved through a number of social processes and interactions conducted in the course of performing organizational practices. Their learning function is argued to lie in their 'social' common denominator, enabling learning as *belonging* by virtue of 'community' and learning as *doing* by virtue of 'practice' (Wenger, 1998). It is the former notion of 'community' that has attracted most scholarly attention rather than the importance of practice for influencing learning trajectories and identity formation (Østerlund and Carlile, 2005). Brown and Duguid (2001) argue, however, that inter-dependent practice is the level at which shared identity develops, and is therefore the level that is most important for the creation and transfer of knowledge. As Lave and Wenger (1991, p98) themselves state, '[t]he social structure of this practice, its power relations and its conditions for legitimacy define possibilities for learning'.

As research on communities of practice has developed, the idiosyncrasies of situated learning represented by the concept have become homogenized (Amin and Roberts, 2008). This has resulted in a rather formulaic treatment of the concept as it is readily applied to a notional 'mythic' community, which may be a far cry from the reality of contemporary work settings (Fuller, 2007). Work environments create numerous kinds of situated practices, which involve a variety of processes and outcomes, dependent on a number of distinct forms of physical and metaphysical social interactions, and uneven power relations. In attempting to introduce and manage 'CoP' as a strategic knowledge management tool, the focus on 'community' is being foregrounded to encourage collaboration, while the emergent, often contested nature of interaction occurring in practice is overlooked (Contu and Willmott, 2003). In an organizational context, while this shared practice is shown to transcend organizational boundaries and to operate at the interstices between formal organizational structures (Brown and Duguid, 1991), it is also suggested that operating in work contexts requires participation in a number of, often competing, communities, which has implications for the development of work identities and community participation (Handley et al., 2007). If it is complex work contexts that provide a socializing mechanism through which an organization's 'situated curriculum' is transferred to new members (Gherardi et al., 1998), what Brown and Duguid (1991) call 'learning-in-working', then we need to know more about how situated learning occurs, or is managed, in such complex work environments (Roberts, 2006).

Practices in organizations are structured around, or against rules, processes and systems of organizing designed by the management cadre. These systems provide

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mechanisms through which individual learning can be shared and institutionalized in the organization (Starbuck, 1996; Crossan et al., 1999; Jones and Macpherson, 2006). In organizations it is systems, practices and taken for granted routines that can influence the nature of interactions through which situated learning occurs; it is also these activities that are, in part at least, influenced by the design and strategies of the organizational elite (Child and Heavens, 2003). Lave and Wenger's (1991) original research was based on craft-based learning and social self-help groups, but we know little about how this concept of communities of practice has been adopted and applied by management within organizations. Indeed, we need to understand the nature of situated learning that occurs within diverse and complex organizational settings, which adopt a variety of structures, goals and practices that are very different from the sites of collective activity in which this concept was first developed (Thompson, 2005; Roberts, 2006).

With these issues in mind, the aim of this paper is to investigate the strategic adoption of CoP within contemporary work organizations. We draw insights from the findings of our empirical study of these issues in a large IT services company (thereafter ITServ). . The 'professional communities' (thereafter PCs) are a focal activity in ITServ for developing and delivering strategy, for managing and developing staff, and for developing and sharing knowledge. As such they are formal parts of the firm's organizational structure, and they cut across operational business units. The professional communities are intended to manage learning, development and innovation and provide a focus for role-based strategic capability development within the firm. By investigating sixteen different types of professional community (which encompass approximately 16,000 employees), our analysis explicates how the community of practice concept is translated into a set of organizational (strategic and operational) practices that foster learning in communities – situated learning. Our objective is to examine how those practices, in turn, are central to the meanings and interrelations that form to create a variety of perspectives and outcomes that differ within and between professional communities in ITServ.

The paper proceeds with a discussion on the concepts of 'situated learning' and 'CoP' in relation to management, identity and participation in work-based practices. Thereafter, a discussion on methodology and data preface analysis of 'professional communities' within the case firm, before a discussion to help us to understand the idiosyncratic and context-dependent nature of managing situated learning and CoP in an organization. Thus, the contribution of this paper is to provide deeper understanding of the interrelationship between the management of organizational structures and the development of situated learning 'communities'. We foreground how the concepts of 'CoP' and 'situated learning' have currency within a contemporary work setting, provided that the complexity of the concept itself is understood and embraced by both scholars and managers.

2. PRACTICING COMMUNITIES OF PRACTICE

According to Brown and Duguid (1991), CoP emerge spontaneously as members engaging in organizational practices; management cannot create them, but they are able to support an environment in which they might flourish. That said, the 'CoP' concept was intended to help explain learning as 'an integral and inseparable part of social practice' (Lave and Wenger, 1991, p31), but it is only a partial representation of the

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complexity of situated learning as originally defined. Moreover, Lave and Wenger's original treatise on the topic was intended to explore and explain learning in apprenticeships, which are socially-controlled learning environments through which participation eventually leads to mastery, and a shared identity as part of a particular craft or social group. This is a significantly different structure to, or at best only a partial representation of, work in organizations. Within firms, and other institutional structures, the difference is that work practices are often defined, designed or at least shaped, by 'national, occupational or other social institutions' and by a management cadre whose aim it is to encourage and cajole effort towards institutional level goals (Child and Heavens, 2003, p310). Indeed, much of work involves engagement across formal structures and organizational boundaries between divisions within the firm (Bechky, 2003), as well as with others in different institutions (Holmqvist, 2003), or with cognizance of allegiances and norms to professional bodies that operate outside of the firm (Handley et al., 2007). In all but the smallest firms, organizational and institutional complexities create heterogeneous geographical and relational spaces in which situated learning occurs (Amin and Roberts, 2008). Unlike the apprenticeship model of situated learning, other work-based learning 'communities' may be less stable, have transparent and changing boundaries, and with a membership (and leadership) that is potentially subject to continual review. Indeed, given the emergence of virtual workspaces through electronic communication, this adds to the complexity of relational spaces and to our understanding of work-based situated learning.

Therefore, while 'CoP' might signify situated learning within a particular context, as described by Lave and Wenger, it does not necessarily follow that this concept is transferable to other work settings. Nevertheless, the way in which situated learning is described as having implications for identity, participation, mastery and power relations still resonates with learning in and through work practices (Contu and Willmott, 2003). Organizations are social spaces and the notion of 'situated learning' through social interactions is as much relevant in firms, and even virtual firms, as it is in other more cohesive social activity systems. After all, the promise of situated learning theory is that attention is directed to learning as a process that depends on knowledge creation and sharing that is embedded and embodied in social activity, or practices (Brown and Duguid, 2001). Focusing on pragmatic issues over which management in organizations have some influence, such as systems and objects that mediate such activity, may be a more sensible way of addressing and understanding trajectories of situated learning in different organizational settings (Macpherson and Clark, 2009). As Lave (2008) herself notes, the concepts of situated learning and CoP propose a way of thinking about how newcomers are socialized and learn 'to be', rather than considering CoP as a tool to manage learning.

3. TRANSLATING STRATEGY INTO PRACTICE

For firms and other organizations, then, it is important to consider what situated learning can tell us about modern work places and the institutional structures and processes that define them. In this regard, Handley et al (2007, p644) argue that 'the dynamics between identity development and forms of participation are critical to the ways in which individuals internalize, challenge or reject the existing practices of their community'. This statement points to the heart of two key concepts associated with situated learning: its dependence on engaged participation in practices; and the

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implication of this practice for the development of work identity. They go on to note that practices are simpler to operationalize, since they are limited to observable activity, but participation 'can be understood to denote *meaningful* activity' (ibid, p651). As Lave and Wenger (1991, p98) originally argued, membership in a community of practice entails participation at a number of levels, but it does not imply co-presence, or a well-defined social group with clear boundaries. What it does imply, however, is 'participation in an activity system' in which members share concerns about what they are doing and becoming. Thus, this notion of participation is important, since it suggests a commitment, however temporary, to an activity system where there is at least some shared understanding and concern for achieving goals, however defined. So while participation might suggest engagement in and with a 'community'—a stable, close and enduring relationship—it does not necessarily suggest that this must involve geographic proximity (Fuller, 2007). Rather, participation can take place in multiple social spaces that cross different contexts. As such, occupational 'communities', where they exist, are rooted in engaged participation in work practices, and this shapes the development of occupational identities (Bechky, 2006). If the community of practice concept tells us anything about situated learning in work places it is that it points to unseen boundaries within organizations, boundaries that emerge through participation in practices and which divide knowledge and learning networks from each other (Duguid, 2008a). Participation suggests a commitment to goals, relationships and meanings, and this can occur within, as well as across, formal organizational boundaries.

Many work communities may be enduring, since it is the accepted formal, informal and technological structures of work that inevitably help to shape social interaction and engagement in activities to accomplish that work (Orlikowski, 2000). However, the notion of participation, suggest that just doing work is not enough for the shaping of identity and commitment to shared goals. Rather, goals, often defined by the institutions and management who govern them, require a sense of commitment and adoption such that participation is meaningful for the person engaging in the activities to achieve them. Given that these goals change, as do structures, practices, networks and roles in organizations, it is inevitable that work identities are much more complex than 'new and old timers', as suggested by CoP (Handley et al., 2007; Jewson, 2007). Indeed, it would be difficult in any contemporary work setting to draw boundaries around a specific work community. The conduct of work inevitably means engagement in what Kellog et al (2006) define as 'trading zones', where loosely-coupled contributions emerge in a collage to temporarily co-ordinate the direction of shared actions. Indeed, since practices are promiscuous and cross work and organizational boundaries, participation in such interstitial communities challenges the very notion of such canonical boundaries (Fox, 2000). Identity, then, rather than being embedded in one community, might develop in several, and is likely to be continually emerging as people traverse the landscape of organizations over time.

It is the meaningful interrelations occurring between actors during the practice of their organizational roles that define any the social associations through which identity and participation are given meaning. According to some authors, the social is in essence networks of associations (Callon, 2002; Latour, 2007), practice bundles (Knorr Cetina, 2001; Schatzki, 2005), or activity systems (Engeström, 1987), within which symbolic and material artefacts are central to such associations. These complex networks of associations and artefacts influence how interactions are conducted, or made meaningful. In that sense, symbolic artefacts such as performance management systems,

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role competences and training schedules, and material artefacts such as intranet forums, video conferencing, tools or databases allow associations to be formed between actors, and are deeply embedded in the meaningful interactions through which identity and participation occur. In most organizations, institutional objectives are generally set or enacted by the management cadre, loosely defined, such that they instigate structures, practices and initiatives to achieve this (Child and Heavens, 2003). So, translating strategy into practice occurs through the deployment of such material and symbolic artefacts in organizations that facilitate and direct work. It is this deployment of system and structures that sets the landscape on which the participation central to situated learning occurs.

This is not necessarily a benign landscape. The concept of 'legitimate peripheral participation' is at the heart of Lave and Wenger's (1991) discussion on situated learning, and has not achieved the attention it deserves. They clearly articulate, and Contu and Willmot (2003) remind us, practice is dynamic, negotiated and contested. In such a context, legitimate peripherality has both positive and negative connotations. On the one hand, it suggests inclusion within a community as a novice working towards mastery. Alternatively, it also connotes exclusion and disempowering of those not considered to be worthy of potential membership. Also, participation, if it is to be legitimate and competent, depends on others viewing it as such (Fox, 2000); situated learning is as much about negotiating and engaging with social structures of power, since they define legitimacy of actions and membership, and thus the possibilities for learning (Lave and Wenger, 1991). Indeed, as they are at pains to point out, this concept cannot be broken down into its constituent parts; the degree of participation, its legitimacy and its centrality to a practice community are together all at the heart of defining situated learning trajectories. Thus, legitimate peripheral participation suggests both a degree of engagement in practices with a commitment to some shared objectives, and leadership and design of such practices, responsibilities and opportunities so that this engagement is possible for all in the organization. This means that attending to the leadership and governance structures of such CoP is an important aspect of understanding situated learning; any analysis must include attention to how leadership and governance are both enacted and supported within the organization of such communities. There are many different relational proximities through which work is achieved and which influence the trajectories of situated learning of individuals and groups (Amin and Roberts, 2008). We should be alert to the potential diversity of geographical and social spaces through which work, and thus work identities, are accomplished; legitimate peripheral participation is at the heart of defining, or understanding, the nexus of relations through which situated learning occurs.

4. OPERATIONALIZING RESEARCH INTO SITUATED LEARNING

From the discussion above we can see that legitimate peripheral participation in CoP suggests a complex, and changing, nexus of relations through which situated learning occurs in contemporary organizations. Few organizations maintain a stable workforce, and new projects, changing structures and new recruits change the relational dynamics of the workplace continually. This has implications for participation (or engagement), the investment in particular work identities, and the relationships through which work and situated learning are accomplished. In a context which is in flux, the notion of participation suggests, potentially at least, evolving or competing identities

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shaped by developing and/or changing work practices and relationships. In that regard then, managing CoP would entail understanding and providing opportunities for organizational members to engage with a community (or communities), both in terms of its objectives, but also in terms of developing staffs' own work identity. This latter point suggests that situated learning has the potential to be influential in the trajectory of careers, and ambitions, and any managerially-defined community of practice must provide opportunities to recognize and develop its members' mastery. So, in understanding how CoP are translated into a series of strategic and operational organizational practices, it follows that attention must be given to how they are enacted within specific work contexts. This means focusing on: 1) the objectives that the professional communities are intended to achieve; 2) the tools and processes that are intended to support these goals; and 3) the perceptions of identity, participation and leadership that define the coherence and legitimate participation within the any potential community. It is this framework that was adopted to investigate the management of professional communities in ITServ.

Data collection at ITServ involved over 40 interviews in two phases. A review of key internal publications including policy documents, corporate presentations and annual reports was also conducted at the start of, and throughout the project to establish the organizational context for the research. The first phase included interviews with strategic level management involved in the development and governance of the firm's professional communities, including business unit directors and the HR Director and Manager responsible for the development of PCs. The three themes, identified above, were used as a framework for the structure of the interviews. The qualitative data was analyzed using a template analysis based on a preliminary review of the first phase interviews and which also incorporated the theoretical concepts developed from the CoP literature. This template analysis was conducted using Nvivo software. In the initial coding attention was given to issues of identity and engagement, which are considered essential to the functioning of situated learning in CoP (Wenger, 1998), and the types of objectives, practices or activities expected and described as occurring by managers and members of the communities (Brown and Duguid, 1991). The initial findings helped to orient the structure of the questionnaire and informed the data collection and analysis of subsequent interviews.

A short survey was conducted with staff to a stratified sample of 3311 employees from all Professional Communities, based on community size and community membership. For the survey, the questions were orientated around respondents' perceptions of the functioning of professional communities. We were thus testing for consistency of views within the communities rather than measuring for causality or testing specific hypotheses. The questionnaire contained 24 items and included open questions as well as closed likert scale questions. The response rate was 36.4%, resulting in 1206 usable responses. From the original round of strategy interviews three specific roles for the PCs were identified. These were HRD, Knowledge Sharing and Strategy. Scales were used in the questionnaire to compare the effective achievement of these goals in comparison to communities and against the levels of perception of the coherence of the community in terms of its leadership, participation and identity. The scales used were tested for reliability and data was tested for analysis of variance between communities. Thus, questions in these areas also provided a focus for the second phase of interviews and for analysis of variances between communities' performance based on the specific areas of community

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development identified in the literature—leadership, participation and identity—and the objectives of those communities identified through the first phase of the interviews (HRD, knowledge sharing and strategy).

The second round of interviews involved senior managers, human resources staff and employees working within a sample of five of the professional communities. Again the second round of interviews followed the themes suggested above, but insights from the first round of interviews were used also to guide questions and probes, particularly to explore the specific challenges and differences that were evident in the functioning of communities and that had been identified through the survey analysis. In addition, the research team was also invited to attend and observe organized individual Professional Community events run within the organization; these occurred across the whole project. Qualitative data, including participant observations, questionnaire responses and meeting records collected at such events have been integrated within research design and analysis, both in developing the questionnaire and in analyzing the responses and differences between the communities.

In conducting the data analysis, insights have been developed by amalgamating the analysis from both the questionnaire and qualitative data in order to build and develop an understanding how the professional communities differ, and what key practices influence their 'maturity'.

5. PROFESSIONAL COMMUNITIES AT ITSERV

5.1 Structures, Practices, and Goals

From the interviews, policy documents and participation in the various professional community forums, data provided a reasonably clear and consistent picture about the evolution and strategic objectives of professional communities within ITServ. Originally conceived as a way of managing similar job families within the business, the professional communities' boundaries and structures are influenced by discrete existing professional roles, such as HRM or Accounting, and business unique roles such as software and hardware development and management, or client sales and consulting. The practices and artefacts intended to support the activities of professional communities provide significant support to career mapping, competence mapping, and performance management, including training programmes, community 'academies' and certification routes for job grades and roles. Human resource development (HRD) is seen as a strategic activity to 'grow their own' through the deployment of a competence framework for each professional community, and to co-ordinate 'core competences' across communities. Thus, while the composition and boundaries of the 'professional communities' are open to re-negotiation as the roles within the business change, they are less affected by organizational restructuring of business units. So they have some longevity, over 13 years since their inception and, although some have changed in that time, the current list of 16 professional communities has provided some stability despite organizational changes in terms of clients and business development.

The focus on human resource development activity remains a key teleological function of professional communities. However, the degree of coherence in terms of these goals and practices of HRD are significantly different between professional

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communities. For example, communities that were focused around professions were seen to be more coherent and functional since they were also linked to specific career paths for development activity within that profession, while others that are more client facing, with more disparate functions, skills and job roles considered that it was difficult to know 'how to be a community'. Indeed, deciding on job families, shared competences and community career paths within some communities was still being debated at the last forum we attended two years after our first engagement with the firm.

As well as HRD practices, the professional communities were seen as the method by which methodologies and tools could be developed, to share 'best practice' between communities, but also to develop functional protocols specific to that community. In that way they were seen as a tool to enhance the strategic capability of the firm through knowledge development and sharing, captured and codified in methodologies and tools. So, for example, in sales and account management a particular methodology was developed and taught to all staff, allowing those with more experience to be used to mentor new staff in the adopted approach. Where other professional communities had developed assessment centres, or benchmarking protocols, these were intended to be made available and shared through professional community forums, web casts or internet portals. Examples were evident were these protocols were developed 'bottom up' within communities', but also where they had been imposed 'top down'. Again, it was clear that some communities were more effective than others in creating practices of knowledge development and sharing; some PCs struggled to engage in the process, and it was considered that knowledge sharing was ineffective because there was a lack of coherence or priority attached to such activity in some communities.

Finally, it was clear that the intention of the professional communities was to provide a differentiating factor against competitors and to provide a tool to develop the firm's strategic capability. By foregrounding their unique approach to 'professional communities' this was suggested as a way of showing potential clients how internal structures provided a mechanism for developing and supporting services by focusing internal practices and procedures on talent development and knowledge sharing, so that clients could benefit from synergies across the business units. Professional communities were described by senior management as being a key mechanism through which they could deliver strategic capability. The PC framework was often described as a mechanism through which strategic plans and strategic priorities could be communicated, although it was noted that this was more effective in some communities, such as HR, that had a coherent professional focus. Also, because the business units were the focus for operational delivery, the PC was not directly included as part of the strategic planning process. Nevertheless, it was the intention to create a more direct link between PCs and strategic capability planning and delivery in the future.

So, in summary, the structures and practices of the professional communities were intended: to provide an HRM/D function in developing talent, careers and competences throughout the business; to contribute to developing knowledge sharing by dissemination of good practices between and within communities and to provide a focal point for activities that encouraged dialogue and development of new systems and procures; and to enable the development of strategic capability to deliver client focused solutions and to differentiate the firm from competitors. These teleological functions were achieved to different degrees by the PCs and this was evident in the perceptions of

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staff about their commitment to and participation in their own PC, as well as the effectiveness of the leadership.

5.2 Leadership and Governance

The analysis of variance between perceptions of leadership and the 3 objectives of the communities suggested a direct correlation between effective leadership and the perceived performance of the PC. In other words, if staff considered that the leadership was effective, then they also had a positive view on way in which the PCs contributed to strategy, knowledge sharing and HRD. The qualitative data provided insight into why this might be the case. First was the degree to which the leadership had an identifiable figurehead, or PC sponsor, who was considered to be able to provide a degree of influence in the firm, by either: being a member of the board; a professional head (such as HR Director); or being responsible for business unit performance. Second, and associated with these roles, was acknowledgement that within some PCs, the governance was easier to manage, either through professional coherence (for example, accounting), or because those responsible for the governance had control of budgets against which they could allocate time and resources to support PC development activity. Both of these factors influenced the degree of coherence in communication about the scope and purpose of the PC and also resulted in differences in the strength of direction provided through such forums as PC management meetings, information dissemination and the way in which others in the community were encouraged and willing to take on community development projects (more below). So, what seemed key here were the differences in which the sponsorship of a PC was clearly identifiable, had the authority and resources to encourage and develop PC activities, sought links with accreditation bodies (where appropriate), and were committed to putting time and effort into developing their PC. Where this was not the case, the PC lacked coherence and governance protocols.

Also significant were the tensions sometimes caused by the cross cutting nature of organizational structures where PC sponsorship might be located in one business unit, but membership of that PC was spread across business units. Further, within each of the business units were embedded capability units and projects. So, for example, membership of a PC might align with a particular career path, or indeed provide an opportunity for an individual member of staff to change career paths. However, the line manager responsible for funding such an opportunity and training must be willing to support it, and they may not since the benefit would accrue to another business unit and/or project. So there was a blurring of boundaries and tensions between community frameworks and other organisational management structures (such as business units and projects). This caused tension in terms of funding and priorities for PCs and in the allocation of individuals time and ultimately resulted in identity conflicts, discussed below.

Directly linked to the 'top down' visible leadership or sponsorship were comments about how staff was encouraged to take on PC development projects. While the senior PC sponsor might be able to provide resources (time and funds), and both real and symbolic support, leadership was also visible through individuals who were 'PC activists'. These individuals were 'volunteers' who took forward specific initiatives designed, in particular, to develop PC coherence or to develop systems and activities

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that contributed to knowledge sharing. For example, this might be an activity intended to develop and disseminate a new protocol for sales practice, or to develop community intranet content to engage and communicate with staff in the PC. Where this 'PC activist' activity was most visible was in the PCs that had both structural and governance coherence, and the activists sensed that their efforts were likely to be noticed *and rewarded*. Where this was missing, there was a tension between the lack of cohesion in the PC and the ability to provide tangible PC services and outputs by activists, or indeed if any would volunteer to take on such a role. In other words, the distributed leadership evident in some PCs through activists seemed in evidence only where the structures and governance provided opportunities for support and recognition.

5.3 Participation and Engagement

The issues of structural and governance ambiguity and distributed leadership are clearly influence opportunities for participation and engagement. Acceptance of activist roles, for example, shows a willingness to be involved and engage with the development of the PC and organizational goals. However, structural and governance ambiguity undermines that ability or desire to make a contribution. It is no surprise therefore, that perceptions of engagement and the achievement of goals were again directly correlated. The more staff perceived they were, or were actually given, the opportunity to participate in the PC, the more likely they were to consider the contribution of the PC was positive in terms of HRD, knowledge sharing and delivering strategy.

Here, then, any structural ambiguity had a particularly detrimental effect on the willingness to engage with PCs. Where PC goals and structures were aligned there was a greater allegiance to the PC and, where this was not the case, there were instances where staff either did not care, or did not even know, if they belonged to a particular PC. Unless the PC was considered to have a direct effect or relevance to day-to-day operational practices, there was a lack of interest in PC activity. Indeed this meant that staff were more aware of opportunities within their own project, capability or business unit, but might not be aware of how they might belong to or contribute their expertise outside or across those canonical boundaries. They had more meaningful engagement and participation with others within a project than they did with others in their own PC. This reinforces the notion that it is meaningful activities that are at the heart of developing and sustaining engagement, and that, this opportunity was uneven within PCs. So for example, some PCs provided interactions daily that allowed sharing and discussion about work protocols and also the tools to make this information available to different parts of the organization. The sales force were a particular example of this where the sales methodology provided a set of practices and experiences that could be shared easily. However, some PCs were so large and so dispersed that practices rarely, if ever, were focused around similar activities or knowledge sharing practices that could be attributed to, or acknowledge, individual contributions to the development of a particular PC. Indeed, some were so large that the idea of a discrete 'community' was difficult to sustain.

This meant that there was often a lack of focus in terms of the meaning a PC had for the way in which staff engaged with the firm and meant that some were particularly cynical about the communities as being a top down management tool, rather than a mechanism to encourage knowledge sharing, collaboration and a focus around which

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meaningful interactions were likely to take place. A PC was considered by many to be just an administrative function and not something from which they could 'derive much sustenance'. While some activities were intended to communicate the value and aims of the PCs these were continually set against business unit and project priorities. Where engagement within the PCs was particularly strong, however, this seemed to be around informal problem or issue-based groups. These special interest groups were self governing, provided a useful focus for a period of time, and then often disbanded. They were seen as providing both knowledge sharing and strategic benefits, with participants contributing with expectations of personal as well as organizational outcomes. This was offset though by performance driven reviews systems that were individually focused and which meant that engagement and participation was reported as being targeted at self-interested behaviour to promote and preserve individuals' reputation, with potentially a concomitant negative impact on macro-level capability. This is a tension in all organizations, but the lack of coherence in PCs might exacerbate this type of behaviour.

5.4 Identity

Despite these structural and leadership tensions, the PC structure was still acknowledged as having a role to play in providing a route map for careers and also a structure through which staff could develop and target their activity in order to progress within the business. The PCs had a particularly strong role in providing a focus for the development of both behavioural and technical competence frameworks. So for both corporate and personal identity, it was considered that competence maps provided some clarity in terms of identifying 'the right people for the right roles' and in providing coherence for professional training, for professional accreditation and also, potentially a route map for individuals through which they could map or plan their career development. Indeed, the PC competence frameworks and the identification of PCs were considered essential to targeting and developing members of the graduate training scheme. The PCs and competence maps also provided vehicles through which ongoing training and development could be targeted around a consistent approach to practices across project and business unit boundaries, such as was adopted within their Sales and Account Management Practices. Competence frameworks also provided a mechanism through which performance management and the identification of talent could be achieved, allowing recruitment and redeployment across the business. These HRM and HRD practices provided PC members with information on how to develop and maintain links with professional bodies and how to use the corporate information systems to identify opportunities and to build their professional capabilities and identity. IT systems also connected PC members to a community of experts through their intranet, and thus allowed virtual collaboration with others in their PC. So engineers for example could work together and share information across projects, strengthening their identity as a community of engineers, at the same time as developing a sense of belonging to a wider organization. Perhaps the greatest strength of this PC framework was that it provided the opportunity, for some at least, to be able to focus on developing their professional practice while managing the politics of dealing with individual line manager's expectations, since it gave their requests for development and responsibility some legitimacy. There was potential, and examples of the ability to identify and develop community identity and strategic capability.

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Set against these positive elements were some significant tensions. In particular were the identity conflicts between PC and project identity. This was alluded to earlier, but the engagement and ability to identify with a PC was, not surprisingly, informed by those with which individuals had meaningful interactions. While this might be within their own PC through the intranet, forums or other professionally orientated activities, more often it was with those that they shared their day-to-day work on particular projects or tasks, or with whom they engaged on informal projects. These were sometimes orientated around technical problem solving or processes issues such as quality management. Technologies that facilitated knowledge sharing and virtual interactions also had the potential to extend the interactions and development of formal and informal networks. Nevertheless, the tensions between loyalty to projects or PCs remained, and indeed informal projects and associations and interactions with others on short-term task or through forums and virtual networks created a complex mixture of potential interactions through which personal and corporate identity evolved. Indeed technologies intended to encourage a broader commitment to knowledge sharing interactions was mixed, at best, and some communities were more evolved in this regard. This included the development of such things as career mapping, performance management, talent identification and internal recruitment tools that might provide a particular PC with a more coherent presence. Such coherence was also undermined by what was seen as arbitrary inclusion of diverse roles categories within a PC. Allayed to this was also some complaints about the accuracy and/or relevance of some technical and behavioural categories within PC competence frameworks. Finally, there were also perceptions that the PC goals and strategic goals were either not clear or not aligned. So, in short, while the PCs potentially provided a number of ways in which individual and group identity could be developed, there were in all PCs significant tensions through the practices, tools and structures adopted that undermined this identity. It is not surprising therefore that individual's perceptions of identity and performance of the PCs were correlated, with those with a stronger PC identity considering that they achieved their teleological function in terms of HRD, knowledge sharing and strategic contribution.

6. DISCUSSION AND CONCLUSION

Wenger (1998, p134) argues that the instrumental use of CoP goes against the nature of knowing and 'about being together, living meaningfully, developing a satisfying identity, and altogether being human'. However, despite this plea, CoP are used as a tractable management tool, and are likely to continue be used in this manner (Duguid, 2008b). Given this reality, it is important that we understand how CoP are translated into organizational practices. By examining this practice we also need to be able to use the concepts of situated learning, and particularly legitimate peripheral participation (Lave and Wenger, 1991), in order that we might better understand its complexity, and the varieties of influences on situated learning and knowing in contemporary organizations.

Findings from the literature and the data suggest that the practices and values that underpin the functioning of community practices can be identified in support of three essential values within the communities: *leadership and governance, participation and engagement and identity*. In terms of leadership and governance, the nature of the concept of legitimate participation allows us to recognize that any definition of a community sets implicit or explicit boundaries around membership, definitions of

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mastery, and rules for inclusion and exclusion; community is, potentially at least, political and hierarchical (Contu and Willmot, 2003), since membership and recognition is afforded to those actors who have achieved mastery of community expectations, or are recognized as contributing to the good of the community. In terms of engagement, it is not enough to just turn up, complete tasks and leave. Participation connotes that such practice is meaningful, has validity and provides some sustenance to the actors within the community (Handley et al., 2006). Participation involves mutual engagement, and interactions through which negotiation of meanings and understandings of practices are reified (Lave and Wenger, 1991; Wenger, 1998). Participation is therefore not a passive acceptance of existing norms, practices, divisions of labour, rules and tools that define activity within a practice community, but rather this highlights the active and meaningful way in which members practice. Finally, identity is developed through this participation and legitimation within the community as members learn how to be a member of a community. However, in organizations this identity is potentially complex as activities and practices are likely to occur within and across canonical boundaries, or in trading zones, and may cause tensions where legitimate participation in different communities may conflict or change over time (Handley et al. 2007; Jewson, 2007; Kellog et al 2006). It can be seen that these three values or concepts provide a way of exploring the practices, tensions and meaning that the organizationally defined PCs have for members of the organization.

The data shows that, far from being homogenous they identify that perceptions of communities depend on how, structures, artefacts and tools translate or support these values in practice. We note that, within this particular firm, the communities adopted are intended to support specific goals of the firm: *strategic capability*, *human resource development* (HRD): and *knowledge sharing*. We note that differences in the perceptions of community values within each community are linked to the perceptions of the achievement of these goals. In other words, while direct causality cannot be attributed to the performance of the PC and the achievement of intended teleological functioning of the PCs, we can note the differences and tensions in the way that the three values of leadership, engagement and identity are made meaningful for individuals within each community. So, the interactions that govern the way work is made meaningful for participants can be understood and explored through these values to better understand how work is made meaningful in the practices adopted within the firm.

Findings suggest that practices and the actual functioning of each professional community varies widely dependent on a number of factors, such as resources and the quality and coherence of leadership, or community membership. So, the maturity of each community is dependent on how community members perceive the adopted practices support their participation and identity development and might be a way that communities can map or develop activities to sustain their longevity and meaning for staff. Leadership and governance of the community can indentify existing practices, prioritize practices for development, or map new strategic initiatives and practices against the community values. These values can also be used to share promising practices across community boundaries. In that way, each community may develop a framework that is sensitive to their own context, but a framework that provides a way of thinking about the intractable problem of attending the meaningful interactions that shape the situated learning trajectories of community members. So leadership, identity and engagement are important values that underpin the healthy functioning of practices

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at all levels within the organization, but different practices might be adopted should the specific teleological functions of the community change or be reviewed. HRD, knowledge sharing and strategic capability, in this instance, provide a framework of practices that potentially support the development of identity, engagement and leadership. By modelling learning capability and practices, the professional communities reported provide a stable organisational structure through which the firm can capture an overview of organizational learning activity.

There are tensions, however, and managers who wish to capitalize on learning and knowledge that emerges in work must recognize that organizing work creates local and situated activity that makes meaning in organizations heterogeneous, which is problematic for knowledge sharing (Bechky, 2003) and the achievement of disparate and often competing organizational goals. If work boundaries create constraints in sharing and exploiting benefits, such as learning in, and from, projects (Scarbrough et al., 2004), then creating 'CoP' might exacerbate the problems that they are intended to solve; they inevitably create more boundaries defined, in this case, in role profiles and competence maps. Any such definition of a community of practice, potentially subverts the organic nature of emergent knowing-in-practice, and the reification of meaning embodied in community practices, tools and structures that emerge from such practice. That said, all such artefacts, both symbolic and material, are defined through collective and meaningful endeavour; it is how such communities develop over time and, therefore, even organizationally define CoP have the potential to develop such meaningful activity for participants. The difficulty will be in aligning leadership, participation and identity with their intended teleological function. This is likely to become more difficult in larger contemporary organizations where the conduct of work involves more trading zones, the potential for cross-cutting objectives and practices and where boundaries of the firm, both inside and outside are permeable or virtual (Fuller, 2007; Jewson, 2007). Finally, the paper provides a concrete example of how organizational learning theory is translated into practice through managerial strategies. Furthermore, it shows how research of that practice, can be used to develop and inform emergent and situated learning in organizations. In doing, so there is the potential to create a recursive relationship between theory and practice such that academic theory is better able to translate its relevance into organizational practices.

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