Questioning the Place of Communities of Practice

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The role of communities in the process of learning and knowledge generation has attracted much attention in recent years in the context of intra and inter organizational knowledge transfer (Hass, 1992; Knorr-Cetina, 1999; Boland and Tenkasi, 1995; Cohendet, and Llerena, 2003; inter alia.) In particular, communities of practice (CoPs), which have been identified as a mechanism through which knowledge is held, transferred and created (Brown and Duguid, 1991; Lave and Wenger, 1991; Orr, 1996; Wenger, 1998, 2000), have become increasingly influential within management literature and practice. Originally developed by Lave and Wenger (1991) in a study of situated learning, the framework is currently being used to analyse and facilitate knowledge transfer in a wide range of diverse environments. Indeed, CoPs have become a fashionable knowledge management practice.

These developments in organizational literature and practice are set against the context of the growing significance of knowledge and innovation in economic activity (see for example, OECD 1996a, 1996b; DTI 1998). The terms knowledge-based economy and learning economy have become common place in descriptions of advanced economies.[1] It has been argued that knowledge has become the only resource that can create a continuous competitive advantage for a nation (Drucker 1993). Natural resources are no longer a guarantee of competitiveness, and capital resources have become highly mobile and therefore cannot secure a nation's competitiveness (Reich 1992). Consequently, innovation, science and technology, and learning are fundamental to the competitive success of economies in the knowledge-based era (Lundvall 1992; Lundvall and Johnson 1994; Castells, 1996).

There are several established approaches to understanding and promoting the creation and transfer of knowledge in an inter-organizational context whether at an urban, regional or national level. These approaches include national and regional

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[1] Other terms used to denote the central importance of intangibles, knowledge and information in the economies of advanced countries include: information economy, digital economy, experience economy, weightless economy, and intangible economy.

systems of innovation (Nelson 1999; Howells 1999; inter alia.), clusters (Porter 1998; Malmberg and Maskell, 2002; Bresnahon and Gambardella, 2004; inter alia) industrial districts (Becattini 1990, 2004; Markusen, 1996), innovative milieux (Camagni, 1995) and networks (Håkansson, 1987, Bjorg and Isksen, 1997).

While CoPs have already attracted much attention in management literature and practice, they also have relevance for the debates surrounding the knowledge-based and learning economy, which are of interest to policy makers and social scientists concerned with economic development. It is then no surprise to find that CoPs are increasingly receiving attention from academics in the fields of economics and economic geography (see for example, Amin and Cohendet, 2004). If CoPs can lead to effective learning and knowledge generation within and between organizations, can they be used to promote learning and innovation in an extra-organizational context at a regional, national and even international spatial scale? Drawing on extant research, focused largely at the intra or inter-organizational level, this paper aims to provide insights into the use of CoPs within broader spatial and social contexts. While we argue that the framework does have value beyond the intra and inter-organizational context, we suggest that there is a need to develop our understanding of CoPs by differentiating between them in relation to their spatial reach and social context. The extension of the original conceptual framework without any attempt to account for differences, such as spatial scale, risks weakening the original conceptualisation of CoPs as learning and knowledge generating entities situated in social practice. The CoP is in danger of being used to explain all manner of knowledge and learning environments and in the process losing its original focus and explanatory value.

We begin by exploring early conceptualizations of CoPs (Lave & Wenger, 1991; Wenger, 1998). A brief overview of the scope of extant empirical studies of CoPs is provided. Attention then turns to the size and spatial reach of CoPs and the need to differentiate between different types of CoPs. The place of CoPs in the knowledge-based economy is considered. We conclude with a brief assessment of the place of CoPs among approaches to inter-organizational learning and knowledge generation and point to policy measures to promote their role in economic development.

WHAT ARE COMMUNITIES OF PRACTICE?

The concept of communities of practice was originally developed by Lave and Wenger (1991) in a study of situated learning in the context of five apprenticeships: Yucatec midwives; Vai and Gola tailors; naval quartermasters; meat cutters; and non-drinking alcoholics. Lave and Wenger (1991, p. 98) argue that a community of practice, which they define as 'a system of relationships between people, activities, and the world; developing with time, and in relation to other tangential and overlapping communities of practice' is an intrinsic condition of the existence of knowledge. Brown and Duguid, (1991, 1998), drawing on the work of Orr (1996) among others, have further developed the approach. Moreover, through a study of an insurance claims processing office, Wenger (1998) developed a detailed understanding of the dynamic operation of communities of practice. The communities of practice approach focuses on the social interactive dimensions of situated learning, a subject that has received attention from a variety of other organizational researchers (see, for example, Barley and Orr, 1997; Blackler, 1995; Boland and Tenkasi, 1995; Gherardi, et al., 1998; Carlile, 2002).

According to Wenger (1998, p. 55), within communities of practice, meaning is negotiated through a process of participation and reification. Wenger (1998, p. 58) defines the concept of reification as the process of giving form to experience by producing objects. 'Any community of practice produces abstractions, tools, symbols, stories, terms, and concepts that reify something of that practice in a congealed form' (Wenger, 1998, p.59). Such forms take on a life of their own outside their original context where their meaning can evolve or even disappear.

For Wenger (1998) communities of practice are important places of negotiation, learning, meaning, and identity. Wenger (1998, pp. 72-84) identifies three dimensions of the relation by which practice is the source of coherence of a community. Firstly, members interact with one another, establishing norms and relationships through *mutual engagement*. Secondly, members are bound together by an understanding of a sense of *joint enterprise*. Finally, members produce over time a *shared repertoire* of communal resources, including, for example, language, routines, artifacts and stories. Furthermore, Wenger (2000, p. 227-8) distinguishes between three modes of belonging to social learning systems. Firstly, *engagement* is achieved through doing things together, for example, talking and producing artifacts. Secondly, *imagination*

involves constructing an image of ourselves, of our communities, and of the world, in order to orient ourselves, to reflect on our situation, and to explore possibilities. Finally, *alignment* involves making sure that our local activities are sufficiently aligned with other processes so that they can be effective beyond our own engagement.

The existence of a community of practice may not be evident to its members because, as Wenger (1998, p.125) notes, 'a community of practice need not be reified as such in the discourse of its participants'. Nevertheless, he argues that a community of practice does display a number of characteristics including those listed in Table 1.

Table 1 The Characteristics of Communities of Practice

Key Characteristics of a Community of Practice
▪ Sustained mutual relationships — harmonious or conflictual
▪ Shared ways of engaging in doing things together
▪ The rapid flow of information and propagation of innovation
▪ Absence of introductory preambles, as if conversations and interactions were merely the continuation of an ongoing process
▪ Very quick setup of a problem to be discussed
▪ Substantial overlap in participants' descriptions of who belongs
▪ Knowing what others know, what they can do, and how they can contribute to an enterprise
▪ Mutually defining identities
▪ The ability to assess the appropriateness of actions and products
▪ Specific tools, representations, and other artefacts
▪ Local lore, shared stories, inside jokes, knowing laughter
▪ Jargon and shortcuts to communication as well as the ease of producing new ones
▪ Certain styles recognized as displaying membership
▪ A shared discourse reflecting a certain perspective on the world

Source: compiled from Wenger (1998, pp. 125-6).

Communities of practice are not stable or static entities. They evolve over time as new members join and others leave. Communities of practice as defined by Lave and Wenger (1991) cannot be formed. For example, a business can establish a team for a particular project, which may, in time, emerge as a community of practice. But management cannot establish a community of practice. What it can do is facilitate the spontaneous emergence of communities of practice and support those communities of practice that do develop. As Brown and Duguid (2001a) suggest, managers can seek to structure spontaneity; in particular, they have a role to play structuring fragmented practice across their organization. On the one hand, managers have a role supporting

the development of communities of practice. On the other, they can encourage alignments of changing practices between communities, thereby assisting the transfer of knowledge across the organization (Brown and Duguid, 2001a). More recent contributions suggest that communities of practice can be cultivated and leveraged for strategic advantage (Wenger McDermott and Synder, 2002; Saint-Onge and Wallace, 2003). In line with this view, an increasing number of consultancy firms are offering to improve their clients' abilities to manage knowledge creation and dissemination by identifying or establishing communities of practice.[2]

The CoPs framework provides a useful conceptual framework with which to analyse the creation and transfer of knowledge over space and time. It has consequently attracted much attention from academics and practitioners concerned with the effective management of knowledge. Managers are seeking to develop and support communities of practice as part of their knowledge management strategies and communities of practice can in some senses be viewed as a new organisational form (Wenger and Snyder, 2000, Wenger, McDermott and Synder, 2002), which can create value and improve performance (Lesser and Storck, 2001). Furthermore, Swan, Scarbrough and Robertson (2002) suggest that the notion of communities of practice can be used as a rhetorical tool to facilitate the control of professional groups over which managers have little authority. Additionally, much research concerning the transfer of knowledge and information in virtual organisations has been influenced by the communities of practice literature (see for example, Smeds and Alvesalo, 2003; Pan and Leidner, 2003; Schwen and Hara, 2003; Johnson, 2001).

While the community of practice literature is increasingly popular (Wenger et al., 2002; Saint-Onge and Wallace, 2003) it has attracted criticism concerning, for instance, the marginalisation of the issue of power (Contu and Willmott, 2003; Fox, 2000), its failure to take into account pre-existing conditions such as habitus and social codes (Mutch, 2003) as well as its widespread application within organizational studies beyond its original focus on situated learning (Handley et al. 2006), and the use of the term 'community' which is problematic, embodies positive connotations and is open to multiple interpretations (Lindkvist, 2005, Roberts, 2006).

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[2] The French firm Knowings is an example of a consultancy promoting the community of practice as a knowledge management tool, details available at www.knowings.com (last accessed 30/11/05)

EMPIRICAL STUDIES OF COPS

A large body of literature has developed concerning CoPs since Lave and Wenger's original use of the term in1991. In this section a rough sketch of the extent of this literature is provided, with an indication of where CoPs have been identified and applied. A search of *EBSCO Business Source Premier* database provides the data presented in Chart 1. The number of publications listed for the search term 'communities of practice' during each year since 1990 is illustrated. From this data it is evident that the framework's popularity is growing. Academic journal publications are greater than other publications suggesting perhaps that the framework is still in a process of being refined and the application of CoPs in the business environment is in an early stage of development. This body of literature includes theoretical, conceptual and review papers together with critiques and papers reporting the findings of empirical studies.

Chart 1
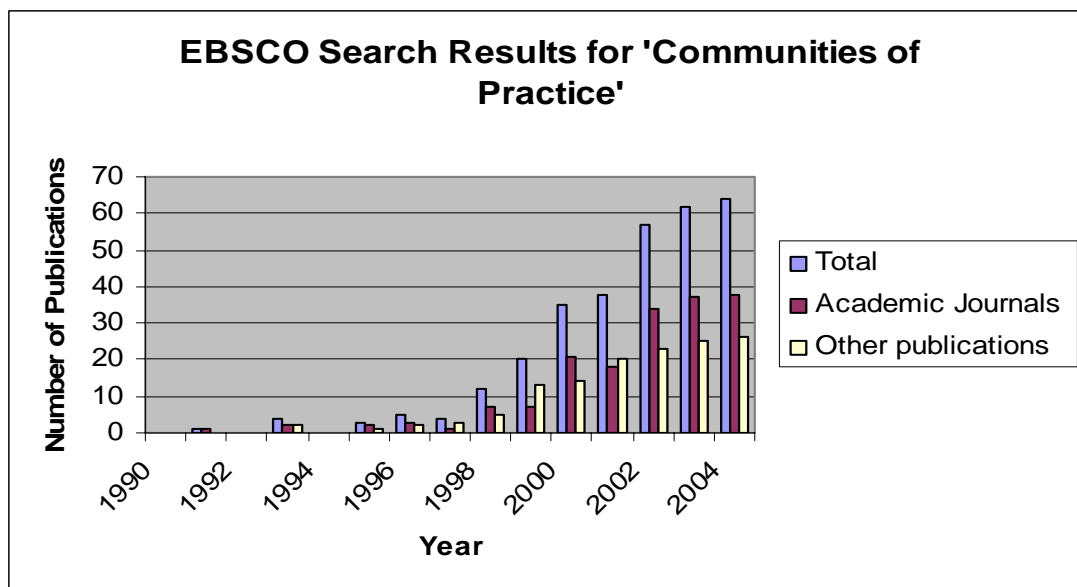
Sources: Chart derived from a search of EBSCO in January 2005.

Note: *EBSCO Business Source Premier*, provides full text for nearly 7,600 scholarly business journals and other sources, including full text for more than 1,125 peer-reviewed business publications. This database offers information in nearly every area of business.

The CoP approach has emerged from academic research into situated learning and actual working practices such as insurance claims processing and photocopy machine

repair. It has subsequently been further articulated in management academic literature and is currently being applied as one of a number of knowledge management tools in many organisational settings. Empirical investigations studies range from CoPs in education and healthcare to learning in business organizations and in extra organizational environments, financial services, innovation and manufacturing to on-line communities and a range of miscellaneous contexts including a witches coven (Merriam et al, 2003) Table 2 provides a preliminary summary of this empirical research.[3]

The research methods adopted in these empirical studies range from detailed ethnographic investigations (e.g. Orr 1996, Thompson 2005, Adams and Blandford, 2005) to other qualitative case studies including interviews, focus groups and questionnaire surveys (Dewhurst and Cegarra-Navarro, 2004; inter alia). In addition, investigations that feature the use of on-line communities include analysis of email and e-portal usage data (e.g. Ardichvilli et al 2003; van Baalen et al., 2005).

Many of the CoPs described in the empirical literature, whether they reveal the existence of CoPs or report on the application of the framework to particular learning and knowledge generation contexts, are far from the CoPs articulated in Lave and Wenger's (1991) original work on situated learning. In particular, much of the empirical research is concerned with on-line and distributed communities. However, in its original conceptualisation the CoPs is very much a socially situated community involving face-to-face interaction between members working in close proximity to one another. Identity formation through participation and the negotiation of meaning are central to early conceptualisations of the CoPs. However, more recently interpretations of CoPs have demonstrated greater flexibility in terms of size and spatial reach, levels of participation and so on. How useful is it to use the term CoPs in such a wide variety of circumstances? Surely it is necessary to make a distinction between these different types of CoPs? The next section attempts to address these questions.

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[3] This research project is on-going. Information is sought on additional empirical studies on CoPs. Please contact joanne.roberts @durham.ac.uk with any suggestions you may have for additions to this literature.

Table 1. Summary of CoPs Empirical Studies

CoPs context	Studies
Education (including the academic community)	Adams & Freeman (2000); Bruce & Easley Jr (2000); Burroughs, Schwartz and Hendricks-Lee (2000); Duncan_Hewitt & Austin (2005), Durning (2004); Janson, Howard & Schoenberger-Ograd (2004); Kling & Courtright (2003); Schlager & Fusco (2003); Shay (2005); Tomlinson (2002); Triggs & John (2004).
Healthcare (including residential care)	Adams & Blandford (2005); Donaldson, Lank & Maher (2004, 2005); Ferlie, Fitzgerald, Wood & Hawkins (2005); Freed (1999); Fuller, Hodkinson, Hodkinson & Unwin (2005); Gabbay & Le May (2005); Goodwin, Pope, Mort & Smith (2005); Jacobs & Coghlan (2005); Josefsson (2005); Lathlean & Le May (2002);
Learning in business organizations	Ayas & Zeniuk (2001); Boud & Middleton (2003); Benner (2003); Geiger & Turley (2005); Gherardi & Nicolini (2000, 2002); Gongla & Rizzuto (2001); Grabher (2004); Mutch (2003); Orr (1996); Sole & Edmondson (2002); Yanow (2000).
Learning in extra organizational contexts	Benner (2003); Conway et al. (2005); Dawley et al. (2005); Dewhurst & Cegarra Navarro (2004).
Financial sector (insurance, venture capitalist)	Dignum & van Eeden (2003); Saint-Ogne & Wallace (2003); Smit & de Moor (2004); Wenger (1998); Zook (2004).
Innovation (including product and software development and design)	Carlisle (2002, 2004);Dougherty (2001, 2004); Edwards (2001); Fischer (2001); Kähkönen (2004); Nues (2001); Swan, Scarbrough & Robertson (2002); Tiegland (2000); Un & Cuervo-Cazurra (2004).
Manufacturing	Ardichvili, Page & Wentling (2003); Pan & Leidner (2003); Powers (2004).
Online communities (including intranets and technologies to support such communities)	Abdullah et al (2005); Allen & Taylor (2005); Baalen, van et al (2005); Barton, Currier & Hey (2003); Cox & Morris (2004); Cox, Patrick & Abdullah (2003); Davenport (2001); Dube, Bourhis & Jacob (2005); Hall & Graham (2004); Hernández-Martí (2005); Hung & Nichani (2002); Kavanaugh et al. (2005); Kimble, Hildreth & Wright (2000); Lueg (2000); Pak & Snell (2003); Rogers (2000); Vaast (2004); Wasko & Faraj (2000).
Miscellaneous	Ehrlich (1999); Kodama (2002); Lesser & Storck (2001); Merriam, Courtenay & Baumgartner (2003); Ostermann (2003).

Note: This categorization of CoPs empirical research is tentative. Many studies overlap in terms of the relevant context, this is particularly the case for on-line communities. Consequently, in some cases the selection of context is somewhat arbitrary. Where studies include a wide number of contexts or and unusual context they have been classified as miscellaneous.

SIZE AND SPATIAL REACH: THE FLEXIBLE COP?

Communities of practice were originally presented as spontaneous, self-organizing and fluid processes (Lave and Wenger, 1991). However, in later work Wenger and Snyder (2000), among others (Wenger et al., 2002; Saint-Onge and Wallace, 2003), suggests that they are not only amenable to manipulation by organizational designers but can be applied in a wide variety of organizational contexts. For instance, Wenger et al. (2002), consider CoPs in large multinational organizations, including Shell Oil Company, Daimler Chrysler, Hewlett Packard Company, McKinsey and Company and the World Bank. Not only are CoPs applied in large multinational organization but some are also identified as having very large memberships. For example, Shell Exploration and Product International Ventures includes a globally distributed community of more than 1,500 members (Wenger et al., 2002, p. 115). While it may be possible to identify CoPs in both small groups of people working in close proximity and in globally distributed communities of 1,500 people, there is surely a significant difference between these two types of CoPs? Is it really possible to apply exactly the same principles to these two communities?

In some senses large distributed communities can be viewed as a collection of CoPs. According to Wenger (1998), a specific community of practice can be part of any number of constellations of practice, which arise from interactions among practices involving boundary processes. Wenger (1998, 2000) identifies a number of boundary processes through which knowledge can be transferred including brokering, boundary objects (Star and Griesemer, 1989), boundary interactions and cross-disciplinary projects. For instance, elements of styles and discourses can travel across boundaries (Wenger, 1998, p. 129) diffusing through constellation they can be shared by multiple practices and create forms of continuity that take on a global character. But such styles and discourses may be integrated into these various practices in very different ways.

The boundaries between CoPs are not fixed, but flexible, continuously shifting, porous in nature and difficult to identify. Although communities may originate in a local context, sustained and repeated interaction facilitated by various boundary processes may create new spatially extensive communities and constellations (Coe and Bunnell, 2003, p. 446). For instance, in a study of CoPs in a high-technology

firm, Teigland (2000, p. 143) identified the importance of Internet communities that exhibited many of the characteristics of CoPs but the individuals involved have typically never met.

Technological developments in transportation and information and communication technologies (ICTs) are increasing the scope of engagement, but, as Wenger (1998, p. 131) argues, these developments involve trade-offs that reduce participation in the complexity of situations and their local meanings. Amin (2002) suggests that organizational or relational proximity, achieved through CoPs, may in reality be more important than geographical proximity. Relational proximity, usually achieved through face-to-face interaction may also be achieved through ICTs and the mobility of individuals (Coe and Bunnell 2003, p. 445). Indeed, Sole and Edmondson (2002, p. 32), noting the importance of the mobility of people in multi-site teams, claim that '… dispersed teams may be successful, … because they have enhanced awareness of a greater breadth of situated knowledge from which they are … better positioned to learn'.

Constellations of practice, together with other concepts such as fractal structures for global communities (Wenger et al, 2002, p. 127), help to incorporate spatially dispersed, virtual, or distributed communities and very large communities. However, Brown and Duguid (1991) argue that all but the smallest of organizations should be regarded as communities of communities of practice. They make use of the term networks of practice to describe relations among members which are significantly looser than those in a CoP (Brown and Duguid, 2001b, p. 205). While members of such a network are able to share knowledge most of them will never know or meet one another.

However, it is questionable as to whether what are conceptualised as CoPs in many empirical studies are CoPs in the sense of Lave and Wenger's (1991) original elaboration. The original conceptualisation was very much one of learning and knowledge creation embedded and situated in social practices. But the term CoPs has been stretched and has become so flexible that it is now applied to a wide variety of learning and knowledge creating activities. Many of these activities do not include situated social practice, but rather dislocated practice, with members being separated in time and/or space. Also, although much of the interaction incorporated in studies of CoPs may be situated, in the sense that it occurs face-to-face, it may not be directly

linked to the process of learning and knowledge creation in practice. Social interactions in professional associations, for instance, may impact on the knowledge or learning of individual members, but that learning does not necessarily occur through the socially situated practice of a number of members working together. So there is a sense in which social interaction can occur without a direct impact on practice. This type of social interaction is dislocated from practice.

Just as Lindkvist (2005) develops an alternative, though complementary, view of communities of practice in the form of collectivities of practice, to refer to temporary groups or project teams concerned with knowledge creation and exchange, there is a need to differentiate between CoPs of different sizes and spatial scales and the nature of practice. There are then different types of knowledge creating and transferring communities. Table 2 below outlines a tentative typology of CoPs.

Table 2 A Tentative Typology of CoPs

Nature of Practice	Type of CoPs	Examples
Situate Practice - Involving mutual engagement	Community of Practice	Yucatec midwives; Vai and Gola tailors; naval quartermasters; meat cutters; and non-drinking alcoholics (Lave and Wenger, 1991), Xerox repair technicians (Orr, 1996) Insurance claims processors (Wenger 1998)
Situated Practice - achieved through boundary spanners/brokers	Constellations of Practice	Insurance company (Wenger 1998)
Dislocated Practice*	Networks of Practice:	
	• Local	Urban creative industries (Conway et al. 2005).
	• Regional	Women's Internet design and development association (Benner, 2003);
	• National	National Health Service (www.nks.nhs/uk)
	• Global	World Bank (Wenger et al. 2002)
	• Virtual	Open Source Software (Edwards, 2001)

* Members to not practice together although they may be co-located. Their interactions will include knowledge exchanges relevant to practice, but they are not mutually engaged in practice. Dislocated practice may include membership of formal or informal associations.

Wenger et al. (2002, p. 220) suggest that 'the complexity of markets and learning systems in the knowledge economy have sparked a trend towards communities that are not confined to a single organization'. The increased competition and speed of change in markets and supply conditions due to technological developments and globalization in the past 20-30 years has resulted in organizational restructuring, downsizing and a growth of outsourcing. Wenger et al. (2002, p.220) argue that 'interorganizational communities of practice help to maintain internal expertise while strengthening relationships with outsourcing partners'(p. 220). Hence CoPs that exist independently of business organizations may take on an increasingly important role in the creation and transfer of knowledge. Furthermore, Kimble and Hildreth (2004) argue that workers increasingly operate in an individualistic world of weak ties where resources are frequently obtained through personal networks and individual relationships rather than through organization based communities. Individuals belong to a variety of CoPs some internal to their work organization while others will be external arising from their personal and professional networks.

The film industry provides an exemplary case of the importance of extra-organizational CoPs. Here individuals come together to create a film and once this is achieved they disperse, yet they remain members of film making community even when they are no longer employed by a film producing business organization (see for instance, DeFillippi and Arthur,1998). The shared enterprise, mutual engagement and shared repertoire of the film making community are brought to bear in the temporary project of the production of a film, but it is in these extra-organizational communities of practice that new members gain legitimate peripheral participation and over time become full participants. Employment opportunities will come and go but membership of a CoP becomes an important constant in the lives of certain workers in the current accelerated business environment (Roberts, 2006).

The empirical literature does include investigations of a number of extra-organizational COPs. For example, Benner (2003), examines the value of CoPs in supporting individual learning and collective learning processes in Silicon Valley using a case study of an association of women in Internet design and development occupations. There are also examples of the approach being applied to urban economic development in terms of silicon alley in Newcastle, UK (Conway, et al.,

2005) and regeneration (Dawley, et al., 2005). Economists and geographers are increasingly adopting the CoPs framework in their explorations of economic development. CoPs would then appear to hold value in terms of understanding learning and knowledge systems beyond the boundaries of organizations or inter-organizational activities.

The value of CoPs in the promotion of learning and knowledge generation will vary according to the broad socio-cultural context (Roberts, 2006). National competitiveness deriving from knowledge creating and sharing capabilities may then vary depending on nation-specific socio-cultural characteristics, such as, levels of trust or the relative position of the individual versus the community. The CoP as a tool of learning and knowledge generation may well be more successful in those regions and nations that have a strong community spirit compared to those nations that have a weak community spirit. For instance, in relation to Hofstede's (1991) study of national culture, we might expect that a nation characterised by collectivism might find that the CoP is a more effective knowledge creation and dissemination strategy than nations characterised by individualism. If this is the case, then a country wishing to excel in the knowledge-based era through the development of CoPs will need to promote community in the wider society through education and social infrastructures. Consequently, the broad national system of innovation will influence the success of CoPs as a mechanism for learning and knowledge creation.

CONCLUSION

We began by exploring early conceptualizations of CoPs (Lave & Wenger, 1991; Wenger, 1998) before briefly exploring the scope of extant empirical studies. Much research has been conducted which uses the CoP framework as a tool of analysis. Many very different contexts are interpreted as CoPs. Importantly many of these are far removed from the context in which the CoP emerged as a means of appreciating situated learning and knowledge creation. When considering the size and spatial reach of CoPs we identified the need to differentiate between different types of CoPs. A tentative typology of CoPs was presented. The place of CoPs in the knowledge-based economy was then briefly considered. We argue that the CoP, as defined in our typology, does offer a mechanism for the exploration of learning and knowledge

generation in various spatial contexts. We see CoPs as complementary to other frameworks, such as regional and national systems of innovation, industrial districts, clusters, innovative milieux and networks, which seek to explain learning and knowledge generation at regional and national levels. CoPs provide a means of revealing how the social situated interaction within such environments contributes to learning and knowledge generation, in this way they add another layer to our understanding of the innovation and learning processes.

Analyses of organizational specific CoPs suggest that managers can do much to promote their successful development (Brown and Duguid, 2001a; Wenger, et al. 2002; Saint-Onge and Wallace, 2003). Similarly policy-makers, while not being able to create local, regional or national CoPs, can contribute to their construction through the provision of supportive institutions and infrastructures.

This paper is the result of ongoing research into use of the CoP as a mechanism for learning and knowledge generation in intra, inter and extra organizational activity. A number of questions have emerged from the research to date, some of which have been tentatively addressed here. In particular, we have presented an initial attempt to classify CoPs, with a view to providing a means to distinguish between CoPs of various sizes and spatial scales and the nature of practice. Further research will lead to a more refined version of the typology of CoPs presented here.

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