What are communities of practice? A comparative review of four seminal works.[1]

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Abstract

This paper is a comparative review of four seminal works on communities of practice (Lave and Wenger 1991, Brown and Duguid 1991, Wenger 1998, Wenger, McDermott and Snyder 2002). It is argued that the ambiguities of the terms community and practice are a source of the concept's reusability allowing it to be reappropriated for different purposes, academic and practical. However it is potentially confusing that the works differ so markedly in their conceptualisations of community, learning, power and change, diversity and informality. The three earlier works are underpinned by a common epistemological view, but Lave and Wenger (1991) is often read as primarily about the socialisation of new-comers into knowledge by a form of apprenticeship, while the focus in Brown and Duguid (1991) is, in contrast, on improvising new knowledge in a interstitial group that forms in resistance to management. Wenger (1998) treats communities of practice as the informal relations and understandings that develop in mutual engagement on an appropriated joint enterprise, but his focus is the impact on individual identity. The applicability of the concept to the heavily individualised and tightly managed work of the twenty first century is questionable. The most recent work (Wenger, McDermott and

Snyder 2002) marks a distinct shift towards a managerialist stance. The proposition that managers should foster informal horizontal groups across organisational boundaries is in fact a fundamental redefinition of the concept. However it does identify a plausible, if limited, Knowledge Management (KM) tool. The paper discusses different interpretations of the idea of "co-ordinating" communities of practice as a management ideology of empowerment.

1   **Introduction**

The concept of communities of practice has become popular in several academic fields including organisational studies (particularly the topics of knowledge management and organisational learning) and education. Information scientists interested in knowledge and learning are also using the term (witnessed, for example, by bibliographic reviews in the Annual Review of Information Science and Technology, (Davenport and Hall 2002, Ellis, Oldridge and Vasconcelos 2004)). However usage of the term is very diverse. Sometimes it is a conceptual lens through which to examine the situated social construction of meaning. At other times it is used to refer to a virtual community or informal group sponsored by an organisation to facilitate knowledge sharing or learning. This paper does not attempt to prescribe one definition, rather it aims to clarify for the reader variations in usage and comment critically on the different conceptions.

A particular cause of confusion is significant divergences between three earlier seminal works; one or all of which are cited by almost every author who uses the concept. These are:

- *Situated learning: legitimate peripheral participation* (Lave and Wenger 1991), a theory of newcomer learning stressing it as a continuous, active, engaged, situated and identity forming process – in contrast to the then dominant cognitive view.

- *Organizational learning and communities of practice: toward a unified view of working, learning and innovation* (Brown and Duguid 1991), which takes the concept more directly into the organisational setting, stressing communities of practice's role in the improvisation of new understanding where canonical accounts of work prove inadequate to "get the job done" and stressing the importance of narrative.

- *Communities of practice: learning, meaning and identity* (Wenger 1998) which focuses on social identity, trajectories of participation and the stresses of dilemmas to the individual of their multi-membership of different communities.

These works share some important common ground: in particular their view of meaning as locally and socially constructed and in placing identity as central to learning. Yet the most distinctive concepts of each are often absent in the others. There are significant divergences in their most basic conceptualisation of:

- community
- learning
- power
- change
- formality
- diversity

This is despite the fact that the four authors were associates at the Institute for Research on Learning (Jordan 1996) and build on a body of common influences in ethnographic studies of work by Suchman and Lave (Davenport and Hall 2002). The works also differ in style and depth of treatment from theoretical monograph to practical handbook.

The first sections of the paper therefore consider each of these earlier works in turn in an attempt to foreground the differences. Comment is also made on the strengths and limits of the contribution of each to the literature.

The discussion is continued by considering, as representative of the burgeoning literature of "COPs" as managerial tools, Wenger's latest work,

- *Cultivating communities of practice* (Wenger, McDermott and Snyder 2002) which is a guide for practitioners to forming and managing informal groups composed of members drawn from across functional boundaries to enhance organisational performance.

That Wenger's work is increasingly "performative" rather than "analytic" has been well recognised (Contu and Willmott 2000, 2003; Davenport and Hall 2002). So while acknowledging the power and practical value of such works, Wenger, McDermott and Snyder (2002) is viewed in this paper from a critical stance (Alvesson 2002), consistent

with the critical roots reflected in the original thinking of Lave and Wenger (1991) (Contu and Willmott 2003).

Having considered the four works, a summary section draws together the discussion foregrounding their differences and particular contributions. The conclusion points to a major distinction between direct and indirect social relations as the foundation of communities.

2   Lave and Wenger (1991)

The dominant reading of Lave and Wenger (1991) has been that it proposes a new approach to understanding learning, including that which takes place in the workplace. This approach focuses on informal and situated social interaction, rather than on a planned mechanistic process of cognitive transmission. Such interaction achieves authentic, motivated learning of what is needed to be known about the complexities of real practice. It is a central proposition that learning is more than simply acquiring knowledge, it is about an identity change. Peripheral participation, active involvement in the practice, is identified as a key process in learning. Table 1 summarises some features of this new account, set against the rejected orthodoxies (as the authors themselves construct them).

Table 1 The new model of learning proposed in Lave and Wenger (1991)

Old model (cognitive)	New model (constructivism, situativism)
Teaching	Learning
Classroom	In Situ
By Teaching	By observation (therefore social)
	By peripheral participation
(individualised) pupil learns from teacher	Learning from other learners (therefore social)
Planned in a curriculum	Informal, driven by the task (though elements of the apprenticeship are formal)
Learning is a mechanistic, cerebral process of transmission and absorption of ideas	Learning is as much about understanding how to behave as what to do, and is an identity change

As regards concept of community, there is something of a tension between the final theory and the cases of apprenticeship learning from which it is derived. The practices used as examples in the book are coherent crafts, such as butchery or tailoring and as such are communities that are rather all-encompassing for the individual member. The book has even been read as suggesting the reintroduction of apprenticeship styles of learning in the

workplace. Thus a surface reading would see a community of practice as a unified, neatly bounded group, whereas what is intended is a far more subtle concept. Community of practice is never defined precisely (Lave and Wenger 1991: 42), but it is not a "primordial culture sharing entity" (98) rather those involved have different interests and viewpoints. It is not a sub-culture. Use of the term community does not "imply necessarily co-presence, a well-defined, identifiable group or socially visible boundaries" (98), rather it is "participation in an activity system about which participants share understandings concerning what they are doing and what that means for their lives and for their communities" (98). As Gherardi, Nicolini and Odela (1998: 279) argue:

> Referring to a community of practice is not a way to postulate the existence of a new informal grouping or social system within the organisation, but is a way to emphasize that every practice is dependent on social processes through which it is sustained and perpetuated, and that learning takes place through the engagement in that practice.

Lave and Wenger (1991) is a subtle (even poetic) account of mutual participation in practice, whose purpose is to look at the level at which agency and structure are married. It has often been read or cited in more crude senses.

Lave and Wenger (1991) is essentially a picture of how newcomers are socialised (albeit through a more active and engaged process than that word implies) into a rather static practice community, through legitimate peripheral participation. There is one hook for understanding change and conflict in such groups in the notion of generational conflicts focussed on the legitimation of the participation which is central to learning (a point reinforced by Lave 2004). Yet this is probably not adequate to explain all the power forces within a community, let alone those that structure it from outside. It does not consider the potential for conflict among old timers themselves or indeed among newcomers. Fox (2000) supplies a more developed conceptualisation of how the legitimation process, as a power struggle, using Actor Network Theory. As portrayed in Lave and Wenger (1991) the concept betrays its origin in anthropology in seeing the community as a rather self sufficient entity. Thus the relationship between communities or between communities and other entities as a source of change and conflict is not considered, a critical failing (Osterlund and Carlile 2003).

Lave and Wenger (1991) has been a very influential corrective to previous educational practice, and continues to be so, accepting the limit that teaching and individual learning are recognised to have continuing validity as educational paradigms. It may be however that the pressurised setting of the modern workplace is not the most likely environment for this approach to learning (Owen-Pugh 2002: 5).

3   Brown and Duguid (1991)

Brown and Duguid's purpose is to show how informal groups form to improvise solutions to problems, when canonical (abstracted managerial) accounts of work prove inadequate. A key aspect of the thesis is that all canonical accounts of work are inevitably flawed, inflexible and limited, so "getting the job done" always requires locally developed understanding. The emphasis in this account is on the generation of solutions to novel problems, less the reproduction of existing knowledge, as it was in Lave and Wenger (1991). The proposition is that organisations should recognise the value of this source of shop floor innovation and foster the informal networks which actually work out how to get the job done. All Brown and Duguid's evidence is drawn from Orr's ethnographic studies of photocopier repairmen, later drawn together in *Talking about machines* (1996). Orr captured the richness and complexity of the reps' invisible work, and the degree to which creative collective effort through storytelling, though unsponsored by the organisation, was vital to their work.

Although philosophically close to Lave and Wenger (as is apparent from comparing tables 1 and 2), there are marked differences of focus. As regards learning, Brown and Duguid are writing about improvised new practice, not the reproduction of an existing practice. This may explain why there is little reference to the concept most borrowed by other writers from Lave and Wenger (1991), legitimate peripheral participation. As a consequence Brown and Duguid's (1991) concept of community seems relatively homogenous, without different levels of participation. Equally learning the job is not something Orr himself discusses in depth. Brown and Duguid's community has a counter cultural feel and the authors are very much concerned with the relation between communities. This is a valuable expansion of the concept, because the relation between a community of practice and the rest of the world, including the organisation, is a key issue. They also stress narrative more than Lave and Wenger (1991) or Wenger 1998, though it

is important to Wenger et al (2002). Their concept of the community is internally egalitarian, whereas a critical aspect of Lave and Wenger's is that a community includes masters and apprentices. Since the tension between these generations is the motor of conflict, this is paralleled by Brown and Duguid's losing sight of conflict. The result is more than simply a picture of a harmonious collaborative group based on shared meanings which is too romantic, as Contu and Willmott suggest, there may be an affinity "between the dilution and selective adoption of Lave and Wenger's thinking and its ideological compatibility with dominant managerial values" (2003:284).

Table 2 The contrasting nature of canonical and non canonical knowledge

Canonical knowledge	Non canonical knowledge
Abstract	Situated
Written, logical	Oral, narrative, loosely structured
Fixed	Improvised
Imposed, deskilling	Collaborative, enabling
Individualising	Collective
Alienating	A place in which identity is made and accepted
Merely a useful resource	Right (works to fix photocopier)

It is interesting to note that Orr (1996) does not himself use the term community of practice or even cite Lave and Wenger, preferring to use the concept of occupational community (van Maanen and Barley 1984). This notion points to the power of common work situations and structures – as opposed to directly joint practices - to create commonality (imagined community in Anderson's (1991) sense), immediate mutual understanding (compare with Wenger's community of practice indicator 4, Wenger 1998:125) and underpin social networks. A continuing cause of confusion in community of practice writing is its relation with occupational/professional community.

Brown and Duguid's argument is based on a radical rejection of formalised accounts of work. But there are several contingent factors why the Xerox manual was in this case so poor (Orr:107) and in fact the reps did regard it as a "useful resource" (111). If we accept that rationalised accounts of work (and formal training) are useful, then the space for communities of practice to operate is limited.

Much of the power of the argument turns on how far the photocopier repairmen's case described by Orr and as interpreted by Brown and Duguid is typical or exceptional. There

are good grounds for seeing the repairmen's situation as rather unique. Certainly it was the (unintentional) outcome of structures created by the organisation itself. Thus essential preconditions of the formation and character of the community were such factors as the complete inadequacy of the management supplied manuals and training, the threat by management to the reps' status providing an external motivator for collaboration and identity creation and the existence of suitable unsupervised social spaces and relative freedom to gather in them. These can hardly be regarded as typical work conditions; vary the conditions and the resulting counter community, if one emerged at all, might be very different.

One interesting aspect of the Xerox case is that we know a little of the history of the corporate response to Orr's discoveries. Xerox introduced radios for "reps" to communicate with each other (but this was also a justification to make some of them redundant) (Raba 1998). The new understanding was also paralleled by the decision of a group of designers to turn away from producing an expert system to support the repairmen and instead create (by participative design) a "knowledge sharing" tool (Bobrow and Whalen 2002). This account of subsequent events shows how the knowledge generated by communities of practice may actually be successfully reified within a closely managed, technology based solution. Thus the knowledge sharing system has morphed from something called Colombos, operating over Minitel in France, to (part of) a web based corporation wide portal, called Eureka II. Significantly, neither Colombos nor Eureka is a storytelling or community building tool. Eureka is a simply structured relational database of copier fixing tips, recording problem – cause – solution[2]. Thus a local community activity has become a global system. Complex storytelling has been superseded by simple structured information sharing (with a quality control system). Stories as containers for all sorts of information such as the history of a particular machine or about "fixing the customer" have been replaced by the simple exchange of technical fixes. The identity work in the stories is "reduced" to attaching names to fixes as a reward in a reputation system. Thus a situated storytelling community is turned into a body of apparently satisfied users of

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[2] Though perhaps to technologists this simple genre is a sort of antenarrative (Boje 2001). It is certainly a common collaborative genre (Finholt et al 2002, Gibbs 2003, Cox and Morris 2004).

a global information sharing system, which has quantifiable levels of activity and benefits to the organisation. The Eurkea story shows that discovering informal, communal, social knowledge mechanisms does not preclude *successful* rationalisation/reification of these into formally constructed, managed systems. The implication for management of discovering communities of practice is not necessarily therefore that they "foster" them (as Brown and Duguid conclude), rather that their energy can be channelled through rather familiar rationalising processes.

4   Wenger (1998)

Whereas neither of the two works discussed so far had a clear definition of a community of practice, Wenger's 1998 work does finally supply one. Thus a community of practice is defined as a group that coheres through "mutual engagement" on an "indigenous" (or appropriated) enterprise, and creating a common repertoire. The tight knit nature of relations created by sustained mutual engagement is clear from Wenger's indicators (Wenger 1998:125-6; reproduced below). Surprisingly the indicators have not been widely referenced by subsequent researchers, even though they do clarify the nature of Wenger's concept substantially. Altogether Wenger (1998) provides a range of relatively clearly defined concepts – expanding also to define other types of belonging other than engagement.

Table 3 Wenger's indicators of community of practice

1) sustained mutual relationships – harmonious or conflictual
2) shared ways of engaging in doing things together
3) the rapid flow of information and propogation of innovation
4) absence of introductory preambles, as if conversations and interactions were merely the continuation of an ongoing process
5) very quick setup of a problem to be discussed
6) substantial overlap in participants' descriptions of who belongs
7) knowing what others know, what they can do, and how they can contribute to an enterprise
8) mutually defining identities
9) the ability to assess the appropriateness of actions and products
10) specific tools, representations, and other artefacts
11) local lore, shared stories, inside jokes, knowing laughter
12) jargon and shortcuts to communication as well as the ease of producing new ones
13) certain styles recognised as displaying membership
14) a shared discourse reflecting a certain perspective on the world.
Extracted from Wenger 1998: 125-6

Other likely but not necessary, features are that all participants will interact intensely each other, that they are held accountable by all other members of group, and that much of the repertoire has been invented locally.

Wenger's (1998) focus in is identity, and he particularly stresses the importance of trajectories through different levels of participation in a community and the tensions of multi-membership of different communities as a key dilemma for the individual. The nature of boundaries between communities is also explored. Power is not a central concern.

A particularly controversial aspect of community of practice theory has been the use of the term *community* to describe the emergent relationships around a practice. In sociology the term community has proved impossible to define clearly (eg Cohen 2002: 167). It has strongly and unqualified positive overtones, as Raymond Williams pointed out (and Wenger acknowledges, fn4 p288). Brown and Duguid (2001: 203) ask how the concept would have fared if the label of cadre or commune of practice had been chosen instead. In fact, Wenger's conceptualisation of community is paradoxical in the history of that term. A community of practice is not necessarily friendly or harmonious (see indicator 1, Wenger 1998: 125 ; Contu and Willmott (2003: 287) may be correct, however in pointing out the consensual connotations of much of Wenger's language, eg "*joint* enterprise"). It has a purpose, whereas communities are usually seen as unpurposive. Connections are circumscribed by the enterprise (indicator 7), whereas community is seen as typically a total, a unity (Fox 2002). It is a group based on a practice not a locality (though it is one sense local and situated). It is also unexpected in being located in the workplace, often even in mundane work, a context which is generally seen as simply alienating. More obviously it is a community of people who differ, having different skills and knowledge and "mutually defining identities" (indicator 8), whereas community tends to imply sameness. It also has internal structure (periphery), whereas communities are usually thought of as unstructured; it evolves over time, is a creative force, whereas communities are generally seen as rather static.

Table 4 Wenger's usage of the term community

Expected usage	Wenger's usage
Tight knit network	Tight knit
Large scale	Uncertain scale, probably smaller
Neighbourhood based (Geographically situated)	Co-located in the workplace

Expected usage	Wenger's usage
Self conscious/externally recognised	Not recognised, not clearly bounded
All encompassing	Specific to the enterprise
Friendly, supportive	Conflictual as well as harmonious
Unpurposive	Purposive
Static	Ephemeral, creative
Born into	Voluntary

It almost becomes difficult to see why Wenger used the term community at all since he denies most of our usual assumptions about it, save to express the strength and voluntary, informal, authentic nature of the relationships identified. Yet, however paradoxical a view of community this is, it does accord well with revisions of the notion in current sociological thinking (Delanty 2003). This increasingly stresses diverse forms of sense of belonging, acknowledging that boundaries can be vague, solidarity based on ambiguous symbols, that sense of community is an accomplishment (Frankenburg 2003:xiv, Baym 2000), episodic and situationally limited (Amit 2002), and that community can be limited rather than all encompassing of the individual. The residual problem, though, is that the term community does lure the reader into the trap of seeing it simply as a rather large, helpful and friendly, bounded group. This is a view Wenger himself warns against.

An aspect of Wenger's notion of a community is the extent to which it is a self contained entity. Significantly absent from Wenger's account is the sense in which relationships and understandings in a community of practice are structured by the work itself and a management created context. As Vann and Bowker (2001) notice, communities of practice are increasingly (in KM literature) seen as a free floating "natural" set of relationships, with their own internal logic, yet the life of the community is actually likely to be heavily structured by the task and formal controls. A community of practice is what emerges if there is sustained mutual engagement on an appropriated enterprise. But that begs the question of whether other communities or entities (eg management) may wish to control the enterprise, and interfere with continuity of engagement. Yet there are many aspects of twenty first century work that would militate against the appropriation of the enterprise by a group in sustained mutual engagement. Building on suggestions by Eraut (2002) the following conditions limiting appropriation can be suggested:

1. Frequent reorganisation, so that engagement between individuals is not sustained.

2. Employment of temporary or part time staff, so that people come and go, no relationships build up and the individual does not commit to the task eg seeing consumption/leisure activities not work as the primary form of identity creation.

3. Tight management, where the organisation wishes itself to "own" the task. Unlike in the Brown and Duguid case study the formally defined account of work could be convincing, and therefore there is less room (or need) for individuals to create their own account of it. As well as management, other groups such as professions or the state may attempt to define how to do work, so limiting the scope for the task to become appropriated and defined locally.

4. Individualised work, so there is no collective engagement, only relations between an individual and their supervisor.

5. Very competitive environments, inhibiting collaboration.

6. Time pressurised environments, so there is a lack of time to develop collective understanding.

7. Spatially fragmented work, so that there may be no available common, unsupervised space (like the café used by Orr's photocopier repairmen) in which to assemble.

8. Heavily mediated activities, eg by computers, so that interaction is (arguably) less immediate and intense.

The implication is that conditions of much, perhaps most C21st work inhibit sustained collective sense making, leading to fragmented, rather individualised appropriation of tasks. Wenger's (1998) account underestimates the powerful rationalising processes in capitalism and the ability to rapidly appropriate and systematise understanding; also the influence of wider discourses to construct local sense making. These arguments may limit the occurrence or strength of communities of practice. So, for example, Frenkel et al's (2003) study of horizontal collaborations in different organisational settings found a variety of structures, but nothing as strong or coherent as a community of practice (2003). Korczynski (2003) suggests the notion of "communities of coping" to describe the more limited way call centre workers offer each other emotional support; this collaboration does not seem to extend to interpretation of the task or getting the job done. For all this

community of practice surely remains a useful ideal type of social relations. In a sense, however, is a theory of pure agency, saying little about structure at all. A fruitful area of research would be the relation between the internal features of emergent communities of practice and the structural forces within which they operate.

The implication that communities of practice may be quite rare makes the shift in Wenger's attention away from more mundane work to "innovative" or problem solving settings more comprehensible. These are the contexts where work is more likely to be appropriated, where management is more likely to wish it, and need to allow it, to be.

The case studies used by Brown & Duguid (/Orr) and Wenger both have a flavour of resistance to authority, almost of organizational misbehaviour. Thus much of the identity work in the photocopier repairmen's storytelling is to construct a satisfying identity in the face of the management project of deskilling them. For Wenger, part of the role of a community of practice is to make "work habitable"; and "a significant amount of the processors' communal energy goes into making their time at work a liveable realization of their marginality within the corporation and the insurance industry" (Wenger 1998:171). It is difficult to account for why in these cases the informal culture contributes to getting the job done, since it is probably just as likely to result in the subversion of work purposes (Gourlay 1999). There is no way in the theory to explain why a community of practice forms rather than "colleagues co-operating to bend the rules in order to get work done, to manage the work-effort bargain to their advantage, to play games, organize to identify and promote their own interests at work, or to engage in community sanctioned acts of sabotage" (Gourlay 1999: 9). It is, at the very least, paradoxical to see how collaboration triggered by alienation can be turned into a management tool.

5   Wenger, McDermott and Snyder (2002)

Wenger, McDermott and Snyder (2002) marks a decisive shift of Wenger's own writing into a new discourse, confirming trends already detected (Contu and Willmott 2000, Vann and Bowker 2001, Davenport and Hall 2002). A change of style reflects a shift of perspective. Wenger, McDermott and Snyder (2002) is a popularisation and a simplification but also a commodification of the idea of community of practice. It now both focuses on the value of the community of practice as a management tool and abandons the early example of routine office work to refocus on "innovation" and problem solving

potential in large, blue chip, multinational corporations. Both changes reflect the reinvention of communities of practice as a managerialist conception. Wenger, McDermott and Snyder (2002) has many of the typical features of the writing of would-be management gurus (Collins 2003): such as recipes of action and argument by anecdote, in which we are to be persuaded not by empirical evidence but by the fact that Shell or BP are doing this or that, therefore we must. There is a sense of a rhetorical construction of a compulsion to change in face of urgent environmental factors (eg globalisation), denying our ability to make choices about that change (Collins 2003, Watson 2002).

The whole community of practice concept is in fact redefined, as:

> Groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis (Wenger, McDermott and Snyder 2002: 4)

This is a much vaguer definition than used in the 1998 book. Now the definition is of a group that are somehow interested in the same thing, not closely tied together in accomplishing a common enterprise. The purpose is specifically to learn and share knowledge, not to get the job done. This is genuinely a different concept from that proposed in Wenger (1998), not just a change of tone or position; it is simply a different idea. Thus the prescription for management is not about making space for workers to appropriate a joint enterprise, as was implied in Wenger (1998); rather the idea is to create or foster new groupings of people who work on similar or parallel not joint enterprises (practices), effectively to invent new practices. Ethically there has been a shift from a concern to reveal and celebrate the value of what people know, especially in seemingly routine or mechanical jobs, to a concern to design a tool for management to manage "knowledge workers" and experts in blue chip companies.

Keywords of the new discourse are passion, informality (=authentic, voluntary) and diversity. A classic example would be linking together technical experts spread across geographically distributed functional teams (eg Muller and Conway 2002). In many cases these look a lot like (organisation based) occupational or professional communities though part of the management task, for Wenger, is to promote diversity of membership and so creative insights on problems. The continuing moral element in Wenger's work is this thrust to engage in honest talk across disciplines and epistemic cultures (Wenger 2003). Yet it may also be the key opportunity for the exercise of power by management: to

smuggle in the disruptive, innovative force of alternative perspectives and bind them in communities with the more conservative occupational groups to force change (cf Swan et al 2002).

This is not to imply that the new concept is an unreasonable proposition or the book a failure by its own (new) standards. Wenger, McDermott and Snyder (2002) works as an inspirational, practical handbook, just as the community of practice concept has a continuing appeal for practitioners (eg see the popularity of the concept in papers given at the Virtual communities conferences 1999-2004). It continues to be an idea that people are attracted to, for its humanising of workplace relations and liberatory tone. It is also a fairly credible manual for facilitating such groups and it is reasonably convincing about the benefits of such cooperation. The idea that a large organisation should create pockets of collaboration to counteract its rationalising, formalising tendencies seems entirely sensible, and is apparently confirmed by many case studies (Lee, Parslow and Julien 2002). By doing so it gets away from cruder more monolithic conceptions of "organisational culture" (Henriksson 2000, Fox 2000).

Increasingly such communities are seen as necessarily virtual, not unreasonably so if the object is to tie together disparate individuals from across a large multinational organization, who will inevitably be geographically dispersed[3]. The issue then becomes the choice of technology (Wenger 2001), issues of scale and the balance of face to face and virtual meetings. This shift is surprising, however, for the original concept was quite clearly an aspect of face to face relationships. There remains doubt about whether communities of practice can be distributed at all (Schwen and Hara 2003). Increasingly it would seem a community of practice or "Cop" is simply a virtual community for the benefit of the organisation (for example, von Wartburg, Rost and Teichert 2004). On the whole, community online tends merely to refer to unusual levels of interactivity and friendly and supportive behaviour among site users (Kling and Courtright 2003: 225), to be distinguished, for example, from web sites which push information out to a body of "passive" readers. So this is a use of the term community to mean something less strongly

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[3] This and the potential vagueness of the term practice invites one almost to define any workplace virtual group as a community of practice, leading to the term being bleached of meaning (Ross 2003).

linked, than used is meant by Wenger (1998). Certainly the notion of virtual community is itself quite ambiguous. If this is the starting point the likely social organisation or motivational structure of a community becomes the possible focus of research (eg Zboralski et al 2004). In the very loosest usage of the term a *community* of practice is defined by its membership being voluntary and behaviour "self organising" and it is a community of *practice* merely because it is about work, not a leisure time activity.

Conceived as virtual communities for corporate giants, communities of practice seem to offer a plausible solution to many classic Knowledge Management problems (Papargyris and Poulymenakou 2003) in that such groups are a social instrument to create, share and steward knowledge, including tacit knowledge. Community of practice is the classic conceptualisation of Knowledge Management as more than Information Management: a social not individual or technological solution, about tacit not codified knowledge. Communities of practice are also claimed to offer solutions to classic management issues such as change management, innovation, motivation and sense of belonging within the organisation. Of course, in reality the idea has limits as a strategy, eg in its inheritance of hierarchical relations from the wider organisation and society and the likelihood of it developing its own internal politics (Hayes and Walsham 2000), its divergence on paths unhelpful to the wider organisation, its lack of immediate, predictable or easily measurable outcomes and in the difficulty of community creation. These are substantial management issues, a downside recognised in chapter 7. What Wenger, McDermott and Snyder (2002) fails to do is to put communities of practice alongside other tools into a potential KM strategy or offer a method for identifying contexts where communities of practice are the most appropriate knowledge management strategy.

"Cops" have been widely adopted as part of the knowledge management toolkit (eg Ramhorst 2004). In this context they may be quite closely regulated, so that they are "semi-formal" (Zboralski et al 2004). Management offers some leeway to staff to join and contribute to communities; but it decides which communities should be allowed, who should join, how often face to face meetings should occur, what technology is in use, how this is integrated with wider systems, what are criteria of success. It offers incentives for participation, even exercises sanctions against those that do not contribute. In effect they are a way of breaking down some of the barriers in large organisations, creating somewhat more flexible, unpredictable spaces. In this sense a community of practice is anything that

a corporation chooses to support as a community of practice. Community of practice is linked to the notion of new forms of less hierarchical, "virtual organisations", especially relevant in "knowledge industries" like management consultancies and software development houses, supposedly a new paradigm of organisational structure (Alvesson 2004).

The central theme of Wenger, McDermott and Snyder (2002) is the concept of light handed management in fostering communities, "coordination", which boils down to facilitating contacts between individuals. Thus the coordinator is very busy behind the scenes in a successful community, joining people up and facilitating useful contacts. On the face of it this would seem to be a benign form of management ideology. There are three possible views on this. Liedtka (2000), for example, classes community of practice theory with other management fashions favouring greater empowerment, and which reflect a genuine concern to engage people in work and give them greater freedom. This might perhaps be in reaction to rising levels of education, changing attitudes to authority and a shift to team and service work. Community of practice theory, in this view, joins other empowering theories to reflect a genuine shift in workplace relations.

An alternative more critical view would point to the repeated return to questions of control and empowerment in management thought (eg Watson 2002: 252-4). Community of practice is just a reinvention of this theme. The constant picking at the sore reflects that this conflict in the management agenda of control is unresolvable (Collins 2003). A key proposition for Wenger and his colleagues, for example, is that "Communities of practice create value by connecting the personal development and professional identities of practitioners to the strategy of the organisation" (Wenger, McDermott and Snyder 2002:17). This reads as if management can foster communities that add value to organisational goals and simultaneously satisfy the needs ("passionate interests", in the terms of the rhetoric) of individual employees. Yet the notion of organisational goals is not a coherent one; aligning multiple individual purposes with organisational direction is profoundly problematic. Assuming that organisational goals can be neatly summarised and result in a rational plan of action to achieve them begs the key management problem. The "forbidden knowledge" (Czarniawksa 2003) is that organisations always have chaotic contested goals and pursue them only within bounded rationality. Consistently aligning individual "needs" with some notional strategy is equally problematic. This alignment is the

core task of management, and it is more likely that the effort of the whole organisation is to achieve this alignment, rather than that communities of practice – which do not represent all the stakeholders - can do it. Free thinking communities of practice are likely to diverge on their own path, and become an autonomous influence in organisational politics. This realisation undercuts the possibility of a straightforward unpolitical identification of potential communities congruent with a pre-existing strategy.

A third, even more pessimistic view would see informal communities as potentially a new insidious form of control. Misztal (2002: 26-29) has written about the way "informalisation" has become a trend in management practice where formality is apparently relaxed, individuals are allowed to be more spontaneous and greater commitment to organisation is achieved. However, this informality could itself simply constitute a new set of rules, which can be "coercive and alienating," imposing an obligation on the individual to be cheerful and spontaneous. It is not really egalitarian as the resources of informality are more available to those further up the organisation. Covertly it allows rules which protect the individual worker to be relaxed. Informality implies less bureaucracy; it also implies more change, and more dependence on the whims of an individual manager, less accountability of authority. Community of practice theory is particularly dangerous when it presents a vision of the community of practice without conflict and therefore constructs a vision of harmonious community which could become a new norm to impose on participants, oppressive in the same way the "team" can be (cf Sennett 1998). If it ignores the fact that creative relationships can involve challenge, criticism, disagreement – and the use of the term community could be used to label such relationships as anti-social – then communities of practice as an ideology of informalisation has potential dangers. In the end this may be too gloomy a view, but it is important to be aware of the ambiguity of the concept of informality (Misztal 2000), and the possibility that it hides other forms of normative (Kunda 1992) and networked control (Jones 2003).

6   Summary

To summarise the discussion so far, while the common ground, at least between the first three works, is significant, it may be clearer to stress the contrasts. Thus:

- *Situated learning: legitimate peripheral participation* (Lave and Wenger 1991) is primarily about socialisation into a practice by peripheral participation. A hook for understanding conflict exists in the process of legitimation.

- *Organizational learning and communities of practice: toward a unified view of working, learning and innovation* (Brown and Duguid 1991) focuses on the generation of new knowledge through narrative and improvisation by experts in a community. The potential for conflict inside the community is forgotten, but the relationship between the community and other entities is uncovered.

- *Communities of practice: learning, meaning and identity* (Wenger 1998) Identifies a universal social phenomena that arises where there is sustained mutual engagement on an indigenous enterprise, largely seen from the point of view of implications for social identity, using such concepts as trajectories, multi-membership, boundary work.

- *Cultivating communities of practice* (Wenger, McDermott and Snyder 2002) stands apart as a manual and inspirational text for practitioners on the formation of informal groups for learning in large companies.

The four views have rather different central concerns and cite different types of examples. A concept that is key in one version can be absent in another (eg Legitimate peripheral participation in Brown and Duguid 1991). Key orientating concepts such as learning, power, formality and diversity are treated differently, as indicated in table 5 below.

Table 5: Comparative summary of the four works discussed

	Lave and Wenger 1991	**Brown and Duguid 1991**	**Wenger 1998**	**Wenger, McDermott and Snyder 2002**
Concept of community	A group of people involved in a coherent craft or practice, eg butchers OR Not a neatly group at all	An informal group of workers doing the same or similar jobs	A set of social relations and meanings that grow up around a work process when it is appropriated by participants	An informal club or Special Interest Group inside an organisation, set up explicitly to allow collective learning and

	Lave and Wenger 1991	**Brown and Duguid 1991**	**Wenger 1998**	**Wenger, McDermott and Snyder 2002**
				cultivated by management action
View of learning	Central, and seen as occurring through becoming a member – mostly the socialisation of new members by peripheral participation	Collective learning / collaborative problem solving of the group through storytelling	An individual learning history is identification with different communities of practice and trajectories through communities	Learning/ problem solving by deliberately bringing together multiple experts in learning focussed communities
Power and conflict	Between generations, between master, journeymen and novice	Within the community everyone is on the same level	Conflict is mostly internal conflict within identity, caused by multi-membership	It is assumed that the good of the organisation is the good: managerialist. Attempts to level relationships within community.
Change	Gradual change through generations, but rather static	Static, improvisation of solutions to immediate problems is probably within known bounds	Individual change through trajectories and multi-membership	Follows a simple group formation pattern familiar from small group "forming, storming, norming, performing, dissolving."
Formality/infor mality	Could be in the setting of a formal system of apprenticeship,	Informal in the sense of existing outside the formal organisation	Authentic engagement around an enterprise, therefore	• Pre-exists managemen t interest • May pursue its own path

	Lave and Wenger 1991	**Brown and Duguid 1991**	**Wenger 1998**	**Wenger, McDermott and Snyder 2002**
	but sees most learning as informal, ie unstructured, unplanned, not taught	(though premised on its structures), counter cultural. Paradoxically this counter culture actually works to get the job done	beyond formality. May have a shape and purposes unexpected by the designer of the formal system	of evolution, has no formally constituted objective • Its membership cuts across formal organisational boundaries • Relations are based on expertise not formal position • Has no formal organisational leader
Diversity	Masters / Journeymen / novices – but the practice itself does not have a high division of labour	Egalitarian group of technicians on same grade	Includes everyone working on the collective enterprise, mutually defining identities – so could be very diverse	Diversity is designed into the group
Level	Short monograph proposing a theoretical concept in outline	Article aimed at managers	Full book length development of the concept at a theoretical level	Easy to read management handbook to guide practice

The contention of the paper is that these divergences outweigh the common ground found in the stress on situated negotiation of meaning and the importance of identity in learning.

It is therefore essential to position any use of the concept clearly in relation to one of these versions.

If an explanation for these divergences is sought, the weakness (or perhaps the strength) of the concept of communities of practice lies in the ambiguity of both the terms "community" and "practice". We tend to read community to mean a rather large, self conscious and externally recognised, all encompassing, tight knit, friendly, geographically situated group. In the early works few of these characteristics are claimed to be necessary features of a community of practice. It is probably a rather small, not necessarily geographically collocated group, that is not necessarily self aware or noticed; mutual understanding is limited to the scope of the enterprise and relations are not necessarily harmonious. The features it does possess that make it likely to be called a community is that it is tight knit and the voluntary nature of participation (it is not formally regulated by rules). Increasingly in subsequent, looser usage typical assumptions about community creep back into use of the term. Yet the longevity and fecundity of the concept may precisely lie in this ambiguity, enabling it to be appropriated in different ways (compare with Weeks 2004 comments on the word "culture", p.33).

If community is ambiguous so is the concept of practice. Osterlund and Carlile (2003: 2) point to the way that:

> Relational thinking lies at the heart of practice theory and creates a particularly dynamic and open-ended approach with leeway for quite different formulations. Different scholars generally focus on different types of relations. Thus, a practice perspective does not necessarily translate into a unified analytical starting point

Perhaps if more bounded groups form around practice they do so around clusters of practices, and it would be better to talk about "communities of practice*s*" not practice. Another ambiguity of the term practice is much to do with a confusion between whether is meant the same/ joint enterprise or a similar one. As originally conceptualised it meant the people working on a common enterprise (building a boat together). Increasingly it comes to be just a similar enterprise (anyone building a boat). The latter could probably be better seen as an occupational (or professional) community. Certainly the notions of community of practice and occupational community have been often confused. A related ambiguity is that practice can also mean something very local and limited, such as a particular work activity or something quite general, such as the "practice of engineering".

7   Conclusion

The dominant usage of the term community of practice, at least in the organisational literature, is now to refer to a relatively informal, intra-organisational group specifically facilitated by management to increase learning or creativity. There is little point in attempting to prescribe other usage. Yet it may be useful to make a logical distinction between

- The rather intense and creative relations that arise where an activity becomes appropriated by a number of individuals. This may be somewhat uncommon in day to day work, and is an idealisation of direct social relations. Yet it is a useful "ideal type" of a social group.

- Less direct social relations, such as between those working on similar activities in different contexts (Wenger 1998 would refer to these as constellations of practice, p.126-9) or groups who come to be similar through similar socialisation processes, such as exposure to common media (Wenger 1998 would refer to these as communities of imagination or alignment, chapter 8). A particularly relevant form of this would be occupational community. In coining this term Van Maanen and Barley (1984) have pointed to the power of solidarity based on doing similar sorts of work, even if it is not organised in professional communities.

There is increasing recognition that if organisations are to be seen as communities of communities, they contain many different types, not just communities of practice (eg Andriessen et al 2001, Andriessen and Verburg 2004, Ruuska and Vartianinen 2003). Within organisations the latent power of indirect social relations can be channelled into organisational purposes. Given the right facilitation, technical mediation, provision of direct incentives and dedicated time such common ground can be the basis for forming dynamic groups based on direct social relations. The ambiguity of whether this is to be genuine empowerment or if the management involvement introduces a new form of normative control may be the key to why so many COPs fail.

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