Communities of practice and social learning systems: the career of a concept

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The concept of community of practice was not born in the systems theory tradition. It has its roots in attempts to develop accounts of the social nature of human learning inspired by anthropology and social theory (Lave, 1988; Bourdieu, 1977; Giddens, 1984; Foucault, 1980; Vygostsky, 1978). But the concept of community of practice is well aligned with the perspective of the systems tradition. A community of practice itself can be viewed as a simple social system. And a complex social system can be viewed as constituted by interrelated communities of practice. In this essay I first explore the systemic nature of the concept at these two levels. Then I use this foundation to look at the applications of the concept, some of its main critiques, and its potential for developing a social discipline of learning.

The concept of community of practice does not exist by itself. It is part of a broader conceptual framework for thinking about learning in its social dimensions.[1] It is a perspective that locates learning, not in the head or outside it, but in the relationship between the person and the world, which for human beings is a social person in a social world. In this relation of participation, the social and the individual constitute each other. When I refer to "the theory" in what follows, I refer to this version of social learning theory.

A social systems view on learning: communities of practice *as* social learning systems

A community of practice can be viewed as a social learning system. Arising out of learning, it exhibits many characteristics of systems more generally: emergent structure, complex relationships, self-organization, dynamic boundaries, ongoing negotiation of identity and cultural meaning, to mention a few. In a sense it is the simplest social unit that has the characteristics of a social learning system.

It is useful to start by looking at the assumptions about learning in communities of practice that give the concept such a "systems flavor."

Learning as the production of social structure

Engagement in social contexts involves a dual process of meaning making.[2] On the one hand, we engage directly in activities, conversations, reflections, and other forms of personal *participation* in social life. On the other hand, we produce physical and conceptual artifacts—words, tools, concepts, methods, stories, documents, links to resources, and other forms of *reification*—that reflect our shared experience and around which we organize our participation. (Literally, reification means "making into an object."). Meaningful learning in social contexts requires both participation and reification to be in interplay. Artifacts without participation do not carry their own meaning; and participation without artifacts is fleeting, unanchored, and uncoordinated. But

[1] Note that there are other dimensions of learning—biological, psychological, cognitive, as well as historical and political in the broad societal sense. The theory does not explicitly address these aspects, though it is, I hope, compatible with theories that do. It needs to be combined in a plug-and play fashion with theories that address these other dimensions to explain specific situations where they are salient.

[2] For more in-depth discussion of this polarity, see Chapter 1 in: Etienne Wenger, *Communities of Practice; Learning, Meaning and Identity* (New York: Cambridge University Press, 1998).

participation and reification are not locked into each other. At each moment of engagement in the world, we bring them together anew to negotiate and renegotiate the meaning of our experience. The process is dynamic and active. It is alive.

Participation and reification represent two intertwined but distinct lines of memory. Over time, their interplay creates a social history of learning, which combines individual and collective aspects. This history gives rise to a community as participants define a "regime of competence," a set of criteria and expectations by which they recognize membership. This competence includes

- Understanding what matters, what the enterprise of the community is, and how it gives rise to a perspective on the world
- Being able (and allowed) to engage productively with others in the community
- Using appropriately the repertoire of resources that the community has accumulated through its history of learning.

Over time, a history of learning becomes an informal and dynamic social structure among the participants, and this is what a community of practice is.

Through active and dynamic negotiation of meaning, practice is something that is produced over time by those who engage in it. In an inalienable sense, it is their production. Assuming that practice is an active production is not romanticizing it. It is not to deny, for instance, that there are all sorts of constraints, impositions, and demands on the production of practice—external factors over which participants have little control. Nor is it to assume that the production of practice is always a positive process. Practitioners can be deluded or myopic. Subconscious forces can undermine the best intentions. A community of practice can be dysfunctional, counterproductive, even harmful. Still there is a local logic to practice, an improvisational logic that reflects engagement and sense-making in action. Even if a practitioner follows a procedure, it is not the procedure that does the following. No matter how much external effort is made to shape, dictate, or mandate practice, in the end it reflects the meanings arrived at by those engaged in it. Even when they comply with external mandates, they produce a practice that reflects their own engagement with their situation. A practice has a life of its own. It cannot be subsumed by a design, an institution, or another practice such as management or research. When these structuring elements are present, practice is never simply their output or implementation: it is a response to them—based on active negotiation of meaning. It is in this sense that learning produces a social system and that a practice can be said to be the property of a community.

Learning as the production of identity

The focus on the social aspect of learning is not a displacement of the person. On the contrary, it is an emphasis on the person as a social participant, as a meaning-making entity for whom the social world is a resource for constituting an identity. This meaning-making person is not just a cognitive entity. It is a whole person, with a body, a heart, a brain, relationships, aspirations, all the aspects of human experience, all involved in the negotiation of meaning. The experience of the person in all these aspects is actively constituted, shaped, and interpreted through learning. Learning is not just acquiring skills and information; it is becoming a certain person—a knower in a context where what it means to know is negotiated with respect to the regime of competence of a community.

Participants have their own experience of practice. It may or may not reflect the regime of competence. Learning entails realignment. When a newcomer is entering a community, it is mostly the competence that is pulling the experience along, until the learner's experience reflects the competence of the community. Conversely, however, a new experience can also pull a community's competence along as when a member brings in some new element into the practice and has to negotiate whether the community will embrace this contribution as a new element of competence—or reject it. Have you ever come back from a conference with a great new insight or perspective? It can take quite a bit of work to convince your community to adopt it. Learning can

be viewed as a process of realignment between socially defined competence and personal experience—whichever is leading the other. In both cases, each moment of learning is a *claim to competence*, which may or may not be embraced by the community.

This process can cause identification as well as dis-identification with the community. In this sense, identification involves modulation: one can identify more or less with a community, the need to belong to it, and therefore the need to be accountable to its regime of competence. Creating an experience of knowledgeability (or lack of knowledgeability) involves a lot of identity work. Through this process of identification and the modulation of it, the practice, the community, and one's relationship with it become part of one's identity. Thus identity reflects a complex relationship between the social and the personal. Learning is a social becoming.

The concept of identity is a central element of the theory, just as fundamental and essential as community of practice. It acts as a counterpart to the concept of community of practice. Without a central place for the concept of identity, the community would become "overdeterminant" of what learning is possible or what learning takes place. The focus on identity creates a tension between competence and experience. It adds a dimension of dynamism and unpredictability to the production of practice as each member struggles to find a place in the community.

The focus on identity also adds a human dimension to the notion of practice. It is not just about techniques. When learning is becoming, when knowledge and knower are not separated, then the practice is also about enabling such becoming. Being able to interact with our manager is as much part of your practice as technical know-how. Gaining a competence entails becoming someone for whom the competence is a meaningful way of living in the world. It all happens together. The history of practice, the significance of what drives the community, the relationships that shape it, and the identities of members all provide resources for learning—for newcomers and oldtimers alike.

Of course, by the same token, these resources can become obstacles to learning. Learning, once successful, is prone to turning into its own enemy. The long beak that made a species successful can be its downfall if circumstances change. Communities of practice are not immune to such paradoxes. Remaining on a learning edge takes a delicate balancing act between honoring the history of the practice and shaking free from it. This is often only possible when communities interact with and explore other perspectives beyond their boundaries.

A learning view on social systems: communities of practice *in* social learning systems

Communities of practice are of course not isolated; they are part of broader social systems that involve other communities (as well as other structures such as projects, institutions, movements, or associations). So the social world includes myriad practices; and we live and learn across a multiplicity of practices.

It is useful to briefly review the conceptual tools that the theory offers to talk about learning as constituting both the emergence of such a system and the personal experience of it.

Learning as the structuring of systems: landscapes of practice

Learning as the production of practice creates boundaries, not because participants are trying to exclude others (though this can be the case) but because sharing a history of learning ends up distinguishing those who were involved from those who were not. They share an enterprise, an understanding of what matters, relationships, as well as the resources that their history has produced. Boundaries of practice are not geographical; and they are not necessarily visible or explicit. But if you have ever sat at lunch with a group of specialists engrossed in shoptalk, you

know that a boundary of practice can be a very real experience. Because of the unavoidability of boundaries, there is an inherent locality to engagement and to practice.

As learning gives rise to a multiplicity of interrelated practices, it shapes the human world as a complex landscape of practices. Each community is engaged in the production of its own practice—in relation to the whole system, of course, but also through its own local negotiation of meaning. This process is therefore inherently diverse. The bounded character of the production of practice makes social systems dynamic and unpredictable. Such a perspective leads to a suspicion of uniformity in social systems. If a uniform pattern is observed across the landscape, the production of this uniformity needs to be understood in terms of local production and boundary interactions.

Our ability to know is shaped in such landscapes of practice. For instance, the body of knowledge of a profession is not merely a curriculum. It is a whole landscape of practices—involved not only in practicing the profession, but also in research, teaching, management, regulation, professional associations, and many other contexts, including contexts in which the clients of the practice develop their own views (e.g., patients communities in medicine). The composition of such a landscape is dynamic as communities emerge, merge, split, compete, complement each other, and disappear. And the boundaries between the practices involved are not necessarily peaceful or collaborative. What researchers find, what regulators dictate, what management mandates, what clients expect, and what practitioners end up deciding, all these attempts to colonize moments of practice can be in conflict.

In such social systems, boundaries are interesting places. First they are an unavoidable outcome of any depth of knowledge requiring a shared history of learning. Without a shared history of learning, boundaries are places of potential misunderstanding arising from different enterprises, commitments, values, repertoires, and perspectives. In this sense, practices are like mini-cultures, and even common words and objects are not guaranteed to have continuity of meaning across a boundary. At the same time, boundaries can be as much a source of learning as the core of a practice. The meetings of perspectives can be rich in new insights and radical innovations. Still such new insights are not guaranteed, and the likelihood of irrelevance makes engagement at the boundaries a potential waste of time and effort. Indeed, competence in not well defined at boundaries. This means that the innovation potential is greater, but so is the risk of wasting time or getting lost.

In every practice, boundary processes require careful management of time and attention. Depth in any practice demands commitment, and time at the boundary can be seen as taking away from core engagement. Moreover, the very value of boundary processes depends on the depth of commitment to the practices involved. Local depth increases both the tension and the likelihood of interesting insights at boundaries. The qualities of practices and their boundaries are complementary aspects of learning. There is therefore a profound paradox as the heart of learning in a system of practices: the learning and innovative potential of the whole system lies in the coexistence of depth within practices and active boundaries across practices.

Modes of identification

As we (and by extension our communities) negotiate our participation in broader systems, we need to make sense of both the system and our position in it. Doing so creates relationships of identification that can potentially extend across the whole system. It is useful to distinguish between different modes of identification[3] that position learning in the landscape:

- **Engagement**: This is the most immediate relation to a practice—engaging in activities, doing things, working alone or together, talking, using and producing artifacts. Engagement gives us direct experience of regimes of competence, whether this

[3] These modes were called “modes of belonging” in Wenger (1998), but I now think that the term “mode of identification” is more accurate.

experience is one of competence or incompetence and whether we develop an identity of participation or non-participation.

- **Imagination**: As we engage with the world we are also constructing an image of the world that helps us understand how we belong or not. If you work as a social worker in a given city, you know that there are countless other social workers in other contexts and you can use your imagination to create a picture of all these social workers and see yourself as one of them. We use such images of the world to locate and orient ourselves, to see ourselves from a different perspective, to reflect on our situation, and to explore new possibilities. The world provides us with many tools of imagination (e.g., language, stories, maps, visits, pictures, TV shows, role models, etc.). These images are essential to our interpretation of our participation in the social world. Imagination can create relations of identification that are as significant as those derived from engagement.[4]
- **Alignment**: Our engagement in practice is rarely effective without some degree of alignment with the context—making sure that activities are coordinated, that laws are followed, or that intentions are communicated. Note that the notion of alignment here is not merely compliance or passive acquiescence; it is not a one-way process of submitting to external authority or following a prescription. Rather it is a two-way process of coordinating perspectives, interpretations, actions, and contexts so that action has the effects we expect. Following directions or negotiating a plan are forms of alignment as are enlisting a colleague's collaboration or convincing a manager to change a policy. Whichever way they go, these processes of alignment give rise to relations of identification: applying the scientific method, abiding by a moral code, joining a strike, or recycling can all become very deep aspects of our identities.

All three modes function both inside practices and across boundaries. Engagement is typical of participation in the communities we belong to, but it can also be a way to explore a boundary if we can have enough access to the practice. Imagination functions inside a community as members make assumption about each other and talk about their future, but it can also travel without limits and is a way to experience identification way beyond our engagement. And a community's local regime of competence entails alignment, as do broader systems, such as setting the goal of an organization or the laws of a country.

Identity in a landscape of practices

Learning can be viewed as a journey through landscapes of practices. Through engagement, but also imagination and alignment, our identities come to reflect the landscape in which we live and our experience of it. Identity itself becomes a system, as it were. From this perspective, identity includes the following characteristics:

- **Identity is a trajectory.** Over time, it reflects our journeying within some communities as well as transitions across communities. It incorporates the past and the future into the experience of the present. Over time it accumulates memories, competencies, key formative events, stories, and relationships to people and places. It also provides directions, aspirations, and projected images of oneself that guide the shaping of the trajectory going forward.

[4] I use imagination here in the sense proposed by Benedict Anderson (1983) to describe nations as communities: it does not connote fantasy as opposed to factuality. Knowing that the earth is round and in orbit around the sun, for instance, is not a fantasy. Yet it does require a serious act of imagination. It requires constructing an image of the universe in which it makes sense to think of our standing on the ground as being these little stick figures on a ball flying through the skies. This is not necessarily an image that is easy to derive from just engaging in activity on the earth. Similarly, thinking of ourselves as member of a community such as a nation requires an act of imagination because we cannot engage with all our fellow citizens. But it is not less "real" for involving an act of imagination. Benedict Anderson notes that people are ready to kill and die for their "imagined" nations.

- **Identity is a nexus of multimembership.** Identity also comes to reflect the multiplicity of locations of identification that constitute it. Multimembership is sequential as we travel through the landscape and carry our identity across contexts. It is also simultaneous as we belong to multiple communities at any given time. The experience of multimembership is thus inherent in the very notion of identity in a landscape. And so is the work of experiencing all these forms of identification at once and in one body—whether they merely coexist or whether they complement, enhance, or conflict with each other.
- **Identity is multi-scale.** Our identities are constituted at multiple levels of scale all at once. For instance, teachers can identify (or dis-identify) with the teachers in their school, district, region, discipline, country, and even with all teachers in the world. Identification is in some sense a scale-free process through which identity embraces multiple levels of scale. Resonance may be stronger at some levels than others; with some levels we may actively dis-identify. Nevertheless, through the combination of engagement, imagination, and alignment many levels of scale do enter into the constitution of identity.

Through learning, the landscape shapes our experience of ourselves: practices, people, places, regimes of competence, communities, and boundaries become part of who we are. Identities become personalized reflections of the landscape of practices. Participation in social systems is not a context or an abstraction, but the constitutive texture of an experience of the self.

Knowledgeability as the modulation of accountability

The metaphor of a journey through a landscape suggests a variety of relationships to practices. Some we enter and some we leave behind. Some we only visit, merely catch a glimpse of, or ignore altogether. With some we identify strongly, with others lightly, and with many not at all.

The danger of the metaphor might be to suggest that these relationships are merely individual decisions. Some communities may welcome us, but others may reject us. In the course of our lives, we enter in contact with countless practices we have no competence in, and never will by choice or necessity. As characterized so far, identity is both collective and individual. It is shaped both inside-out and outside-in. Identification is both something we are actively engaged in negotiating and something other do to us. Sometimes the result is an experience of participation; sometimes of non-participation. Both types of experience shape our identities. We are constituted by what we are as well as by what we are not.

How we experience non-participation depends very much on our degree of identification with a practice. If you don't understand what your neurosurgeon friends are talking about, you don't go through an identity crisis. You may not even feel marginalized. You can just listen out of curiosity or daydream for a bit. You are not a neurosurgeon. You just know that a bit better now you have seen them in action. But you don't identify with that practice. Since your identity is not invested in it, you don't consider yourself accountable to its regime of competence.

The regime of competence of a community of practice translates into a regime of accountability—accountability to what the community is about, to its open issues and challenges, to the quality of relationships in the community, to the accumulated products of its history. When an academic community expects a doctoral student to contribute something new through a dissertation, it first expects that student to do a literature review. This is a way to honor the history of learning of that community. Becoming accountable to history also enables the student to discover the learning edge of the practice, the places where a contribution makes sense and is possible. It is this double accountability to the past and the future of the practice that equips the student to contribute to its evolution as a full participant.

This kind of in-depth accountability is hard work (not just for graduate students but for any practitioner, new or old). The willingness to do it depends on the degree of identification with the community and its enterprise. When one considers a whole landscape, the situation gets more complicated. Should a nurse be accountable to research, to management, to a curriculum, to

regulation? To all of them? What about close colleagues? What about personal experience? This often depends on the situation. Does the regulation apply to this specific case? There is a sense in which a professional serving a client represents the whole landscape of practice for that person. In each moment of professional service, he or she has to resolve the question of where to be accountable. This is quite a dance of the self, especially where there are conflicts at boundaries in the landscape.

More generally, one way to conceptualize knowledgeability in landscapes of practice is to think of knowing as the modulation of identification among multiple sources of accountability.

As the world becomes more complex, there are an increasing number of locations in the landscape to which we may potentially need to become accountable. Should I follow that blog, read that scientific journal, follow that twitter stream, subscribe to that website, go to that conference, or join that community? Negotiating an identity of knowledgeability is becoming more complex.

The processes and the challenges of learning in a complexifying world become clearer if we conceptualize knowledgeability as a process of modulating identification across multiple locations of accountability. This involves a constant interplay between practices and identities. In a complex landscape, trajectories of practice and identity do not evolve in parallel. The two act as distinct but interdependent carriers of knowledgeability across time. Learning takes place when they dance.

Applications and critiques

When my colleague Jean Lave and I coined the term “community of practice” in the late 80’s, we could not have predicted the career the concept would have (Lave and Wenger, 91). It has influenced theory and practice in a wide variety of fields in academe, business, government, education, health, and the civil sector. It is by now impossible to list all the applications of the concept, but it is useful to mention a few examples:

- In organizations in the private and public sectors, communities of practice have provided a vehicle for peer-to-peer learning among practitioners. It enables them to develop the portfolio of capabilities necessary for the organization to achieve its mission. Communities of practice have always been there, of course. But having the concept makes the process discussable and then potentially more intentional.
- In education, communities of practice are increasingly used for professional development, but they also offer a fresh perspective on learning and education more generally. This is starting to influence new thinking about the role of educational institutions and the design of learning opportunities.
- In international development, cultivating horizontal communities of practice among local practitioners presents an attractive alternative to the traditional view of the vertical transmission of knowledge from north to south.
- In healthcare, communities of practice offer the potential of new learning partnerships that are not hostage to professional silos. The potential even extends to patients who are increasingly forming their own communities.
- New technologies, in particular the rise of social media, have triggered much interest in communities of practice. Indeed, these technologies are well aligned with the peer-to-peer learning processes typical of communities of practice.

Not everyone is happy with these developments. There have also been serious critiques of the concept, both from a theoretical standpoint in academic circles and among practitioners. These critiques are diverse, subtle, and complex. A just review and response would require a whole book. But at the risk of oversimplifying, it is useful to mention some of them here. And at the risk

of sounding flippant, it is useful to sketch out my take on them. This is not to dismiss them, but on the contrary to acknowledge their validity and appreciate how their challenge can help sharpen the perspective.

A powerless concept: what about power?

A common line of critique is that the concept of communities of practice, especially in its later formulations in my own work, does not place enough emphasis on issues of power. The term community here risks connoting harmony and homogeneity rather than disagreement and conflict, even though it is not the intention. The self-generating character attributed to communities of practice may seem to obscure the degree to which they are influenced and shaped by their context, be it institutional, political, or cultural. The formation of identity in practice may seem to make slight of broader discourses of identity, such class, gender, and race. Versions of this critique have focused on institutional settings in capitalist modes of production (Contu and Wilmott, 2003), use of language as a tool of power (Barton and Tusting, 2005), and propagation of influence in networks through which action is possible (Fox, 2000; Jewson, 2007).

It is true that the theory takes learning as its foundation and its focus, not power. It is a learning theory, not a political theory. Issues of power are part of that, however: they are inherent in a social perspective on learning. It is useful to review some of the concepts from the perspective of how they incorporate issues of power.

Economies of meaning

When learning takes place in social systems such as communities of practice, issues of power are at the core of the perspective. The definition of the regime of accountability and of who gets to qualify as competent are questions of power. Every learning move is a claim to competence, which may or may not function -- i.e., be considered legitimate by the community or change the criteria for competence that the community has developed. From this perspective, a community of practice can be viewed as an unstable equilibrium among a set of experiences, each with a more or less effective claim to the competence that defines the community. Learning and power imply each other.

The accountability and identification that form the basis for power in communities is horizontal, mutual, negotiated, often tacit and informal. But this does not mean that it is less effective than more visible form of power, such as vertical hierarchies. In particular there is nothing that says that communities of practice are egalitarian, at least not in any simple way, or harmonious. Conflict can be a central part of the practice. The very existence of a community means that there is a competence for learners to lay claim to, something common to struggle over, meanings to define and thus appropriate. In the language of the theory, a community of practice creates an *economy of meaning*.

Economies of meaning do not operate inside communities of practice only. The power dynamics of learning and community also takes place in a landscape of practices. Beyond a given community, successful claims to competence inherit the position of the community in the economy of meaning in which its practice exists as a claim to knowledge—again a claim that may or may not be accepted. Belonging to a community of engineers confers you the right to design bridges because your practice has a history of doing so (mostly) successfully. Great success among your fellow gang members, however, may not confer much legitimacy to your perspective in other contexts. And in fact, it may be counter-productive or even disempowering in other contexts. In other word, there is no guarantee that a successful claim to competence inside a community will translate into a claim to “knowledge” beyond the community’s boundaries.

Reification is a process by which power can be projected across the landscape. Institutions, laws, and designs are an example of such projection of power through reification. But institutions as reifications do not carry their own meaning. The theory would expect that they require participation. They are a design that acts as a boundary object among the multitude of practices

that in some way contribute to sustain the institution. Power needs to run through the formation of communities and the production of practice.

In a landscape, all practices are practices. Management and research are as much practices as technical communities. All practices are local and no practice can subsume another because they are all produced by practitioners. But what they produce has different value in the "market" of knowledge, where for historical reasons, some practices have developed a greater ability to influence the landscape (e.g., management, government), to colonize an area of the landscape (e.g., engineers having a history of building bridges that don't collapse), or to make people accountable to their competence (e.g., math as a core subject for all kids). In this historical sense, the concept of community of practice is not relativist. But it is political.

Power and identity

The pairing of identity and community is an important component of the effectiveness of power. Identification with a community makes one accountable to its regime of competence and thus vulnerable to its power plays. In academic circle you can make people feel very defensive by asking them what they think of this or that esoteric theory or author. But this works only if there is identification. Short of the threat of violence, the efficacy of power depends on your degree of identification with communities and their practice. Without a notion of identification, it is very difficult to theorize power and its exercise. Even the threat of violence depends to some extent on identification. For instance, once identification with the fear of death is removed, exercise of power through violence becomes very problematic. This is one reason why groups that have overcome the fear of death, such as early Christians or some terrorists today, are such a puzzle for state powers.

Because identification is a source of nourishment for the self, modulating it can be difficult and painful. It can also be caught in conflicting demands that make it counterproductive. For instance, the anthropologist Gillian Evans (2006) has observed some kids dis-identifying with school-based accountability because of their accountability to other communities they belong to on the street. Their street life, family life, and school life create a need to modulate their identification across contexts—a complex equation of identity, which they can only solve by "misbehaving" in school. But whether empowering or not, the modulation of identity is an aspect of power. It is the personal counterpart of a regime of competence. It is what makes such a regime effective or irrelevant as a source of accountability.

Power in learning theory

The concept of community of practice yields an inherently "political" view of learning, where power and learning are always intertwined and indeed inseparable. The only glimmer of optimism that the theory affords in regard to power is that practice, even under circumstances of utter control and mandates, is the production of a community through participation. This local production implies a notion of agency in the negotiation of meaning, which even the most effective power cannot fully subsume. It is a small opening, a crack that represents a limitation to the application of power: the creation of a practice takes place in response to power, not as an outcome of it. Similarly the concept of modulation of identification locates relations of power in the active production of identity. Again it is a kind of theoretical crack in the concrete through which the negotiation of meaning allows for an experience of agency in learning.

Perhaps it is this insistence on learning as the negotiation of meaning, as a crack of agency in the concrete of social structure, that critics find overoptimistic. But this insistence is not incompatible with theories and data that consider the reproduction of power structures writ large. All that is required for these theories to become consistent with communities of practice is that they run their claims through the lived experience of participation in practice. If class, gender, race, institutional roles, government systems and other axes of power become part of our identities, they do so through learning as the production of practice, identity and meaning. This places the reproduction of institutional structure in specific contexts of practice, as advocated by Paul Willis

(1977) in his detailed ethnographic study of why working class boys get working class jobs. The reproduction of class is a lived story of learning and identity that is more complex than simply the reproduction of class. Or perhaps it is the story of the reproduction of class, viewed as learning. When theories run through each other in such a plug-and-play fashion, they can each contribute what they do best to the telling of the story.

An anachronistic concept: is it history?

Another line of critique is that the concept is anachronistic. For some, this critique is theoretical: communities of practice are introduced in a ahistorical fashion, but in fact represent a learning process associated with craft production and cannot play a prominent role in learning in a different era. In particular, the fluid nature of modern work calls for more dynamic structures (Engestrom, 2007). It is true that the concept reflects an attempt to capture something fundamental about human learning, which should not merely be the reflection of specific moments in the organization of work. On the contrary, the concept is meant to provide a learning foundation for anchoring history in social practice. At the same time, it is also true that what is fundamental about the notion of a community of practice will manifest differently as societal contexts evolve. Along these lines other critics are concerned that there is too much emphasis on community for an adequate account of learning in a web-enabled globalizing world. They prefer to think in terms of networks (Brown and Duguid, 2001; Jewson, 2007). Networks seems more adapted to a world where learning needs and connections are becoming increasingly fluid; when the internet sends its tentacles across the globe, the notion of community seems almost quaint.

Again there is an important insight to this critique. Some of us have probably overemphasized community in our attempt to account for the directionality of learning. But it is a mistake, I believe, to think of communities and networks as distinct structures. I am often asked what the difference is between a community and a network. Rather than contrasting *a* community here and *a* network there, I think it is more useful to think of community and network as two types of structuring processes. Community emphasizes identity and network emphasizes connectivity. The two usually coexist. Certainly communities of practice are networks in the sense that they involve connections among members; but there is also identification with a domain and commitment to a learning partnership, which are not necessarily present in a network.

More generally, I find it more productive to think of community and network as combined in the same social structures—but with more or less salience. So the question is not whether a given group is a network or a community, but how the two aspects coexist as structuring processes. This is not only a richer way to think about social structures, it also has useful practical implications. Network and community processes have complementary strengths and weaknesses; they are two avenues for enhancing the learning capability of a group. If a community becomes too much of a community, too strongly identified with itself, prone to groupthink, closed, or inbred, then fostering connectivity to generate some networking energy is a good way to shake it up and open its boundaries. There is something random and unpredictable about the dynamics of networking processes, which is a good counterpart to community. A twitter message sends a question into the connectivity of a network and it boomerangs back with a totally unexpected response, and a brand new person to follow. This is the magic of network. Conversely, if a network remains too fragmented, undefined, and individualized, then developing its identity as a community is a good way to give it shape—to endow it with an ability to project a collective intention and commit to a learning partnership. It is inspiring to discover others who share a concern and to let this joint caring become a bond of identity. This is the power of community.

A co-opted concept: on the instrumental slippery slope?

Indicating as I just did that the perspective has practical implications leads to another line of critique, which has to do with the shift from an analytical concept to an instrumental one. Indeed, the concept of community of practice started out as an analytical concept, giving a name to a phenomenon that already existed. Now it is often used with an intention to create, cultivate, or

capitalize on the process—almost as a technique. Some critics deplore the potential loss of analytical sharpness in this transition. The concept in its original formulation was used to distinguish practice from prescription (in particular educational, institutional, or managerial prescriptions), and to view learning as inherent in practice rather than reified in an educational setting. If it becomes a "design intention" or a "prescribed process" then it loses the very insights that made it useful (Vann and Bowker, 2001). Furthermore, instead of becoming sharper and more coherent over time the concept is becoming diluted and heterogeneous as various disconnected groups use it to suit their needs (Hughes, 2007).

I am quite sensitive to this line of critique, both because the critics assume that I had a key role in the transition and because I live in both worlds in my own work (Wenger et al., 2002). The dangers these critics warn against are real enough. The concept has been adopted and used in ways that are not always consistent with its origins and the diversity of adoption means that the concept is in some sense "out of control." It is true that many people are using the concept without much care for the broader framework or underlying principles. And admittedly, most organizations are interested in communities of practice to be more effective at what they already do, not for a more profound transformation. Nevertheless I find that the discourse about communities of practice is having an effect even if it is still at odds with the ways organizations function. Self-governance, voluntary participation, personal meaning, identity, boundary crossing, peer-to-peer connections, all these concepts are slowly reshaping the discourse on knowledge and learning. To see so many traditionally hierarchical organizations in so many contexts show genuine interest in fostering horizontal communities and networks may not be a revolution, but it does have a transformative potential for the future of learning.

Note that practitioners also have their own critique from the other side. They find the concept good in theory, but difficult to apply in practice. Communities of practice still do not fit very easily within traditional hierarchical organization. Cultivating communities of practice and creating an organizational context in which they can flourish is difficult within these organizations. Many "designed" communities of practice fail or die early. The concern is that their informality and the difficulty to measure their value lets them fall through the cracks and lose priority The word "community" itself sometimes arouses suspicion of clubs or unfocused groups. A manager declared that a series of self-organized groups sounded too much like chaos. And it is indeed difficult to find the right balance between enough formality to give them legitimacy in the organization and enough informality to let them be peer-oriented, self-governed learning partnerships.

I do not know whether the growing popularity of the concept will lead to its demise. Perhaps uninformed applications will generate too many failures, causing disappointment with the whole idea in practical settings. Maybe the fragmented adoption and redefinition of the concept will discourage academics from using it. The process has probably gone too far for people like me to have much effect. But for myself, I find the combination of analytical and instrumental perspectives particularly productive. It is a tension, no doubt, but one that pushes both perspectives. Emerging from this tension, I see the beginning of a new discipline focused on the learning capability of social systems.

Toward a social discipline of learning

Learning capability may be one of the most important characteristics to cultivate in social systems. But it is still an elusive aspiration. We need a social discipline of learning. Such a discipline builds what we have learned from the theoretical and practical work on communities of practice. It also incorporates perspectives such as the systems one outlined in this essay and it takes seriously critiques like the ones I have addressed. It derives its rigor from combining more systematically analytical and instrumental perspectives. It focuses on network as well as community processes. And it provides conceptual tools to address issues of power more directly.

But it does it all this from a social learning perspective, that is, with a primary focus on understanding and enhancing learning capability in social systems.[5]

Practice: learning partnerships

The concept of community of practice is a good place to start exploring a social discipline of learning. From an analytical perspective, it is the simplest social learning system. From an instrumental perspective, a community of practice can be viewed as a learning partnership. Its learning capability is anchored in a mutual recognition as potential learning partners. The discipline of such a partnership deepens and builds on this mutual engagement:

- *The discipline of domain*: What is our partnership about? Why should we care? Are we likely to be useful to each other? What is our learning agenda? What specific set of issues does it entail?
- *The discipline of community*: Who should be at the table so the partnership can make progress? What effects will their participation have on the trust and dynamics of the group? How do we manage the boundaries of the community?
- *The discipline of practice*: How can the practice become the curriculum? How can it be made visible and inspectable? What should participants do together to learn and benefit from the partnership?
- *The discipline of convening*: Who will take leadership in holding a social learning space for this partnership? How can we make sure that the partnership sustains a productive inquiry? Who are the external stakeholders and what are their roles? What resources are available to support the process?

Such a partnership may be collaborative and harmonious, or it may be tempestuous and full of conflicts. A learning partner is not someone who agrees with you or who even shares your background necessarily. It is someone with whom focusing on practice together creates high learning potential: "I can see the practitioner in you from the concerns you express, from the way you behave, and from the stories you tell." There is a kind of trust that arises out of this mutual recognition. It is not necessarily a personal kind of trust—that you would trust the other with you bank account—but it is a significant trust that participants will come from a place of experience and therefore make contributions that are very likely to be relevant to practice. It is trust in the learning capability of a partnership.

Learning governance: stewardship and emergence

Cultivating learning capability gives rise to issues of governance. Learning in social systems requires decisions about what matters, about what counts as learning, about direction and priorities. To the extent that learning suggests doing something better, the definition of "better" is a contestable terrain. Governance here refers to the process by which a social system becomes a learning system: it is learning that drives governance, not the other way round

Governance oriented to social learning capability must reflect the complementary character of network and community structuring. On the one hand, our imagination gives us the ability to project what we care about, individually and collectively, into the future and across social spaces. On the other hand, our knowledge and our visions are limited. Each of us is just one node in a network. We need to respond to and embrace the unexpected as part of our learning. This suggests two types of governance processes that contribute to social learning capability:

- *Stewarding governance*. This type of governance derives from a concerted effort to move a social system in a given direction. Championing a cause or pushing an issue is a typical example. Stewarding governance is a process of seeking agreement and alignment across a social system in order to focus on definite concerns.

[5] The following contains extracts from an essay I wrote on learning capability in social systems (Wenger, 2009)

- *Emergent governance*. This type of governance bubbles up from a distributed system of interactions involving local decisions. Market mechanisms are the quintessential example of emergent governance in that they produce decisions like prices of goods that emerge out of many transactions. Similarly, aspects of learning capability emerge as the cumulative effect of local decisions negotiated and spread by participants.

Like network and community, emergent and stewarding forms of governance have complementary strengths and weaknesses in their effects on learning. It is the combination of the two that can maximize the learning capability of social systems.

Power: vertical and horizontal accountability

Governance inevitably conjures up issues of power. It is useful to distinguish two forms of power, especially when one considers institutional contexts. Institutional structures tend to be based on what can be called *vertical* accountability through hierarchies. By contrast, the regime of accountability of a community of practice could be defined as *horizontal* in that it exists in mutual relationships among participants. Power works along these two axes of accountability:

- ***Vertical accountability***, associated with traditional hierarchies, decisional authority, the management of resources, bureaucracies, policies and regulations, accounting, prescriptions, and audit inspections
- ***Horizontal accountability***, associated with engagement in joint activities, negotiation of mutual relevance, standards of practice, peer recognition, identity and reputation, and commitment to collective learning

A common mistake in organizations is to assume that horizontal relationships lack accountability—and therefore that the only way to create accountability is to overlay vertical structures. Participation in a community of practice can give rise to very strong horizontal accountability among members through a mutual commitment to a learning partnership. Even a good conversation creates accountability, albeit of a temporal and tacit nature. Participants are held to an expectation of mutual relevance: they can't just go off into irrelevant topics or statements without violating such expectation. In its own ways, horizontal accountability is no less binding and operative than formal vertical accountability.

Another common mistake is to demonize vertical accountability and romanticize local engagement in practice. A self-governed community of practice is not heaven. It can reproduce all sorts of undesirable things, such as racism or corruption. It can be a place of collective mediocrity or contribute to systemically counterproductive patterns. When a system becomes too complex for negotiating governance issues directly, horizontal accountability is not always the best means of fostering systemic learning capability. It is useful to have certain things that are non-negotiable across a social system to limit the effects of local dysfunctions and myopia. Vertical accountability can help structure and simplify local engagement. We don't need to each decide at every moment on which side of the road to drive or whether it is a good idea to grab someone's wallet. Not everything has to be negotiable and decided anew every time. There is more productive use of our learning capability.

Vertical and horizontal accountability structures are very different in nature. Vertical accountability works across levels of scale. It tends to favor tools that travel easily across a landscape of practice. Numbers are a good example. Horizontal accountability tends to favor processes that focus on substance in the context of mutual negotiation. Conversations are a good example. In many organizations, vertical and horizontal accountability function almost completely separately. To foster learning capability at a system level, they need to be brought in interplay, even though they unavoidably remain in tension.

One of the difficult issues is that the two forms of accountability are not easily visible to each other. Imagine a vertical and a horizontal plane: the intersection between them is just a thin line.

In one organization, the person cultivating communities of practice had developed the practice of making the horizontal plane more visible in the vertical structure. From time to time, when someone was recognized as a valued contributor to a community, she would just send a letter to the manager of that person to let the manager know about what the subordinate had done, which the manager may not be aware of because it is not part of the job description. A letter like this is typical of what I call *transversality*: the ability to increase the visibility and integration between vertical and horizontal structures. One of the challenges of a social discipline of learning is to understand and develop *transversal* processes and roles.

Identity: learning citizenship

The final chapter of a social discipline of learning has to be about the person. If learning capability is a desirable characteristic of social systems, then attempting to contribute to this capability as much as we can is a personal responsibility that comes with social participation. Given our limited resources of time, attention, and memory, we have to make decisions about how we participate in landscapes of practice. This is going to affect learning capability—ours and that of the social systems in which we participate. The concept of *learning citizenship* refers to the ethics of how we invest our identities as we travel through the landscape. Examples of acts of learning citizenship include:

- Managing one's membership in existing communities: how do I contribute to communities I belong to or could belong to?
- Seeing a boundary to be bridged and becoming brokers using multimembership as a bridge across practices
- Being in a unique position to see the need for a community with the legitimacy to call it into being and becoming conveners
- Connecting someone, like a patient or a student, to a community that will enhance their learning capability
- Providing transversal connections in a context where vertical and horizontal accountability structures are disjointed

Learning citizenship is the personal side of a social discipline of learning. Its ethical dimension arises out of a recognition that each of us has a unique trajectory through the landscape of practices. This trajectory has created a unique point of view, a location with specific possibilities for enhancing the learning capability of our sphere of participation. From this perspective, our identity, and the unique perspective it carries, is our gift to the world.

The question of how we act as learning citizens is an appropriate way to end this review of the concept of community of practice from a systems perspective. What a career for a simple, intuitive concept with a systems flavor to end up challenging us to see ourselves as the learning contribution we have to offer.

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