

Landscapes of practices, social learning systems and rural innovation

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Abstract

Wenger (1998) claimed that “the learning and innovation potential of a social learning system lies in its configuration of strong core practices and active boundary processes”. Wenger, well known for his work on Communities of Practices, has more recently further developed the related concept of a ‘Landscape of Practices’ (Wenger 2010) which has been found to be meaningful by some Open University students working towards their Masters qualifications in Systems Thinking in Practice. These students have used skills developed in systems thinking to review their future trajectories, not just within one or two communities of practice but across boundaries. This paper draws on insights from Wenger and from the Open University’s recent work on social learning systems and managing systemic change to consider landscapes of practices of relevance to rural innovation and the contribution this concept might make to the discourse on systems thinking and practice in rural innovation. It also provides examples of some of the boundary processes of communities engaged in rural innovation and raises questions about how their learning and innovation potential might be enhanced.

Introduction

Communities of Practice (CoPs) have become well recognised as knowledge-based social structures in many different contexts ranging from health (Stephens, 2007), to police services (de Laat, 2006), to farming (Oreszczyn and Lane, 2006) to environmental regulation and management (Jørgensen and Lauridsen, 2005) to education (Kimble et al. 2008; NDLR, 2012) . It is a concept that has also been much used and explored by the IFSA community in various contexts concerned with learning and innovation (e.g. Blackmore, 2004 (designing and facilitating events as part of learning systems); Madsen and Noe, 2010 (new water environmental planning processes); Morgan, 2010 (social learning in associations of organic farmers); Nettle et al, 2010 (ethical collective action as an innovation in rural development). These and other authors have shown that many practitioners and researchers identify with CoPs and its theory, either implicitly or explicitly (Blackmore, 2009a).

Practitioners who aim to innovate to address issues of farming, food, environment and rural areas often focus on changing practices within their own CoP. They also often recognise what can be learnt through making connections with other CoPs, and in some cases take on a brokering role between communities (see Wenger, 2000 p235). For instance, many different communities are involved in forestry and farming, in practices ranging from crop and livestock production to forest management to development of agricultural and environmental policy. While some engage in the core practices of these communities, others are more concerned about how these communities might address their related agendas in an integrated manner, e.g. regarding emissions that contribute to climate change, where actions to address these agendas need to be coherent and mutually reinforcing at a range of different levels (ARDD, 2009; Blackmore, 2010a).

The literature already mentioned shows that CoPs theories have proved useful in understanding practices within a CoP, how they might be improved and how learning can be enhanced. The related concept of a Landscape of Practices (LoPs) has been found to illuminate how CoPs are connected, the continuities at their peripheries, the discontinuities at their boundaries and in the tradition of Wenger's social theory of learning, the learning associated with individual trajectories across these 'landscapes' (Wenger, 1998, 2010; Blackmore 2010b). However much less has been written about the use of this concept. I suggest that this LoPs concept might help with integrating different but related agendas and that understanding a LoPs perspective on learning might help support innovation, across, rather than just within, communities.

The links between CoPs, LoPs, systems thinking and practice and rural innovation are not obvious, partly because the CoP and LoPs concepts did not arise in a systems theoretical tradition. I therefore set out to explore what the concept of a Landscape of Practices might offer the discourse on systems thinking and practice in rural innovation, first by contextualising it within the discourse on social learning systems and CoPs, then by briefly considering what CoPs have contributed and finally by explicating two aspects of the LoPs concept that seem particularly relevant, namely

- (i) learning at boundaries and peripheries of communities and
- (ii) learning and identity formation in landscapes of practice as a trajectory.

This paper is not based on empirical research but it is grounded in various experiences and examples of facilitating learning and reflecting with others who are concerned with innovating, particularly regarding their conceptualisation of their practices.

Social learning systems traditions, learning and innovation

A social learning system uses the construct of a learning system, mainly in the sense of a 'system of interest' with the purpose of learning that can be identified by an observer and linked to a range of systemic theoretical and practice traditions. A social learning system is concerned with social learning, though meanings of social learning can range from individual learning in a social context, to collective learning for concerted action, to societal learning more generally (Blackmore, 2007; Reed et al 2010 ; Koutouris 2003; Keen et al, 2005). Early traditions of social learning systems were led by Schön (1973), Vickers (1970, 1987) and Bawden (1999, 2010) and their colleagues (see Blackmore, 2010b for details and a synthesis of these traditions). Each of these traditions has followers today and all are relevant to the discourse on systems thinking and practice in innovation. For instance: (i) Schon's focus on transformations and change, his observations of how social systems resist change and the way that networks play an important role in learning systems. (ii) Vickers' work on appreciation (in the sense of appreciating a situation) and his development of the dynamic concept of appreciative systems with settings that need to be constantly 're-tuned' to our current times. (iii) Bawden and his colleagues' 'Hawkesbury approach', developed in the context of rural Australia distinctive because of its valuing of both epistemology and ethics as important to learning. CoPs also can readily be conceptualised as social learning systems (Wenger, 2000, 2010; Snyder and Wenger, 2004; Blackmore 2010b). Unlike the other traditions mentioned, systems theories were not central to the development of the CoP tradition, but the two are well aligned.

All these traditions of social learning systems are systemic in that they focus on the way different contexts affect and are affected by people and their activities. Systems thinking and practice and innovation dimensions can also be found either explicitly or implicitly in all of these traditions.

However, the purpose of learning is more prominent in this discourse than the purpose of innovation, hence their use of the language of learning systems rather than innovation systems. *The relationships between learning systems and innovation systems might be one area of interpretation that could usefully be unravelled in this workshop?*

Communities of practice and learning and innovation potential

So what does the CoPs tradition contribute to our understanding of systems thinking and practice in innovation? The term community of practice was coined by Jean Lave and Etienne Wenger and appeared in a range of literature from around 1991 (e.g. Barab and Duffy, 2000; Brown and Duguid, 1991; Chaiklin and Lave, 1993; Kimble et al., 2000; Lave and Wenger, 1991; McDermott, 1999; Wenger, 1998; Wenger et al., 2002). Wenger et al. (2002) distinguish CoPs and 'communities of interest' from other structures such as formal departments, teams and informal networks and several of the above authors consider CoPs as systems. Vestal (2003) refers to 'innovation communities', 'helping communities', 'best-practice communities' and 'knowledge-stewarding communities'; Archer (2006) identifies various networks as CoPs. There are many ideas about how CoPs relate to community development and design and their capacity to innovate (e.g. McDermott, 2000; Wenger et al., 2002). That communities have the potential to change and become 'learning communities' is another common theme in the literature (McKenzie, 1997; Stoll and Louis, 2007). CoPs theories focus on core and boundary practices and the relationship between them, with Wenger (1998) claiming that *"the learning and innovation potential of a social learning system lies in its configuration of strong core practices and active boundary processes"*.

Landscapes of practices

The idea of a landscape of practices is that as CoPs differentiate themselves and identify or negotiate their boundaries with other CoPs they build up a complex social landscape, a weaving together of boundaries and peripheries, defined by practices, not by institutional affiliation (Wenger 1998, p118). Considering CoPs together, as a social landscape, provides an opportunity to review what is occurring at their boundaries and peripheries and how learning and innovation occur.

As the diverse use of CoPs theories has shown, Wenger's writing is conceptually rich and there are no doubt many ideas about LoPs that are relevant to a debate on innovation systems.

Two related aspects of Wenger's ideas about landscapes of practices appear to me to be particularly relevant to systems thinking and practice in innovation:

- (i) Learning at boundaries and peripheries, including negotiating our participation in broader systems and making sense of different perspectives including our own (Wenger 2010, p131, p184)
- (ii) Learning and identity formation in landscapes of practices as a trajectory, linked to multi-membership of communities and as a consequence being able to consider multi-scale and multi-level activities. (Wenger 2010, p133-134, p137, p185)

Here I discuss these two aspects in turn and explore examples associated with each.

(i) Learning at boundaries and peripheries

In most systems theoretical approaches a system of interest is distinguished by a system, its boundary and environment (Blackmore and Ison, 2007). What lies within and outside that system depends on the perceived purpose of that system. CoPs theories are among several system-related theories that focus on learning at boundaries and peripheries. Wenger (2000)

distinguished three types of boundaries of relevance to learning in social learning systems: people, objects and interaction. Activity theory also considers the role of partially shared objects between activity systems in co-production of knowledge (Engeström 2001).

As Wenger has noted, there is a great deal of difference between the experience of being outside a boundary and being on the periphery of a CoP (Wenger, 2010 p.131). A boundary constitutes a discontinuity whereas a periphery constitutes a continuity. Wenger uses the example of sitting at lunch with a group of specialists engrossed in shoptalk as an illustration of how a boundary of practice can be experienced (Wenger, 2010 p.183). Wilding (2011) reflected in her blog on what she had learned as she had taken her journey through landscapes of practices in her Open University studies. For Wilding it was a range of concepts, methods and techniques that had made her think differently about her connections with communities of practice. *“What I have also realised is that my academic studies have put me at the periphery of a number of different communities of practice. In a very formal sense I have accessed the documented know-what and know-how of that community with only incidental access to individuals from that community and then I have moved on.”*

Wenger (2000) considers some of the opportunities and problems of boundaries of communities. He sees that they can create diversions but can also be places where perspectives meet and new possibilities arise. According to Wenger, learning takes place when experience and competence are kept in tension, not too near and not too far apart. He distinguishes between deep expertise which depends on convergence between experience and competence and innovative learning which requires divergence.

An example of this kind of convergence would be where a farmer draws on past experience and skills developed over many years to produce a crop. Divergence would involve trying something new. Keeping experience and competence in tension would involve being able to draw on past understandings and existing skills in a new situation but also recognising shortfalls in both and hence a need for learning. Adopting a new management practice or technology could involve keeping experience and competence in tension. Just doing ‘more of the same’ or changing to a kind of land use that is very remote from the experience and competence of those involved would be unlikely to lead to innovative learning.

Wenger also talks of developing the boundary infrastructure of a social learning system by paying attention to people who act as brokers. What does this mean for those involved in the practices associated with issues of rural innovation?

An example of brokering and renegotiating boundaries for rural innovation: new possibilities for agriculture from robotics

In recent years there has been an increasing interaction between agricultural and robotics communities in Europe for the purpose of improving the efficiency of agricultural production (Blackmore, 2009b). A relatively small group of agricultural engineers facilitate the communication between these two communities, in Wenger’s terms they are ‘boundary spanners’. Some interactions are technology-led where engineers and scientists are exploring the implications of ‘cross-over’ technologies that can be imported from one context to another , e.g. from communications contexts to agriculture, with some tractors now equipped with ‘wifi’. Robots cannot just cross over directly as wifi can, as they need to be re-designed to take account of agricultural contexts. The agricultural and robotics communities have seen significant possibilities for improvement through their collaboration and interactions. A new CoP is developing that embraces both agricultural and robotic opportunities with agricultural engineers at

its core. Those agricultural engineers who take boundary spanning roles are drawn to events in both agricultural and robotics CoPs and are developing a new group identity that stakeholders can relate to. Enthusiastic discussions have developed leading to formalisation, initially through a network that may result in more formal conferences and funded actions.

I am not a part of this new CoP but have experienced its boundary, observing the enthusiasm of its members in discussion of changes and possibilities in agriculture as new technologies are developed and adapted. I have also experienced its periphery in discussing environmental decision making and systems approaches with that community (Blackmore and Blackmore, 2007).

The above examples in this section illustrate how participation in broader systems can be negotiated and how boundaries and peripheries of CoPs can be experienced as part of learning. A question for this workshop might be to consider the role of these negotiation and boundary processes in innovation?

(ii) Learning and identity formation as a trajectory

Wenger developed the idea of a trajectory as a past, present and future pathway associated with learning that takes a central role in the work of developing identity (Wenger 2010, p133). He also suggested that *“Learning can be viewed as a journey through a landscape of practices. Through engagement, ...imagination and alignment our identities come to reflect the landscape in which we live and our experience of it. Identity becomes a system, as it were.”* Wenger argues that from this perspective identity is (i) a trajectory (ii) a nexus of multi-membership and (iii) multi-scale (Wenger 2010, p185).

Open University students studying the module Managing systemic change: inquiry, action and interaction as part of their postgraduate qualifications in Systems Thinking in Practice (The Open University, 2010, 2012) used the ideas of CoPs, LoPs and critical social learning systems (Bawden, 2010) in their studies about managing systemic change in relation to situations of their own choice. Only a small percentage of them are concerned with rural innovation but they all engaged with some of the inter-related issues and challenges of agriculture, managing natural resources and rural communities to some extent. These students appeared to find the concept of a landscape of practices useful in reviewing their future trajectories in relation to a range of communities of practice. The concept enabled them to review their own future learning trajectories by helping them review their multi-membership of communities, recognise the multiple levels of scale with which they identified and generally providing them with a potential way of considering what they perceived beyond the communities and practices with which they most identified from their own experience.

The students' process included exploring their personal histories prior to studying the module through developing a 'trajectory diagram' and sharing it with other students in the online Forum. They also concluded the module by reflecting on a particular aspect of their trajectory and how they might make changes – this concerned the extent to which they interacted with other people in their practices related to managing systemic change and the extent they might want to in future. Wenger (1998, p155) claims that *‘a sense of trajectory gives us ways of sorting out what matters and what does not, what contributes to our identity and what remains marginal.’* and in his later work he connects the idea of learning as a trajectory with *“The concept of learning citizenship which refers to the ethics of how we invest our identities as we travel through the landscape.”* This learning of individuals is still very much within a social context, recognising the potential of an individual to bridge communities and to help connect others to communities that will enhance their learning capability. Wenger sees that *“...we each have 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" (Wenger, 2010 p197)

A question for this workshop that arises from this consideration of trajectories through landscapes of practices is: *How might we both individually and collectively develop a sense of trajectory in relation to rural innovation?*

Conclusion

The concept of a landscape of practices and learning trajectories through that landscape seems to capture something of the dynamics of learning and innovation. Boundaries of CoPs can change as can the kinds of interactions that take place at them. Peripheries of CoPs can also be experienced in a positive way to learn how to make changes necessary to meet some of the major challenges currently being faced, including those regarding food, farming, environment and rural communities. Wenger has focused on designing social infrastructure that fosters learning. A question emerging from this paper as a whole is *how might the learning and innovation potential of a social learning system that goes beyond an individual community of practice be realised?* Perhaps as a community of people concerned with international farming systems we might usefully re-evaluate the boundaries of our own communities of practice from a learning point of view and review the potential for learning and innovation not just in one or other community but in our landscapes of practices?

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