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Managing systemic change: future roles for social learning systems and communities of practice?

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How to cite:

Blackmore, Chris (2010). Managing systemic change: future roles for social learning systems and communities of practice? In: Blackmore, Chris ed. Social Learning Systems and Communities of Practice. Springer, pp. 201–218.

For guidance on citations see FAQs.

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Version: Version of Record

Link(s) to article on publisher's website:
http://www.springer.com/computer/information+systems+and+applications/book/978-1-84996-132-5

oro.open.ac.uk

Part IV
Synthesis

This final part of the book comprises just one chapter, written by Chris Blackmore, the editor of this book. This chapter is a synthesis of the main points made in all the chapters of the book by all the authors. First the context of 'managing systemic change' and the relevance of social learning systems and communities of practice for that purpose are considered. This is partly because this book is intended to contribute to an Open University course with that focus. A range of distinctions made by authors concerning social learning and social learning systems is next discussed. Fourteen common themes are identified across the book as a whole. These themes are elaborated in a process of mapping *a landscape of social learning systems praxis,* drawing on Etienne Wenger's metaphor of a landscape of practice, (which is explained in Chapters 8 and 11). The chapter ends with a brief reflection on potential roles for social learning systems and communities of practice in addressing future challenges.

Chapter 12
Managing Systemic Change: Future Roles for Social Learning Systems and Communities of Practice?

Chris Blackmore

Managing Systemic Change

The Open University course that prompted this book, and for which it is part of the required reading, focuses on *managing systemic change*. The course is designed for people who want to develop their skills and understanding in systems thinking and practice, to be used in a range of different domains. Most of the examples in the course come from work-based settings. The idea of managing in this context is mainly about appreciating situations with others, recognising what actions are desirable and feasible and for whom, and getting organised, in order to affect or respond to change in a positive way. It has little to do with control. As Vickers (1978, p. 81) said 'I do not think it too much to hope that an understanding of systemic relations may bring us a better understanding of our limitations and even our possibilities.'

When I began my career, around the same time that Vickers expressed this hope, my experience of the word *systemic*, in popular usage, was more often associated with illness or weedkiller than with institutions or relations or with ways of thinking and acting. It was a term not used widely in the educational and development contexts in which I worked at that tme. I was first formally introduced to systems theories through my study of ecosystems though it was several years later before I began to recognise a much wider range of systems theories and approaches. However, again from my perspective, terms such as systemic change and systemic failure now appear to be in regular use, for instance, in the contexts of governance, economy, climate change, sustainable development, public services and policy.

Systemic change usually applies to change of a perceived system, or sub-system, as a whole rather than to its constituent parts. Making improvements to health and social care services, for example, might not be possible just through dedicated professionals doing their own jobs better. Individual cases of apparent neglect with unintended consequences can still arise where there are failings at another level of a system, for instance regarding overall communications or management, where interconnections or 'knock-on effects' are not understood or not kept in mind. An elderly patient receiving care and treatment for illness at home and in more than one hospital, for instance, relies on good communication and co-ordination among many different practitioners. The overall quality of a patient's experience does not

rest just with the individuals they see but on how well that patient's health care system functions as a whole, from his or her perspective.

Ackoff's (1995) observation that 'it is better to do the right thing wrong than to do the wrong thing right' captures the idea of systemic change in that however much attention is paid to doing something better at one level it might make little difference in systemic terms. Investment in equipment and technicians to monitor air or water quality to a high degree of accuracy might be an example of doing the wrong thing right if the investment makes little difference over the longer term to addressing any issues of air or water pollution that are identified. This example is over-simplified, if taking the language used in many professional discourses today as evidence that there is now widespread recognition of the need to appreciate interconnections, systemic relations and the possibility of unintended consequences of our actions. But when and even whether this recognition leads to action is another matter. Systemic change does not just happen all around us in a detached way, but we are often a part of it. This might mean that we are sometimes slow to recognise it yet as individuals and groups we often have the ability to affect as well as be affected by systemic change.

In this book, the chapter authors all indicate that we have a lot more to understand about our interconnected world, the ways we live and work in it and how we might make changes in order to meet the many challenges we face as individuals, groups and societies. These challenges range from how we organise or regulate ourselves to work more effectively and ethically, to how we improve our communications and negotiations with each other. They also range from how we – individually and collectively – respond to, for example, issues of climate change, threats of terrorism or financial breakdown and how we might mitigate more negative effects, to how we can design more robust and appropriate institutions for our current times.

In their different ways the authors each offer insights into how we can develop necessary understanding and what we could or should do, using the concepts of social learning systems and communities of practice (CoPs). These concepts appear to have much to offer. The work of Vickers and Schön illuminates processes of interaction and transformation. The Hawkesbury group's focus on areas such as ethics and epistemology offers insights into our different traditions of understanding. Their work raises questions about what *should* be done, the role of epistemic learning in bringing together our different kinds of knowledge and ways of knowing and how social learning might help us engage with institutional dilemmas concerning the unsustainability of modern societies. The CoPs perspectives offered by Wenger, Snyder, Gobbi and Polin highlight the importance of engagement and participation at a local level, to gain access to larger scale learning systems. Insights into the importance of boundary interactions, discourses associated with practice, and multi-membership of CoPs are offered. They focus on identity and interpersonal relationships and highlight a range of conceptual and practical tools for social learning.

Perhaps of greatest import, a need to learn how to learn our way together to bring about improvements in various situations and practices is identified by many of the

authors. Underlying this and other needs recognised by authors, and the recommendations they make, is a range of perspectives on social learning and social learning systems which are next summarised and discussed.

Distinctions Concerning Social Learning and Social Learning Systems

Donald Schön's view of social learning, as expressed in Chapter 1 (Schön, 2010), focuses on public learning, which appears to be akin to *societal* learning. Linear 'knowledge transfer' and didactic 'instructivism' were the underlying traditions of the prevailing view of learning at the time of Schön's writing. However he draws on cybernetics and non-linear dynamics in his arguments, suggesting a constructivist view of learning where knowledge is developed rather than transferred. He recommends a fundamental conceptual shift from central government as a trainer of society, in a linear manner, to central government as facilitator of society's learning. He also argues against the separation of the formation and implementation of policy. In calling for us to develop learning systems and systems capable of their own continuing transformation for the benefit of individuals and society at large, Schön seems to be concerned here mainly with social learning as societal learning, though in his later work he went on to consider the learning of organisations.

Geoffrey Vickers approach to social learning also is constructivist and highly dynamic (Vickers, 2010). He too was clearly much influenced by cybernetics. Vickers' appreciative systems approach focuses both on group process and on individuals in their social contexts. He recognises both social and individual experience as contributing to social learning. Vickers' work is notable not just because of the distinctions he has made – between for instance facts and values, appreciation and action, events and ideas – but because of the way he combines them with standards and 'settings'. In a sense he does not 'freeze' the process to analyse it, but instead captures the dynamics of learning. I consider Vickers' model as a moving model rather than a static model which, to me, seems particularly appropriate to learning. Vickers appreciative systems model can be applied at the level of an individual or a group.

The characteristics of critical social learning systems distinguished by the Hawkesbury group are indicated in Richard Bawden's (2010b) Chapter 6 and at the end of his Chapter 3 (Bawden, 2010a) where he applies a generalised model to consider how an effective learning community might be distinguished. In an earlier chapter (Bawden, 1995) a learning system was proposed as:

- an organised and coherent group of people
- collaborating purposefully together to achieve high quality transformations and transactions
- with a deep appreciation of their own integrity
- a keen sense of emergence

- an acute consciousness of their shared processes, levels and states of learning
- as they design and create new and responsible futures together.

This concept has been expanded in Bawden and his colleagues' subsequent work, drawing on insights from further systemic praxis of the Hawkesbury group. For instance increased emphasis is placed on epistemological, ethical and emotional dimensions and, particularly in Bawden's Chapter 6, the significance of world-views and messy issues. Nonetheless, this 'summary version' provides an accessible overview. It is also useful here for the purpose of comparison both with the earlier traditions of Schön and Vickers and CoPs distinctions that were articulated by Wenger and his colleagues in parallel to this tradition. Vickers' distinctions relating to appreciative systems were among the many influences on the Hawkesbury tradition, as explained in Chapter 6, and the focus on transformations has some similarities with Schön's ideas. Several of the characteristics identified by the Hawkesbury group for a critical social learning system could also apply to CoPs.

Jim Woodhill (2010), in Chapter 4, recognises that while the concept of social learning is not new there is a need to articulate its meaning in more detail in the contexts of environment and development. He offers a definition of social learning that focuses on institutions and makes a sustainability dimension explicit: In Chapter 4 he indicates that he sees social learning as 'Processes by which society democratically adapts its core institutions to cope with social and ecological change in ways that will optimise the collective well-being of current and future generations.' He also offers clarifications of: what he means by the democratic and cognitive process of social learning; the sense in which he uses adaptation; his concern with institutions and his reasons for the purpose for social learning that he specifies in this definition.

Ray Ison's perspective on social learning also focuses to some extent on institutions and sustainability. His Chapter 5 (Ison, 2010) includes examples of social learning systems in practice. The SLIM water management project team that Ison refers to went on subsequently to develop the following shared understanding of social learning:

> What is considered as social learning depends on what focus is taken; it can be on:
>
> - The convergence of goals, criteria and knowledge leading to more accurate mutual expectations and the building of relational capital. If social learning is at work, then convergence and relational capital generate agreement on concerted action for integrated catchment management and the sustainable use of water. Social learning may thus result in sustainable resource use.
> - The process of co-creation of knowledge, which provides insight into the causes of, and the means required to transform, a situation. Social learning is thus an integral part of the make-up of concerted action.
> - The change of behaviours and actions resulting from understanding something through action ('knowing') and leading to concerted action. Social learning is thus an emergent property of the process to transform a situation.

SLIM (2004, p. 1)

Both Woodhill and Ison are concerned with collective learning and concerted multi-level action which they see as essential in their domains of practice, which include development, environmental decision making and natural resource management.

In contrast, Etienne Wenger's CoPs-based theory, discussed in Chapters 7, 8 and 11 (Snyder and Wenger, 2010; Wenger, 2010a, b), is as much concerned with individual as with collective learning and has been applied, in different ways, in a very wide range of domains. Wenger proposes a social theory of learning rather than a social learning theory. He distinguishes this theory by defining learning as a social and historical process (see his quote at the start of this book). In considering social learning systems his focus is specifically on CoPs, where effectiveness of these communities depends on the strengths of their structural elements of domain, community and practice. By distinguishing these elements rather than specifying particular domains or applications Wenger's theory has a generic quality. It has certainly resonated strongly with many practitioners around the world in many different domains. Wenger does not make a hard distinction between practice and learning, seeing learning as practice in the sense that he observes that individuals in work-based settings are more likely to talk about improving their practices rather than explicitly about their learning. Wenger's focus on learning at boundaries of CoPs is echoed elsewhere in this book, for instance in some of Schön's deliberations about the relationship between the centre and periphery of government. Wenger's distinctions between peripherality and marginality and identities of participation and non-participation help to identify where there might be opportunities and constraints regarding learning, when considering CoPs and social learning systems.

In several places in this book the terms 'social learning systems' and 'communities of practice' have either been separated or conflated. So it might be useful here to consider what distinctions concerning social learning *systems* do CoPs traditions make? In Chapter 11 Wenger observes that the CoP concept did not arise from a systems theoretical tradition though several of the disciplines in which it has its roots, such as anthropology and psychology, do include and value systemic understandings and these disciplines are among those that have informed systems theories. In Chapter 11 Wenger elaborates ways in which a community of practice (CoP) can be seen as a social learning system, identifying systems characteristics that a CoP exhibits. It can also be argued that a perceived social learning system can be seen as a CoP, where for instance the distinctions of community, practice and domain can be identified. But both a CoP and a social learning system can be framed in other ways so that they do not automatically map on to each other. For instance, a CoP might be perceived as a knowledge-based social structure, not explicitly as a system. A CoP might also have other purposes besides social learning so even when it is perceived as a system it might be seen as 'a system for improving practice' or 'a system to develop a professional community'. These various framings and purposes are of course not mutually exclusive and still imply learning, particularly when adopting Wenger's (Chapter 11) position of considering learning as the production of social structures or as the production of identity. But they suggest that while a CoP *can* be viewed as a social learning system this perspective is not automatic.

Snyder and Wenger (in Chapter 7) take the perspective of considering our world as a learning system and make three basic specifications of a world learning system which they describe as follows:

- *action-learning capacity* to address problems while continuously reflecting on what approaches are working and why – and then using these insights to guide future actions
- *cross-boundary representation* that includes participants from private, public, and nonprofit sectors and from a sufficient range of demographic constituencies and professional disciplines to match the complexity of factors and stakeholders driving the problem
- *cross-level linkages* that connect learning-system activities at local, national, and global levels.

They consider what a CoPs approach might mean in the context of a world learning system. Structural distinctions are again proposed, this time the idea of a fractal structure, and growing a community of communities, to increase the scale of a community-based learning system without losing core elements of its success.

Mary Gobbi's perspective on learning, working and professional communities focuses on professional capital, discourses of professional practice and interpersonal relationships (Gobbi, 2010). She does not use the explicit language of social learning or social learning systems though she does consider a range of distinctions concerning society, community groups and teams in relation to learning. She also relates her perspective to 'learning through experience' which has similarities with the experience focus in the work of the Hawkesbury group.

A social learning, CoPs-based, model is at the core of Linda Polin's work in design for graduate education (Polin, 2010). In her constructivist approach she reconceptualises graduate education as supporting engagement in a CoP, and in so doing, as she observes in Chapter 10, 'the discourse is re-contextualized from a classroom transmission and transfer discourse to a discourse of collegial collaboration and negotiation around authentic work.' There are some similarities here with Schön's efforts, in his case at the level of government, to reconceptualise public learning by moving away from a linear model of social learning to one that is more systemic.

In this section some of the distinctions made by authors concerning social learning and social learning systems have been noted, compared and contrasted. It is clear that all the concepts and theories discussed have been grounded in or emerged from practices of various kinds and they all build on other theories. The authors also identify a range of influences and in considering the book as a whole it can be seen which of these influences are shared or not shared with other authors. In the next section such commonalities and an emerging synthesis of ideas and practices are explored to map what I refer to as a *landscape of social learning systems praxis*. This term draws on Wenger's (Chapter 8) idea of a landscape of practice and his and several of the other authors' acknowledgement of the importance of praxis-based approaches with theories and practices informing each other. In common with Wenger's idea this landscape is not about institutional affiliation but about shared praxis. As with

any landscape, the exact 'mix' of features varies from place to place, not all elements will be found in every part of the landscape and the 'view' of the landscape is often observer dependent.

Mapping a Landscape of Social Learning Systems Praxis

There are both commonalities and differences among the analyses, ideas, situations and practices described by the authors of the chapters in this book. Many recurring themes have emerged, viewed from different perspectives. Here I begin to map a landscape of praxis with reference to 14 of these themes. I discuss each in turn briefly, summarising and synthesising some of the main points made in the book. These themes are:

1. Institutions, organisations and institutionalising
2. Ethics, values and morality
3. Communication
4. Facilitation
5. Managing interpersonal relationships and building trust
6. Communities and networks
7. Levels and scale
8. Boundaries and barriers
9. Conceptual frameworks and tools
10. Knowledge and knowing
11. Transformations
12. Time lag and dynamics of praxis
13. Design for learning
14. Stability, sustainability and overall purpose.

1. Institutions, Organisations and Institutionalising

Most of the authors focused on institutions and organisations and needs for change as key aspects of their perceptions of social learning systems. The term 'institutions' is used in various ways, sometimes as synonymous with organisations and at other times to refer to a range of forms of enablement or constraint of social learning, such as legislation or rules or organisational culture, as discussed by Ison in Chapter 5. Vickers noted that our institutions, at international level, have become so interwoven that we may regard them as a system. With increasing globalisation this interweaving trend has continued though a contemporary institutional system will undoubtedly also differ from one perceived several decades ago.

The contexts of the authors' observations are significant in a variety of ways. For instance Vickers and Schön wrote at a time when institutions, and attitudes towards them, had emerged from the post-second world war era and responses to events in the mid-twentieth century. New institutions and changed attitudes have

evolved since then, influenced by, for instance, increasing globalisation, increasing world population, environmental degradation and new information and communications technologies. We now have trans-national corporations that operate internationally, beyond the control of any one national government. Less hierarchical, participatory modes of governance have also arisen, with more direct engagement of non-governmental organisations and citizens with issues that they might previously have been left to governments or perhaps ignored altogether. I doubt that today there would be widespread agreement with Schön's idea of public learning as '. . . a special way of acquiring new capacity for behavior in which government learns for the society as a whole.' Contemporary governments are quick to point out that other stakeholders besides themselves need to learn, in order for societies as a whole to change.

Yet Schön's call for institutions that do not separate policy development and implementation is still echoed in many places today. The linear metaphor of 'rolling-out' policy, with its attendant imagery of 'squashing' all in its path, is still with us in contexts ranging from health to environmental management to information technology and beyond (as can be seen from an Internet search). In this book Bawden's identification of the need for institutional reform; Woodhill's analysis of the institutional causes of unsustainability in modern society and Ison's discussion of how understandings become institutionalised, all draw on earlier analyses and identify certain factors that appear not to have changed, in spite of previous insights. For instance, the needs these authors identify: for institutions to change their focus to take account of systemic factors; to engage with the causes of the ecological unsustainability of modern society, and for some individuals to relinquish their perceived power and control in the interests of social learning. In relation to calls for change in power structures, Wenger's suggestion that it is a common mistake to demonise the form of power he calls 'vertical accountability' associated with traditional hierarchies and romanticise local engagement in practice provides another perspective on what might need to change.

However, many of the examples detailed in this book also show how other institutional factors have changed over time to encourage learning. Snyder and Wenger's description of the way that many organisations have had to confront large-scale learning issues to compete in the knowledge economy is a case in point. They consider institutions as part of a proposed learning system. One of their focuses is at the civic level, where they note that a challenge for civic learning systems is that there may be no clearly defined institutional context or financing model for process support. They suggest mapping CoPs as a way of considering the bigger picture and their model of a re-imagined city as a learning system (the second diagram in Chapter 7) puts infrastructure (including institutional factors) at the model's centre.

2. Ethics, Values and Morality

Ethics, values and morality take on a range of different forms and emphases in ideas about social learning systems. All the chapter authors consider ethics either explicitly or implicitly but to varying degrees. Vickers both integrates into his

ideas, and makes explicit, the ethical and values aspects of 'our appreciated world'. Bawden is concerned with moral judgements, with worldviews that make beliefs and values assumptions explicit and with the notion of being critical – which implies comparison of what occurs with what should occur. Gobbi refers to a process of 'appraising oneself against one's own and the community's, the profession's and/or civic society's pre-existing values, beliefs and standards' as a key part of learning in a community. This appraisal process has some parallels with processes that Vickers describes when using and developing standards of fact and value in appreciating a situation.

Some ethical aspects of social learning systems are inevitably connected with how responsibility is viewed, including where responsibility lies. Gobbi compares a professional community that is responsible to clients, a profession and a team, with a CoP that is only responsible to its members. This largely depends on the wider purpose of a group. Professional communities can work as CoPs, as Polin's chapter shows in relation to education. Members of a CoP are also likely to be responsible, at an individual level, to other individuals and groups.

From a philosophical perspective, ethics can focus on 'being good'; 'doing the right thing', what 'ought to be' and on how we 'should' live and treat others. But these focuses are not necessarily the main focuses of learning. For instance, it is possible to learn how to be bad and to do the wrong thing. It is important to recognise that a community that serves its members' interests does not automatically have to have an ethical brief. However, many practices do include an ethical dimension so working with others to improve those practices will involve engaging with ethics. Working as a CoP that functions as a social learning system in the way that Wenger and his colleagues envisage is also likely to include an ethical dimension, for instance in the processes of welcoming newcomers, valuing boundary interactions, exploring and establishing shared values and regularly re-evaluating the purposes of the CoP.

3. Communication

Communication emerges as another significant theme and as an important part of this landscape of social learning systems praxis. It is at the core of processes of interaction and essential to development of our knowledge and understanding. The discipline of cybernetics which has had a major influence on ideas about systems and about learning involves the study of communication and control in both living organisms and machines. Understanding how communication occurs among humans and how it does or does not lead to action is central to developing an understanding of social learning. For Vickers, what changes when we communicate with each other, and how, was a major focus in developing his concept of an appreciative system. He observed the way that human social and individual experience had been amplified by symbolic communication and the way that individuals' ability to represent their contexts formed a basis for communication. As he saw it, '. . . the appreciated world mediates our communication, as well as guides our actions' (Vickers, 1972).

Other authors in this book also focus on communication: for instance, Bawden (in Chapter 3) on sources of distortion of communication; Ison on languaging and dialogue and on providing a biological explanation of communication, with particular focus on communication that leads to action; Gobbi on verbal and non-verbal communication, on the inadequacy of the written word and on linguistic and paralingusitic devices; and Polin is concerned with the social and technical networking tools that can help communication and learning.

4. Facilitation

Arising partly out of the importance attached to communication, needs for facilitation of social learning are widely recognised by authors in this book, particularly in relation to the kinds of social learning that lead to collective and concerted action. Without facilitation, existing power dynamics and patterns of interaction can constrain or even prevent the multi-level interactive learning processes that such social learning requires. In complex and messy situations, such as management of scarce natural resources, stakeholders need to develop shared knowledge and understanding and harmonise their actions, drawing on their different ways of knowing. This kind of social learning requires interaction across rather than within levels of a hierarchy. This interaction tends not to just happen as a result of participation but needs active and purposeful facilitation. A case in point is how local-level participation in 'Landcare', discussed by Woodhill, did not lead to this approach becoming part of the mainstream. Hence Woodhill focuses on the design of systems to facilitate social learning.

Schön identifies a need for government to facilitate social learning and Bawden is concerned with the need to facilitate the transformation of communities to learning systems, with concurrent transformation of worldviews. The CoPs perspectives on social learning in this book also identify needs for facilitation of knowledge development and a range of CoPs processes that require both facilitators and coordinators. For instance, the process of brokering between communities, as discussed by Wenger, is a particular type of facilitation. Facilitators are usually people. But tools, such as web-based tools are also recognised both by Snyder and Wenger and Polin as having a role in facilitation, as are the boundary artifacts discussed by Wenger.

5. Managing Interpersonal Relationships and Building Trust

With significant emphasis on communication and facilitation, it is not surprising that managing interpersonal relationships and building trust is referred to by many of the authors, particularly in the contexts of CoPs perspectives. Snyder and Wenger observe that informal learning and personal relationships are hallmarks of CoPs. They argue that this kind of learning depends on developing collegial relationships with those you trust and who are willing to help when you ask. They give examples

of workshops that enabled trust to be built through face-to-face interactions and teleconferences that have helped in building trust and reciprocity. The process of building trust plays an important part in their idea of a fractal community, where brokering of relationships between levels and communities works 'because trust relationships have a transitive character: I trust people trusted by those I trust' (see Chapter 7). Gobbi's focus on building trust in professional communities is around developing 'non-economic professional capital'. Trust also features strongly in positive community-based personal relationships. For Bawden, addressing issues of lack of trust that affect how development is approached and the need to build trust in order to improve this situation, is part of the justification for critical social learning systems. Other authors, including Polin and Ison discuss some of the challenges in changing actual and perceived power structures that can hinder social learning. Vickers identifies a social system as a pattern of relationships – internal and external with each of us a part of several subsystems. Schön suggested re-modelling governments with a view to facilitating different interactions and enabling different relationships to be built. The emphasis of many of the authors on relationships and interaction to build trust leads us on to the strong focus on communities and networks.

6. Communities and Networks

The body of work in this book relating to CoPs, professional communities and learning communities modelled on principles of critical social learning systems all offer perspectives on how social learning can be brought into effect. Community implies a grouping of people that identify themselves as having some sort of unity and the term community is usually seen in positive terms. To be 'community-minded' or to make a contribution to the community, whether at home or work, often implies an ethical dimension connected to being a responsible citizen (Reynolds et al., 2009). Gobbi also observes that there is an emotional connection of communities. Yet communities and their learning can serve many different purposes, besides those described in this book. Wenger, in general, adopts a broad but critical view of community. By taking this approach Shaw (2002) claims 'he is in no danger of romanticizing notions of community'.

Wenger (in Chapter 11) discusses how communities and networks co-exist, not as different structures but as different aspects of social structuring. Wenger's (Chapter 8) discussion of multi-membership of communities and Polin's analysis of social and technical networking draw out dimensions of community and networking processes that have particular relevance to a systemic view of social learning because both concern the interconnections within and between networks and communities. Wenger's observation that we define who we are by the way we reconcile our multimembership into one identity I find a useful reminder that theories of social learning systems can apply at the level of an individual as well a collective. This brings to the fore notions of networks and communities operating at different levels and scale.

7. *Levels and Scale*

The idea of levels is central to a systems view of the world and to ideas about learning and, thus, to social learning system praxis. Vickers' work on systems claims we distinguish systems as comprising a whole hierarchy of over-lapping sub-systems, each exemplifying a different kind of order (Vickers, 1970). In a constructivist tradition, system, sub-system and wider system are relative terms and the choice of level for observation and analysis always depends on an observer (Checkland, 1999, pp. A23–A24).

Building on Bateson's (1978) work on levels and orders of learning and Kitchener's (1983) focus on level 3 learning, Bawden uses the idea of level in relation to both systems and learning. He describes a systems hierarchy of three levels of *learning*: learning about the matter in hand, *meta learning* i.e. learning about the processes of learning and *epistemic learning* which applies to the beliefs and values that affect the other two levels. Hence, this tradition emphasises epistemic cognition and knowing about the nature of knowledge.

Snyder and Wenger and Woodhill link the ideas of level and scale in considering how local-level participation can affect and be affected by other levels so that, as Snyder and Wenger comment in Chapter 7, the 'scale [of . . .] learning systems can leverage their full potential and match the scale of the problems they address'. Local level participation is recognised by both as essential to learning. Snyder and Wenger suggest a fractal structure as a means of using community-based approaches across different levels and accessing larger scale learning systems. There are some similarities between this view and Woodhill's idea of 'local-global dialectics'. As noted earlier in this chapter, Snyder and Wenger see cross-level linkages that connect learning-system activities at local, national, and global levels as one of the three basic specifications of a world learning system.

8. *Boundaries and Barriers*

A range of different kinds of boundaries and boundary activities are considered by authors in this book. For instance, 'boundary judgments' as part of a critical learning systems approach as discussed by Bawden, and in the sense of recognising limitations and barriers as discussed by Polin, in relation to making conceptual shifts and when considering removal of constraints to learning. An example from Polin is the way that cultural-historical barriers make it difficult to shift from a transmission conception of university learning to a socially constructed one. Boundary is a recognised systems concept, when the term system is used in a technical sense. As such, what is perceived as within a system and outside it, in its environment, defines a system, Hence Wenger's deliberations concerning boundaries (Chapter 8) including brokering, boundary artefacts and boundary interactions, are particularly relevant to social learning systems. Re-negotiating boundaries of systems of interest is an important iterative process in social learning, usually indicative of the changing purposes of a system or sub-system or changes in stakeholders or responsibilities.

For instance, re-negotiation of roles and responsibilities might take place among health care or education practitioners. In this way, consideration of boundaries and barriers are key determinants in shaping extant praxis.

9. Conceptual Frameworks and Tools

Chapter authors have offered a wide range of conceptual frameworks and practical insights into social learning systems and CoPs. These insights primarily concern: the use of a systems orientation, the development and use of models of learning and of learning to learn, and the role of technical tools.

In relation to systems, Bawden identifies a checklist of systems characteristics that provide a framework for the sets of conversations and discourse which guide a community. He also draws out various assumptions concerning our ability to act systemically and specifies what we need to learn in terms of *critical* and *social* and *learning* and *systems*. Ison considers practices that arise from a systems perspective and distinguishes first and second order research approaches.

Consistent with Polin's observation that learning cannot be explored using just one model, a range of models of learning and of learning to learn are considered in this book. Polin herself considers a range of social learning theories and models including those (such as activity theory, sociocultural historical theory, and the CoPs model) where as she says 'learning is viewed as a kind of enculturation of the individual into a system of practice.' Other models of learning in this book include Vickers appreciative systems model and Schön's critiques of prevailing models of governments and public learning and suggestions of alternatives, mentioned earlier in this chapter. Bawden (Chapter 3) proposes a range of models of learning and suggests that meaning emerges as the result of 'interactions' between the process of *experiential learning* on the one hand, and *inspirational learning* on the other with these processes in turn involving the concrete world of experience. In his later Chapter 6 he refers to what he sees as the two vital conceptual models relating to learning and knowing – Kolb's experiential model and Kitchener's model of cognitive processes that led to the 'three levels of learning' framework already described in this chapter (in the section on levels and scale). He also details a set of five beliefs that came to be held collectively by the Hawkesbury group concerning learning. These beliefs are about the role of experience, how we make sense of the world around us, the limitations imposed by our worldviews that 'filter' our 'sense-making'; how worldview perspectives can develop and what affects our ability to act systemically in the world.

Wenger's social learning theory, which includes the CoPs concept, is the main conceptual framework considered in Part III of this book. However, as he discusses in Chapter 11, the CoPs concept, which was developed in the context of modelling learning in apprenticeship, has been used in many different ways and contexts. As part of his overall theory in Chapter 8 Wenger provides a range of conceptual tools associated with social learning systems and CoPs. This range includes various conceptualisations of practice and identity such as the concept of a trajectory

as a continuous motion through time that connects the past, the present, and the future. Use of this 'temporal' conceptual tool can help in understanding individuals' identities in relation to a CoP and the behaviour of the group as a whole.

In Chapter 11 Wenger argues that we need a social discipline of learning that will take account of some of the perspectives on CoPs and social learning systems that he discusses. His primary focus is on understanding and enhancing learning capability in social systems. Wenger sees such a discipline as building on learning through experience with CoPs. He suggests one of this discipline's purposes would be to provide conceptual tools to address issues of power more directly. In addition to her conceptual use of the CoP model, Polin considers the role of technical tools in a practical sense. Her analysis of how applications that have emerged as Web 2.0 tools focus on collaboration and sharing, co-production and social networking includes both conceptual and practical aspects.

All in all the authors reveal, as an important part of the landscape, a diversity of conceptual and practical tools to assist us with the challenge of, in Bawden's words in Chapter 4, 'seeing the world differently'.

10. Knowledge and Knowing

An invitation to see the world differently is carried through in the traditions of both the Hawkesbury group and CoP perspectives which focus on knowledge and our ways of knowing. Epistemology, in particular our assumptions about the nature of knowledge and knowing, has a major influence on our worldviews and in our abilities to learn how to learn, which Bawden sees as one of the main factors that constrains social learning. Ison considers how knowledge is developed in the context of traditions of understanding, through use of metaphors and through dialogue.

Different CoPs perspectives are concerned with developing, disseminating and stewarding different kinds of knowledge and many examples of how this is or could be done are included by Wenger, Snyder, Gobbi and Polin. Roles of knowledge in practice are identified, for instance the relationship between knowledge and managing strategic capabilities which according to Snyder and Wenger in Chapter 7 'entails supporting self-organizing groups of practitioners who have the required knowledge, use it, and need it.' They also observe that 'practitioners themselves are in the best place to steward knowledge in collaboration with stakeholders' and that 'developing and disseminating certain kinds of knowledge depends on informal learning much more than formal – on conversation, storytelling, mentorships, and lessons learned through experience'. In these ways, knowledge and knowing become key elements of a range of transformations, that are discussed next.

11. Transformations

The idea of transformation is central to Schön's view of a learning system. He recognised, in Chapter 1, that 'transformations of local systems influence one another

and may be supported in doing so' and that 'the gradual transformation of the system as a whole influences the context in which each local system experiences its own transformations'. In describing how 'the broad process can 'go critical' as ideas underlying the family of transformations come into good currency and as the numbers of learners and extenders multiply' he argued that 'a system capable of behaving in this manner is a learning system'.

Many different kinds of transformation are discussed by the authors for instance transformations of: discourse, practices, systems for collaborative working, world-views, nature, traditional society, and roles.

Most of these transformations have at least been alluded to in the previous themes so here I will just discuss one, the transformation of roles. Snyder and Wenger comment on our dependence on expert practitioners to connect and collaborate on a global scale. Yet the roles of these experts have changed over recent years, not just because of the need to operate at a range of different levels but because of a more general transformation in the roles of 'experts' (whether teachers, nurses, scientists, organisational leaders or farmers). Perspectives of social learning systems, CoPs and networks and their underlying theories of knowledge and knowing, challenge traditional understandings of experts and expertise, proposing a less hierarchical structure. This challenge is evident for instance in Polin's approach to graduate education. Vickers also focused on transformation of roles, exploring the boundary between personal and institutional roles.

12. Time Lag and Dynamics of Praxis

Several authors identified issues concerning time lags between the emergence of ideas and related practices, captured for instance by Schön in discussion of 'ideas coming into good currency' and by Vickers in considering 'feed forward and feed-back' in appreciative systems. From the perspective of praxis where practices and theories inform each other, this kind of time lag could be seen as an essential part of the dynamics of praxis. Bawden's considers 'tensions of difference', for instance among different beliefs and worldviews, as important to interactive learning. Although not just time related, they could also be considered as part of these dynamics. As noted earlier in this chapter, Wenger's notion of trajectory helps to develop a connected sense of past, present and future and offers potential for insight into the relationship between time lags, praxis and assigned purpose at any given moment of time in the landscape. Issues concerning time lags and dynamics of praxis are among those that need to be taken into account in design for learning.

13. Design for Learning

Design for learning is a strong theme in the work of Wenger (1998), where he argued that learning, of itself, cannot be designed but is something that happens, whether designed or not. He focused instead on designing social infrastructure that

fosters learning, claiming that there are few more urgent tasks. In his contributions in this book, particularly with Snyder in Chapter 7, responsibility of design and design requirements for a world learning system are explored. They even go as far as proposing a *discipline* of world design.

Members of the Hawkesbury group also explore what principles should underpin the design of systems to facilitate social learning. Several other authors make 'design for learning' considerations. Polin, for instance, considers factors in design of graduate education and student's learning experiences. Ison details two independent sets of design considerations for the design of learning systems and Woodhill considers institutional design. Most of these latter authors link facilitation and design which is also consistent with Wenger's position that learning cannot be controlled and designed, but it can be encouraged to emerge from a designed process.

14. Stability, Sustainability and Overall Purpose

Design considerations are entwined with notions of purpose. Schön and Vickers were both advocates of social learning systems (in their different forms) in the context of *stability* which reflected their post-war contexts. The Hawkesbury group's focus on sustainability has some similarities with the stability focus. Both viewpoints are highly dynamic and are specific about what needs to be stable or sustained. There is no suggestion that we can control rates of change, but it is possible to engage in purposeful design for learning that takes account of a range of dynamics in learning and in situations. In the CoPs tradition a similar concern with sustainability is expressed by Snyder and Wenger in making the case for our world as a learning system when proposing the idea of a fractal structure, and growing a community of communities, as a design principle to preserve a small-community feeling at a range of levels.

Snyder and Wenger's chapter also introduces the idea of '*strategic* social learning systems to steward civic practices at local, national, and global levels.' A link here could be made to some of the political and institutional aspects of other chapters, such as those of Woodhill and Ison and it raises an important distinction about the *purpose* of social learning systems.

Quite a range of purposes is presented by authors in this book. Yet from my perspective, all the authors seem concerned in their different ways not just with understanding current situations, but with making improvements to bring about a better world where we nurture, rather than undermine, the variously perceived systems on which we depend.

These 14 themes are not comprehensive, in terms of what could be distinguished as a landscape of social learning systems praxis. For instance, themes around 'meaning' 'governance' and 'power' could apply in their own right. But this mapping exercise represents a start on which to build. All of the themes identified present challenges for the future and imply potential roles for social learning systems and CoPs. In conclusion, I consider what roles these concepts might have in future.

What Future Roles for Social Learning Systems and Communities of Practice?

Social learning systems and CoPs are described variously in this book as perspectives, theories, praxis, traditions, approaches, constructs and as if they existed out there in the world. It is evident from the different authors' contributions, which detail how these ideas are being used in different domains today, that they mean different things to different people. The landscape of social learning systems praxis described here is also part of a larger landscape. A social learning system or CoP might also be recognised through theories and praxis of both social learning and systems other than those that appear in this book. For many practitioners, it is the diversity of ways in which social learning systems and CoPs can be thought about or used that accounts for part of their strength and increasing appeal.

I selected the chapters in this book because to me they all offered descriptions, analyses and examples with potential to be of use to current and future practitioners in making sense of, influencing and managing the kinds of systemic changes that rely on high quality and multi-level individual and interactive learning. Social learning systems and communities of practice seem to me to have much to commend them to those who want to interact with others in meaningful ways to bring about changes perceived as necessary at a range of different system levels. These changes might include improving a national health service, adapting to or mitigating the effects of global warming, approaching development more systemically, redesigning the social infrastructure of cities; increasing opportunities for students to realise their potential and extend the boundaries of their learning, or more generally, increasing opportunities for individuals wanting a different relationship with the world around them.

Any landscape can evoke very different responses in individuals, depending on, for instance, different experiences and worldviews. Individuals with different perspectives might also identify different features and processes as those that are changing or that need to change. In this book, the landscape mapped appears to have been viewed on both sunny and cloudy days. Among the perspectives articulated are: belief that social learning systems and community-based approaches can influence change in a positive way; determination to learn and influence change; and exasperation at what does not appear to be changing, in spite of what we appear to know. Social learning systems and communities of practice appear to have many future challenges to address – conceptual and practical, collaborative and individual, professional and personal. While these are demanding, in mapping a landscape of social learning systems praxis, this book offers insights into new ways of being and acting in the world in relation to each other which arise from both old and new understandings of communities, learning and systems. It is from these insights that the possibility of influencing and managing systemic change for a better world emerges.

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