



## REGIONAL ENVIRONMENTAL EDUCATION PROGRAMME

*This monograph provides four different reviews on social learning literature. Rather than seeking to be comprehensive, the reviews provide views on the social learning literature, from different perspectives. The papers scope aspects of the social learning literature, providing access to a wide body of literature(s) on social learning. This monograph should be useful for researchers interested in social learning in the fields of environmental education and natural resources management.*

***In partnership with***

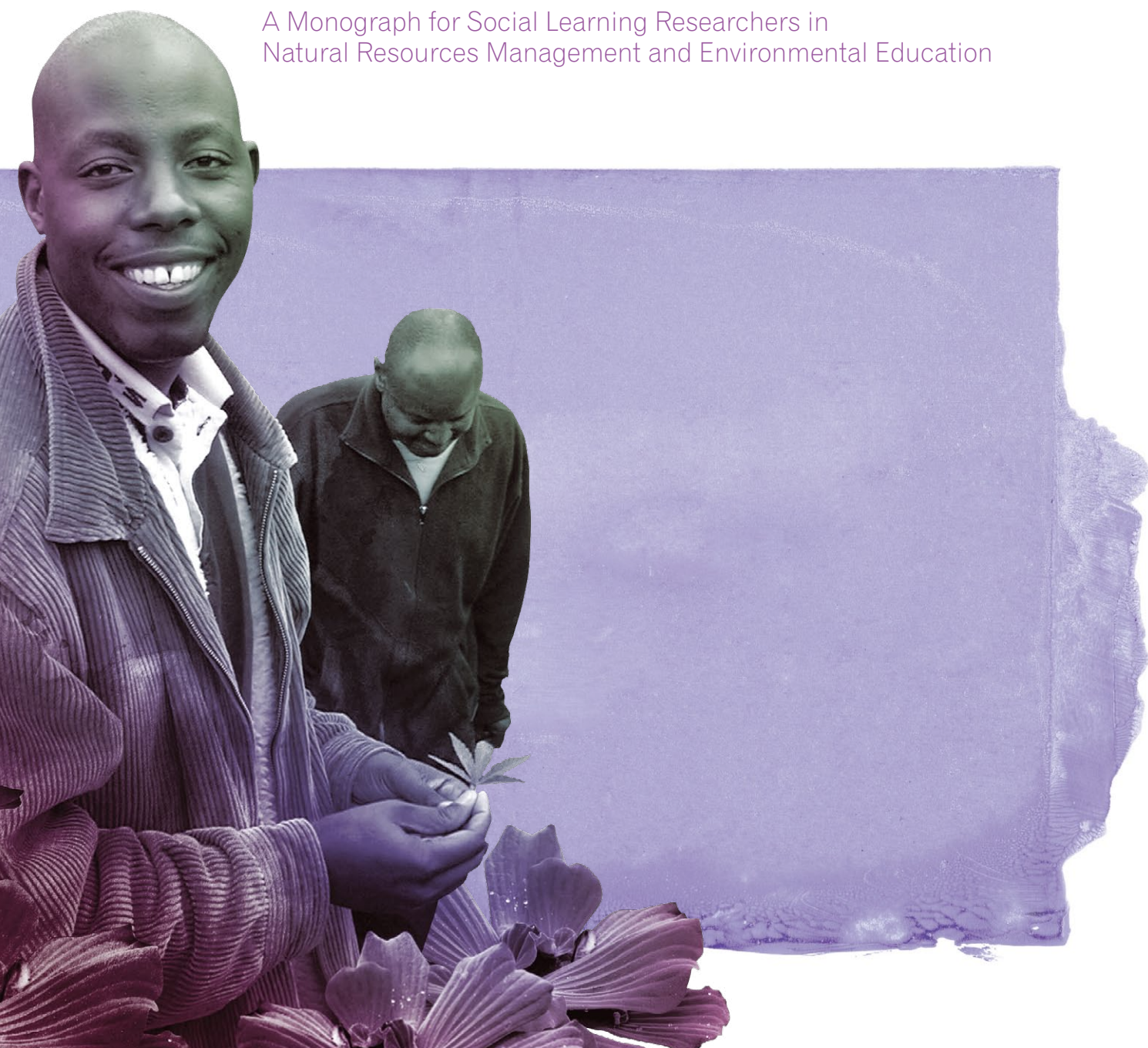






# (RE) VIEWS ON SOCIAL LEARNING LITERATURE

A Monograph for Social Learning Researchers in  
Natural Resources Management and Environmental Education





## A black and white photograph of a smiling man in a cord jacket holding a plant, with another man in the background. The man in the foreground is looking directly at the camera, while the man in the background is looking down at a plant. The image is part of a reportage by the University of Amsterdam.

EDITED BY: HEILA LOTZ-SISITKA



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# FOREWORD

*Arjen E.J. Wals*

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How can learning not be social? Isn't all learning social? These are often the kinds of questions I get when I share my fascination with social learning. Arguably all meaningful learning is inter-relational (with others, including other species, with place and, indeed with oneself) and requires some level of reflexivity by mirroring the significance of one's encounters with the inner sediments (frames, values, perspectives and worldviews) of prior experiences. The result tends to be a process of further solidification (freezing) or a loosening (unfreezing) or a modification (re-framing) or even the parallel occurrence of all three. So yes, the 'social' as inter-relational is crucial in most, perhaps all learning, that we engage in, but even though this is emphasised in social learning, this is not what sets it apart from related learning concepts such as collaborative learning, participatory learning, group learning, and so on.

It appears that in the context of working on inevitably ill-defined and ill-structured issues and situations (e.g. natural resource management issues or sustainability issues) there is an increased awareness that there is no one single perspective that can resolve or even improve such issues. Much social learning literature therefore refers to the importance of bringing together multiple perspectives, values and interests, including marginal and marginalised ones in order to be able to creatively and energetically break with stubborn routines that led to unsustainability in the first place. Despite the range of views on social learning that currently exist, the utilisation of pluralism and/or diversity in multi-stakeholder settings is often referred to as a key component of social learning. Now it

would be naïve to think that just by putting people with different backgrounds, perspectives, values and so on together, this creative and energising process would automatically start. This is where another form of 'social' comes in: social cohesion, sometimes referred to as social capital. In order to be able to create a constructive dynamic that allows diversity to play its generative role in finding routine-breaking solutions to sustainability challenges, there needs to be sufficient social cohesion between the participating actors, even between those who don't seem to care much about each other. In much of the social learning literature stress is placed on things like: investing in relationships, **deformalising** communication, co-creation of future scenarios and joint fact-finding. The idea is that when people who don't think alike, or even disagree, engage in a common task in a pleasant and safe environment, they will find their common humanity (which is considered a first step in developing the empathy for the other) needed to open up and engage with the other's perspective. Creating such an environment is an art in itself and requires careful facilitation – another key topic area in social learning literature.

In the open-access publication *The Acoustics of Social Learning* which appeared at the launch of the Wageningen University UNESCO Chair on Social Learning and Sustainable Development (Wals et al., 2009) we used the metaphor of an improvising jazz ensemble to capture the essence of social learning.

*Chaos frequently emerges in an (improvising) jazz ensemble, but structure rules. Everyone makes up part of the whole and that whole is, if it sounds good, more than the sum of the parts. Every musician has his/her own experiences and competencies, but also intuition and empathy. The ensemble doesn't know how things will sound ahead of time, but its members*



*instinctively know when things sound good. They have faith in one another and in a good outcome. Leadership is sometimes essential and therefore provided by one of the musicians or a director, or it sometimes shifts and rotates. The music is sometimes written down, though this is often not the case, and everyone simply improvises. If it sounds good, then the audience will respond appreciatively, that is to say, those who enjoy jazz music (and not everyone does...). People from the audience sometimes join in, changing the composition of the ensemble. The acoustics of the hall in which the music is played is important as well: not all halls sound alike and some have more character. A concert may also be recorded to serve as inspiration elsewhere, though this does not happen often... (Wals et al., 2009:3)*

Indeed social learning processes remind one of an improvising jazz ensemble. They too are intangible in a certain sense, and are therefore not easily controlled. Success often depends on the people concerned and on the manner in which they became involved. There are ideas regarding which direction the participants want to go and there are even recurring patterns, but the ultimate result comes about little by little. Sometimes, but certainly not all the time,

the conditions are quite optimal and the process brings out the unique qualities and perspectives of everyone and results in surprisingly novel solutions and actions. Indeed, in social learning too the whole is more than the sum of its parts. This monograph, consistent with some key ideas underpinning social learning, brings together and confronts different views on social learning, in order to arrive at a better understanding of the potential and the limitations of social learning in the context of natural resource management, environmental management and sustainability. The monograph represents one of the fruits of a collaborative effort between Wageningen University in the Netherlands and Rhodes University in South Africa. It represents a wonderful entry point into social learning for (young) academics not only in The Netherlands and South Africa, but all around the world, as some of the literature reviewed and the issues raised clearly transcend these two countries.

## REFERENCE

Wals, A.E.J., van der Hoeven, N. & Blanken, H. (2009). *The Acoustics of Social Learning: Designing learning processes that contribute to a more sustainable world*. Wageningen/Utrecht: Wageningen Academic Publishers/SenterNovem.



## 01

INTRODUCING THE MONOGRAPH  
AND THE (RE)VIEWS

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This monograph, entitled *(Re) Views on Social Learning Literature: A monograph for social learning researchers in natural resources management and environmental education* provides four different **reviews** on the social learning literature. Rather than seeking to be comprehensive, the reviews seek to provide **views** on the social learning literature, from different perspectives. The purpose of the monograph is to scope aspects of the social learning literature, providing access to a wide body of literature(s) on social learning for emerging researchers interested in social learning in the fields of environmental education and natural resources management.

The reviews do not claim to have covered **all** social learning literature, but rather to have worked selectively with literature(s) of interest in social learning research, as these emerge from different contextual and disciplinary starting points. All the papers in the monograph, however, note that social learning is a new, emergent arena of research in the fields of environmental education, natural resource management and human development. Of interest are the different histories and antecedent processes and literatures shaping social learning research, as captured in the different papers.

The first paper, by Georgina Cundill and Romina Rodela, 'searches for coherence' and presents the results of a review process that sought to disentangle the different ways in which social learning is conceptualised in natural resource management. The paper begins with an historical review that seeks to reveal the roots of social learning theory in natural

resource management. Their goal was not to decide on one definition of social learning, but rather to identify, and to expose the roots of the definitions that currently dominate the literature. Based on an historical analysis, typologies are developed that identify and describe key processes that support social learning, and the outcomes of these processes. These foreground processes of deliberation; experience and practice; and self organisation as key processes associated with social learning. From an outcomes perspective, the following are identified within the typologies developed: decision making; collective action; and behavioural and social change. Development of these typologies is followed by a systematic review of the literature to assess the extent to which there is an emerging consensus around these typologies. The authors conclude that **a key source of the confusion currently prevalent in the literature, stems from the fact that the same term is used to refer to quite different processes, which have different outcomes as their goal.** The authors recommend that to find a way out of the current confusion in the literature, researchers must be explicit about the definitions that they adopt for social learning, and locate these definitions within the historical development of thinking around social learning in this field. They argue that active debate about appropriate definitions for social learning, based on empirical studies and experience, should form the basis of this field of research in the coming years.

The second paper, by Romina Rodela, Georgina Cundill and Arjen Wals is less focussed on definitions of social learning, how these emerge and shape outcomes or assumptions of outcomes, and is more focussed on methodologies used by social learning researchers as they undertake social learning

research. The paper is also situated within a specific focus on social learning literature associated with natural resources management. Also using a systematic review approach, the paper points to some interesting features of social learning research, most notably its contextual nature, hence a strong reliance on the use of case study research and ex-post reflexive studies. The authors point out that only approximately 50% of the studies reviewed engage in empirical social learning research; the rest frame social learning as a 'backdrop or décor' of the research. They also point to mismatches or incongruencies between researchers' espoused ontological positions and the methodologies and methods they choose. While researchers indicate understandings of the contextual nature of social learning research, they select methodologies and approaches that seek universal conclusions and transferable results suggesting single realities and universalism. Studies espousing a commitment to reflexivity often fail to explain what reflexivity entails and how such studies can still inform practice, and also practice elsewhere. The authors conclude that there is a need to consider the internal coherence of social learning research assumptions and ontological, epistemological and axiological positions and associated methodologies in social learning research.

The third paper, by Injairu Kulundu considers the emergence of social learning literature from the perspective of participatory development and human development discourses. Carefully reviewing and critiquing the key assumptions of participatory development and human development including capabilities approaches, the author considers whether social learning discourse has more to offer an interest in participatory development than its predecessors (as reflected in antecedent literatures and associated critiques). Rounding up her review, she notes that 'the great trap' of the theoretical underpinnings of participatory approaches is that they are seductive in the way that their rhetoric clearly isolates and apports focus on collective agency as the cornerstone of development and transformation. She goes on to say that it does so in 'a language of attainability, a language that presents the proposition as a complete project, not as one that requires significant work to achieve'. Her key concern is that social learning researchers, and others working in the arena of participatory development need to give

more attention to translating and understanding their languages of participatory development and learning **as** practice **in** practice, which she argues further, involves 'hidden work' that 'often lies unaccounted for'. This she states occurs particularly when work with theories of development, participation and learning are 'superficially' engaged and worked with in research. She concludes that, despite attempts to provide signposts for practice in her literature (re) view, 'no amount of critique can prepare one to do the work, for it lives in practice'; and the real (re)view work involves finding the reflexivity to look at and respond to the unintended consequences of our practices as we engage within social learning and other development or change oriented learning processes. Bhaskar (1998) would refer to this as seeking out *the unity of theory and practice in practice*.

The last paper, by Heila Lotz-Sisitka, Million Belay and Mutizwa Mukute, does not focus on definitions of social learning; but rather on the antecedent literatures that allow us to understand the 'social' in social learning; and the 'learning' in social learning in some depth, without which, the paper argues, social learning cannot be fully understood. It complements the other papers in this monograph, all of which seek depth, coherence and reflexive engagement with social learning praxis. The paper argues that there is a need to give attention to these antecedent literatures to engage and understand the change oriented assumptions of social learning (reflected in all or most of the definitions and social learning research endeavours (as reflected in the other papers). The paper also argues that this is necessary to avoid 'ontological collapse' in social learning research undertaken in the context of natural resources management and environmental education; a necessary condition for seeking out *the unity of theory and practice in practice* (mentioned above). Ontological collapse occurs when *a social process* is represented as an *object* in scientific literature. Stepping into dialogue with two PhD literature reviews and their emergent rationales, the paper shows how working with antecedent literatures from cultural psychology, learning theory and social theory focussing on learning, agency and change, may assist social learning researchers to understand more fully the meanings and processes that are constitutive of social learning. The paper argues that this may



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assist social learning researchers to avoid ontological collapse in their social learning research.

Combined, this monograph provides a wide range of interestingly positioned views on the social learning literature. It provides emergent researchers with a landscape from which to critically consider how they may 'launch' their social learning research projects. The papers all emphasise the need to carefully and systematically contextualise the social learning research that is to be undertaken. They also shed light on the importance of engaging with historical understandings, field-based analyses, and antecedent literatures in framing social learning research. The papers show how context of interest and application, and the specific research questions shape how one might approach the social learning literature(s). The papers also show that there are important choices to be made by social learning researchers as they

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approach the social learning literature, all of which require careful, critical and in-depth engagement with the social learning literature(s) as they are emerging.

Of interest too, are the convergences emerging from the divergent interests, contexts, intellectual and practical spaces where social learning research is taking place and developing. These appear to centre most significantly around a core interest in the relationship between learning, agency, social change towards a more sustainable and socially just future. Perhaps these literature reviews point to a need to strengthen our understandings (also built through and in reflexive praxis, as argued by Kulundu) of this 'core relationship' if we are to 'seek coherence' in the social learning literature, and if we are to further the interesting capacity for divergence in social learning research applications and developments that are reflected across this monograph.



## 02

# A SEARCH FOR COHERENCE: SOCIAL LEARNING IN NATURAL RESOURCE MANAGEMENT

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## ABSTRACT

*This paper presents the results of a review process that sought to disentangle the different ways in which social learning is conceptualised in natural resource management. We begin with an historical review that seeks to reveal the roots of social learning theory in natural resource management. Based on this analysis, we develop typologies of statements about the processes that support social learning, and the outcomes of these processes. We then conduct a systematic review of the literature to assess the extent to which there is an emerging consensus around these typologies. We conclude that a key source of the confusion currently prevalent in the literature, stems from the fact that the same term is used to refer to quite different processes, which have different outcomes as their goal. To find our way out of the current confusion in the literature, researchers must be explicit about the definitions that they adopt for social learning, and locate these definitions within the historical development of thinking around social learning in this field. Active debate about appropriate definitions for social learning, based on empirical studies and experience, should form the basis of this field of research in the coming years.*

## INTRODUCTION

Learning, and particularly social learning, has become ubiquitous in natural resource management. One is hard pressed to find recent writings on the subject of natural resource management that do not include at least some reference to learning. The burgeoning interest in social learning is reflected in recent edited volumes (Keen, Brown & Dyball, 2005a; Wals, 2007; Blackmore, 2010) and special issues (e.g. *Environmental Education Research* Volume 16, 2010; *Environmental Science and Policy* Volume 10, 2007; *Ecology and Society* Volume 10, 2009; *Environmental Policy and Governance* Volume 19, 2009). In this review we contextualise the emergence of social learning in natural resource management with the intention of providing some coherence in an era of interdisciplinary science, where researchers increasingly borrow ideas, and sometimes just words, from other disciplines. In the case of social learning, a lack of understanding of the different ways in which the term is used within different schools of thought within natural resource management, leaving aside differences between pedagogy, psychology or anthropology, has led to growing criticism (Muro & Jeffrey, 2008; Reed et al., 2010).

Shared, but independent, experience of the disorientation created by the myriad uses of the term social learning was felt by the authors, and provided the impetus for this paper. The authors have both been involved in social learning theory and practice since our PhD studies, where we both attempted to

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evaluate the outcomes of social learning processes. The overwhelming impression we were left with after these endeavours was one of treading water, trying in vain to find a compass to help us navigate the rapidly growing literature dealing with this topic. In sharing our frustrations with one another, we decided to embark on a search for coherence. The goal is not to decide on one definition of social learning, but rather to identify, and to expose the roots of, the definitions that currently dominate the literature.

We begin our search for coherence by tracing the usage of the term 'social learning' back to its first use in natural resource management. In so doing, we expose the early literature to questions partially posed by Parson and Clarke (1995): Who learns? How do they learn? (what are the processes that support learning?) And what is learned? (what are the outcomes?) Based on this review of the early literature, we develop a number of typologies of definitions based on what is learned during social learning, and about the processes that support these outcomes. We then conduct a systematic review of the contemporary literature and use this to identify tensions in the current literature, and to identify important areas for future research. Overall, our goals are to i) contribute toward greater understanding between researchers who use the same words, but often mean different things; ii) identify the range of expectations about the outcomes of social learning for natural resource management; and iii) highlight the urgent need to test the extent to which these expectations are met in reality. Failure to be realistic about expectations, and to subject them to testing, will inevitably lead to disillusionment with the opportunities associated with learning based approaches, and the rise of yet another widely popular panacea.

## METHODOLOGY

The review was conducted in an iterative manner, involving a number of activities that were largely, but not always, sequential. (1) An initial analysis of the social learning literature, which included different source material i.e. books and journal articles, suggested that social learning is conceptualised differently within different management approaches. Our first task was therefore to identify the different management approaches in which social learning

is considered important, the definitions they use for social learning, and the interchange of ideas regarding social learning over time. We discerned clear differences in answers to the questions: *who learns?, how do they learn?, and what do they learn?*, based on whether the literature was located within the adaptive management, collaborative management or adaptive co-management bodies of literature. (2) To explore these differences, we identified early and frequently cited references to social learning in each of these literatures, and subjected this literature to our three guiding questions. (3) Having completed the previous steps, and having developed a history of social learning in natural resource management, we then wanted to trace the extent to which a consensus is being reached regarding definitions of the processes and outcomes of social learning. To this end, the peer-reviewed social learning literature was approached in a more systematic way. Based on Rodela, Cundill and Wals (forthcoming), two electronic bibliographic databases were used to retrieve publications (Web of Science, Scopus). The search terms included: social learning, environment, sustainability, natural resources management. To be included, papers had to meet the criteria of quality and relevance: they had to be peer reviewed empirical publications and fall within the research domain of environmental sustainability. Papers were excluded if social learning was used only in a superficial manner e.g. if the term was only mentioned once or twice, and if multiple publications were based on one study where the same definition of social learning was used. Where this was the case, only the most relevant paper from that study was included. (4) We captured the definitions of social learning from all selected papers and treated these as 'indicators' of assertions about how people learn and what they learn during social learning. For example, Schusler, Decker and Pfeffer's (2003) definition of social learning as a process in which people share their perspectives and experiences to create common understandings of a situation and to develop strategies for collective action to improve the situation, reveals an assumption that learning takes place through the sharing of perspectives and experiences, and that what is learned is how to create a common understanding and to develop strategies for collective action. The paper selection process resulted in 54 publications being selected, from which data was extracted in the manner just described. (5) At this



point, we mapped the historical review of answers to our guiding questions onto the definitions used in the current literature and identified points of tension and new emergent directions.

## THE ROLE OF SOCIAL LEARNING IN NATURAL RESOURCE MANAGEMENT OVER TIME

Over time, social learning has been defined and advanced for different reasons in natural resource management. In order to fully understand the ways in which learning is conceptualised in different management approaches, it is important to understand the historical context from which each approach emerged. Here, attention is paid to the broader discourses that have influenced the emergence of different management approaches, and we discuss how they have positioned themselves with regard to social learning based on our three core questions (Table 1). At present there is no overarching agreement on how management approaches should be grouped, and for this reason our grouping of management approaches into adaptive management, co-management and adaptive co-management might not find complete consensus among scholars. However, there is some precedent for our groupings: Berkes (2009) reflects on the evolution of co-management and how this differs from other approaches, and Armitage, Marschke and Plummer (2008) discuss and differentiate between adaptive management, co-management and adaptive co-management.

Until about the late 1970s, 'command and control' approaches to natural resource management (Holling & Meffe, 2002), or 'fortress conservation' (Adams & Hulme, 2001; Brockington, 2002) dominated natural resource management, particularly within protected areas. In Africa, with deep roots in Victorian notions of human dominion over nature, and fuelled by the large scale decimation of wildlife (Carruthers, 1989), fortress conservation first took the form of the creation of wildlife reserves intended for sports hunters, and later as national parks intended to maintain wildlife in a pristine condition (Mabunda, Pienaar & Verhoef, 2003; Fabricius, 2004). This approach sought to exclude humans from nature, and to control nature through a worldview that emphasised predictable, incremental change in natural systems (Folke, Hahn,

Olsson & Norberg, 2005). Central to this management approach was an assumption that scientists and managers operated under high levels of certainty, and that interventions based on sound science could 'engineer' nature toward some kind of pristine condition. This approach was epitomised in large nature reserves such as Kruger National Park in South Africa, where it was assumed that 'management by intervention', underpinned by sound science, would lead to the protection of wildlife (Mabunda et al., 2003). Learning, although not referred to at the time, was implicitly seen to take place in the domain of park wardens, and later science.

However, by the 1970s and 1980s, several surprising ecological changes caused by human intervention, such as large-scale wildfires in Yellowstone National Park partially as a result of long-term fire suppression policies (Knight & Wallace 1989), and multi-scale changes in species distribution patterns in Kruger National Park caused by artificial watering points (Gaylard, Owen-Smith & Redfern, 2003), amongst others, had led to a growing recognition of complexity in ecology (Holling, 1973; Holling, 1978; Allen & Starr 1982; Walters, 1986). Complex adaptive systems have a number of key attributes, chief among which are non-linear interactions among processes at multiple scales, and the associated possibility of multiple potential outcomes of interventions (Holling, 1973). Scholars realised that these characteristics of ecosystems had some serious implications for the management of natural resources (Holling, 1978). The fact that interventions would not lead to predictable outcomes introduced the idea of uncertainty in decision making, and exposed the reality that managers faced complex problems with incomplete knowledge (Walters & Holling, 1990). Management approaches that sought stability were no longer tenable, and ecologists began to refer to the 'pathology of natural resource management' (Holling & Meffe, 1996). A systems orientation gained prominence, emphasising linked social-ecological systems, adaptation, learning and resilience (Holling, 1986; Lee, 1993; Gunderson, Holling & Light, 1995).

These conceptual trends led to calls for active experimentation as a means to learn, an approach that became embodied in **adaptive management** (Holling, 1978). Although no definition of learning

was given in early publications (Holling, 1978; Walters, 1986), learning was described as an iterative process based on the scientific model of carefully planned experiments that involved scientists and decision makers who learned through a cyclical process of setting objectives, planning, taking action, monitoring and reflecting on the outcomes, learning, and taking action again (Walters, 1986). The focus was on the individual learning process, expected to take place amongst scientists and policy makers. Lee (1993) was the first to refer explicitly to 'social learning' in the context of adaptive management, which he defined as the combination of adaptive

management and bounded conflict. Lee saw conflict as fundamental for change to occur, but stressed that conflict should have limits to prevent it from dissolving into anarchy. The focus of social learning for Lee was on organised human endeavour, and therefore social learning was seen to occur over many decades within both individuals and organisations. Overall, in adaptive management, learning was originally expected to take place amongst resource managers, who learned how to cope with uncertainty by an expanding awareness of ecosystem change across scales, and the creation of opportunities for social change (Lee, 1993).

**TABLE 1: THE CHANGING ROLE OF LEARNING IN NATURAL RESOURCE MANAGEMENT**

	Learning by	Learning about	Learning through
<b>Command and control</b>	Park wardens	Nature under high levels of certainty	No established method, intervention
<b>Adaptive management</b>	Managers, policy makers, scientists	Ecosystem change under high levels of uncertainty	Experimentation
<b>Collaborative Management</b>	Everyone who has a stake in a given resource	Working together, building relationships in highly conflictual environment	Deliberation, exposure of values, knowledge sharing

During the 1980s and 1990s, a number of largely parallel shifts influenced the development of **collaborative management**, contributing to a different understanding of who learns, how people learn and what people learn in natural resource management. These shifts were influenced by calls for greater civic participation in development decision making (Chambers, 1994) and for rights-based approaches to development that empowered the poor and focused on issues of access to resources (Sen, 1981, 1999; see also Mansuri & Rao, 2004 for a review). These shifts created an academic and policy environment where command and control approaches to conservation

were seen as increasingly socially unjust and untenable (Adams & Hulme, 2001). Influenced by participatory democracy, these shifts found traction in international policy discourses, which were calling for conservation with development and greater sharing of benefits with communities in natural resource management. For example, the World Conservation Strategy (1980) espoused the possibility of harmonising conservation and development objectives, the report of the Brundtland Commission (1987) highlighted the links between poverty and the environment, and the Rio Earth Summit (1992) gave support to community-based approaches to

resource management and sustainable development more generally. Simultaneously with the rights-based discourse, early debates in economics regarding the appropriateness of private versus common property regimes for conservation (Hardin, 1968; Berkes, 1989; Ostrom, 1990; Bromley, 1991) began to influence the ways in which the role of communities in natural resource management was understood and applied. A fundamental contribution from these fields included the recognition that common pool resources could be managed effectively by local people under certain conditions (Ostrom, 1990), and with appropriate levels of decentralisation (Murphree, 2000). Collaborative natural resource management thus became seen not only as desirable from a rights-based perspective, but also feasible in practice.

In contrast to adaptive management, where learning was largely seen to take place in the domain of managers and scientists, and through experimentation, in the collaborative literature the focus of learning came to bear on deliberative processes involving all stakeholders. The term 'social learning' was first used in this literature in the context of fisheries management in the late 1980s and early 1990s (Dale, 1989; Pinkerton, 1994) to refer to a process in which parties learn to work collaboratively. All stakeholders, including resource users and government, were considered key to this learning process. Influenced by Habermas's communicative rationality, Pinkerton described learning as taking place when parties deliberate over problems, undertake shared tasks, reveal values and perceptions, and conduct joint monitoring. Similarly grounded in deliberative theory, Daniels and Walker (1996) described social learning as the process of framing issues, analysing alternatives, and debating choices as part of an inclusive deliberative process. Individuals were considered to learn through a process of civic discovery as the range of public values was exposed. The goal of social learning was not to eliminate conflict, but rather to learn about complex issues in an inherently conflictual environment. A similar definition was put forward by Buck, Wollenburg and Edmunds (2001), based on Maarleveld and Danbegnon (1999), in the context of forest management. Here, individuals were seen to learn through a process of knowledge sharing, bounded conflict (Lee, 1993), communication and experimentation. Some overlap

between adaptive management and collaborative management learning discourses were therefore evident by the early 2000s, and indeed Borrini-Feyerabend, Pimbert, Farvar, Kothari and Renard (2004) later used the adaptive management focus on learning through experimentation as the basis for learning in collaborative management. Significantly though, although implied in the claims put forward by Pinkerton (1994) and Daniels and Walker (1996), Buck et al. (2001) were the first to explicitly advance the claim that social learning enhances the capacity for joint action, problem solving, conflict mitigation and relationship building. In summary, the collaborative management literature differed in significant ways in terms of its approach to social learning. All stakeholders were engaged in the learning process, they learned through deliberation and interaction, rather than experimentation, and the content of their learning revolved around relational issues such as learning how to appreciate other perspectives and how to act collectively. This approach to social learning is based far more solidly on classic definitions of the term in adult education (Merriem & Caffarella, 1998).

During the 2000s, a growing interchange of ideas from adaptive and collaborative management, and heavily influenced by systems ecology, led to the emergence of an approach referred to as **adaptive co-management**, in which learning plays a similarly central role (Ruitenbeek & Cartier, 2001; Olsson, Folke & Berkes, 2004; Olsson et al., 2006). In theory, the approach combines the adaptive management emphasis on learning-by-doing, monitoring and action, and co-management's focus on collaborative and inclusive decision making (Armitage, Berkes & Doubleday, 2007). However, the way in which social learning is frequently conceptualised in this body of literature differs substantially in some ways from its predecessors. In a distinct break from earlier work, social learning has been conceptualised as a long-term self-organising process of social-ecological co-evolution that takes place through interaction with the environment and experience of ecological crises (Olsson et al., 2004; Folke et al., 2005). Within this school, learning is thought to build the ability of resource users and managers to respond to changes in ecosystems, and the ability to direct social-ecological systems onto more sustainable trajectories (Olsson et al., 2004; Folke et al., 2005). Other analysts

working with adaptive co-management define social learning in terms of single-, double- and triple-loop learning, based on organisational learning theory (Armitage et al., 2008). In accordance with this focus on loop learning, participants in the learning process are thought to learn about their own and others' values, and to question the governing norms in which values are embedded (ibid.).

A number of key early contributions toward the current focus on social learning in natural resource management came from a set of literature that does not fit neatly into any of these identified management approaches. A seminal contribution came from Parson and Clark (1995) who provided, at the time, the most detailed background to theories of adult learning in the context of natural resource management, and who explicitly differentiated individual from organisational learning. These authors described learning as taking place through observation and imitation, symbolic representation of events and experiences, through language and other media, and through self-generated rewards and punishments.

Perhaps one of the most influential publications exploring the role of social learning in natural resource management was that of Keen, Brown and Dyball (2005a). Reflecting influences from both collaborative and adaptive management, social learning was defined as the "collective action and reflection that occurs amongst different individuals and groups as they work to improve the management of human and environmental interrelations" (Keen, Brown and Dyball (2005b: 4). All stakeholders were considered relevant to the learning process, with learning taking place through dialogue, disciplined debate and experiments. Reflecting earlier work (e.g. Lee 1993; Buck et al., 2001; Roling, 2002), the authors claim that learning, as a process, can expand understanding of human-environment interactions, and the problems at stake.

## EXPRESSIONS OF TYPOLOGIES IN THE LITERATURE

In order to ascertain the extent to which different approaches to social learning, as described in the previous section and summarised in Table 1, have found purchase in the literature, we conducted a systematic review. To assist with the review,

typologies of assertions about a) the processes through which social learning takes place, and b) the outcomes of this learning, were developed based on the previous review of early and frequently cited literature (Tables 2 and 3). These typologies were developed by extracting key concepts and words, then grouping them based on the extent to which they were used together in the early literature. Definitions of social learning were extracted from 54 selected peer reviewed papers. The results of this systematic review are reported below.

## HOW DO PEOPLE LEARN? THE PROCESSES THAT SUPPORT SOCIAL LEARNING

**Typology i: Social learning takes place through deliberative processes involving sustained interaction between individuals, and the sharing of knowledge and perspectives in a trusting environment**

The idea that social learning is supported primarily by deliberative processes, which, historically in natural resource management, was originally advanced mainly through the collaborative management literature (Pinkerton, 1984; Daniels & Walker, 1996; Buck et al., 2001), has received the most traction in the more recent literature on social learning. Indeed, of the 54 papers reviewed here, 39 stated that this was the primary way in which learning occurs. For example, based on Schusler et al. (2003), many state that learning occurs when people engage with one another and share diverse perspectives (e.g. Selin, Pierskalle, Smaldone & Robinson, 2007; Cheng & Mattor, 2010; Brummel, Nelson, Souter, Jakes & Williams, 2010; Kendrick & Manseau, 2008). Others, drawing on Maarleveld and Dangbegnon (1999), state that social learning is in itself a continuous dialogue and deliberation amongst a variety of stakeholders who explore problems and their solutions (e.g. Standa-Gunda, 2005; Frost, Campbell, Medina & Usonga, 2006).

However, in asserting that social learning will be triggered by deliberation, this literature does not account for the fact that not all participants are equally equipped to partake in a deliberative process and share their opinions. Recent literature on deliberative democracy has extensively discussed



how deliberative processes do not always lead to a shared understanding, agreement upon the issue at stake and eventually to learning (e.g. Elstub, 2010). Time constraints, attendance fluctuation, levels of literacy, issue salience and power relations are some factors that influence participants' learning

experiences. This means that while deliberation can be framed as processes that potentially can benefit individual participants in terms of offering a learning environment, the extent to which this translates into social learning still needs to be tested.

**TABLE 2: TYPOLOGIES OF CLAIMS ABOUT THE PROCESSES THAT SUPPORT SOCIAL LEARNING AND EXAMPLES FROM THE LITERATURE**

Typologies	Number of surveyed articles that referred to this claim (N = 54)	Examples
Typology i) Social learning takes place through deliberative processes involving sustained interaction between individuals, and the sharing of knowledge and perspectives in a trusting environment	39	<p>Social learning is learning that occurs when people engage one another, sharing diverse perspectives and experiences to develop a common framework of understanding and basis for joint action (Schusler et al., 2003; see also Selin et al., 2007; Cheng &amp; Mattor, 2010; Brummel et al., 2010; Kendrick &amp; Manseau, 2008)</p> <p>Social learning is a process of continuous dialogue and deliberation among scientists, planners, managers and users to explore problems and their solutions (Maarleveld &amp; Dangbegnon, 1998, see also Standa-Gunda et al., 2003)</p> <p>Social learning can be considered as learning how to participate and learning how to get involved with other stakeholders, to get desirable social outcomes in terms of joint project work or development of common attitudes (Bouwen &amp; Taillieu, 2004:141)</p> <p>Social learning is the process by which a group develops knowledge that is held collectively and can influence the behaviour of individuals who are members of a group (Keen et al., 2005b, see also Davidson-Hunt, 2006 )</p>
Typology ii) Learning takes place through deliberate experimentation and reflective practice involving joint actions such as monitoring	10	<p>Social learning is experimentally based learning that takes place among scientists, users, planners and managers as they interact continuously leading to ongoing adaptation (Maarleveld &amp; Dangbegnon, 1999, see also Brown, Buck &amp; Lassoie, 2008).</p> <p>Social learning is an interactive process of action and reflection (Kuper et al., 2009)</p> <p>Social learning is defined as an iterative process of knowledge co-production among stakeholders brought into interaction (Steyaert et al., 2007)</p>
Typology iii) Social learning is a self-organising process of social-ecological interaction over long periods of time	6	<p>Social learning as a process whereby local people are able to learn and transmit knowledge among themselves and to future generations (Rodriguez &amp; Vergara-Tenorio, 2007)</p>

***Typology ii: Learning takes place through deliberate experimentation and reflective practice involving joint actions such as monitoring***

The idea that learning takes place through deliberate reflective practice and experimentation, which historically emerged out of the adaptive management literature (e.g. Walters, 1986; Lee, 1993), has found less traction in the literature, with only 10 out of the 54 papers stating that this was the primary process that supports social learning. Within this cloud of literature, social learning has variously been defined as an interactive process of action and reflection (Kuper et al., 2009), as an iterative process of knowledge co-production among stakeholders (Steyaert et al., 2007), and as an intentional process of collective self-reflection (Fernandez-Gimenez, Ballard & Sturtevant, 2008).

***Typology iii: Social learning is a self-organising process of social-ecological interaction over long periods of time***

Less influential have been the ideas that social learning is a self-organising process of social-ecological interaction over long periods of time, which has been advanced primarily from within the adaptive co-management literature (e.g. Folke et al., 2005; Olsson et al., 2004). Only one paper was found to support this definition, with Rodriguez & Vergara-Tenorio (2007) describing social learning as a process whereby local people are able to learn and transmit knowledge among themselves and to future generations.

## THE OUTCOMES OF SOCIAL LEARNING

***Typology iv: Social learning improves decision making by increasing awareness of human-environment interactions, and by building relationships and the problem-solving capacity of stakeholders***

One of the major assertions that emerged from all spheres of the early natural resource management literature was that social learning improves decision making. Of the 54 papers reviewed, 36 supported this assertion. For example, it is argued that social learning facilitates co-management by transforming relationships (Schusler et al., 2003); that it transforms social and human capital so that management

processes are adjusted and improved (Brown et al., 2008); that it leads to the integration of understanding over space and time (Nerbonne & Lentz, 2003); and that it enhances the ability of social-ecological systems to respond to change (Pahl-Wostl & Hare, 2004). The extent to which this assertion is supported by experience and empirical studies requires far greater attention in the future.

***Typology v: Social learning facilitates collective action around common environmental concerns***

Although the idea that collective action is a key outcome of social learning is widely stated in the literature, our review revealed that it was supported by comparatively few authors in the definitions that they offered (12). This result is likely to have been influenced by our inclusion of only one paper from a given project in the review, and also by the fact that we used only the definitions of social learning to discern the extent of this assertion. In support of collective action as an outcome of social learning, some argue that social learning promotes collective actions within social networks (Maurel, Craps, Cernesson, Raymond, Valkering & Ferrand, 2007), while others state that social learning leads to new knowledge, shared understanding and therefore collective action. Collins, Blackmore, Morris and Watson (2007: 565) refer to concerted action in a similar way, and state that social learning promotes concerted action which "...involves multiple stakeholders working together in a purposeful way to achieve some common end that emerges during the process". Although less central to the social learning discourse than improved decision making, collective action is certainly an expectation among those interested in this concept. The source of this expectation can perhaps be traced to the collaborative management literature, where, from about the 1990s onward, resource managers were faced with multi-stakeholder situations in which action was fundamentally dependent on a group of people coming together, reaching some form of agreement, and taking action. This dilemma, in which collective action is fundamental to management success, has moved well beyond collaborative management, and is a feature of almost any natural resource management context today, even within protected areas (e.g. Pollard, du

Toit & Biggs, 2011). However, given that limited empirical research has tested the extent to which this expectation is appropriate, the extent to which collective action is an outcome of social learning should be subject to empirical scrutiny

in the future. Guiding questions might include: Does social learning lead to collective action? And if so, under what conditions? What other contextual factors play a role in determining collective action outcomes?

**TABLE 3: TYPOLOGIES OF CLAIMS ABOUT THE OUTCOMES OF SOCIAL LEARNING AND EXAMPLES FROM THE LITERATURE**

Typologies	Number of surveyed articles that referred to this claim (N = 54)	Examples
Typology iv) Social learning improves decision making by increasing awareness of human-environment interactions, and by building relationships and the problem-solving capacity of stakeholders	36	<p>Social learning facilitates co-management through the transformation of relationships (Schusler et al., 2003)</p> <p>Social learning transforms both social and human capital so that the natural resource management process is adjusted and improved (Brown et al., 2008).</p> <p>Social learning is aimed at strengthening the communities capacity to collaboratively manage ecosystems sustainably for human well-being (Leys &amp; Vanclay, 2010)</p> <p>Knowledge communities provide a collective experience called social learning. Through relationships with others, understanding is integrated over space and time (Nerbonne &amp; Lentz, 2003)</p>
Typology v) Social learning facilitates collective action around common environmental concerns	12	<p>Social learning refers to processes in which people share their perspectives and experiences to create common understandings of a situation and develop strategies for collective action to improve the situation (Cheng &amp; Mattor, 2010, based on Schusler et al., 2003)</p> <p>Social learning promotes collective actions within social networks (Maurel et al., 2007)</p> <p>Social learning is learning in and with social groups through interaction and leads to new knowledge, shared understanding, trust and, ultimately, collective action (Lebel, Grothmann &amp; Siebenhuner, 2010)</p> <p>Social learning promotes concerted action, which "...involves multiple stakeholders working together in a purposeful way to achieve some common end that emerges during the process" (Collins et al., 2007: 565)</p>

Typology vi) Social learning leads to behavioural and social change	6	<p>Social learning is a "...participatory process[es] of social change underpinned by a theoretical framework in which social processes are defined as non-linear and non-deterministic. Social learning-based initiatives are essentially non-coercive and their contents are open to collective agreement. SL approach is a shift from multiple to collective cognition" (Rist, Chidambaranathan, Escobar, Wiesmann &amp; Zimmermann, 2007: 26)</p> <p>Social learning a process of long-lasting change in the behaviour or the general ability to behave in a particular way that is founded on changes in knowledge (Dedeurwaerdere, 2009)</p> <p>At the heart of a social learning process is an agenda for social change as it involves self-conscious and deeply reflective critique of received dogmas and knowledge, while expanding the space for alternative conceptualisations, social action and change (Kroma, 2006)</p>
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***Typology vi: Social learning leads to behavioural change***

Although not present in the early literature, assertions that social learning leads to behavioural and/or social change are becoming common in the current literature (6 of 54 papers made this assertion), and are perhaps linked to expectations of collective action. For example, Rist et al. (2007) explicitly describe social learning as a participatory process of social change, while others describe social learning as a change in behaviour that is founded on changes in knowledge (Dedeurwaerdere, 2009). Indeed, Kroma (2006) states that an agenda for social change is at the core of social learning processes. These assertions, however, are not substantiated by empirical evidence and it remains unclear what underlying processes could underpin behavioural and/or social change in a context of resource management. Both are a complex and multidimensional phenomenon. In terms of behavioural change, research in environmental psychology has already shown that it does not follow simple cause-effect dynamics. For example, research has illustrated that providing large amounts of information about recycling will not necessarily lead to the uptake of recycling behaviour (Schultz & Oskamp, 1996). In terms of social change, perhaps most extensively addressed within sociology, research has likewise arrived at no concluding point. If these two are indeed of an interest to natural resource management the literature might

need to borrow theories and established knowledge from disciplinary domains where similar questions have been around for a long time.

## CONCLUSIONS

The term social learning is used in significantly different ways in the natural resource management literature. Key differences can be traced to the fundamentally different reasons behind the perceived need for learning within different management paradigms. In the case of adaptive management, ecological complexity, and the resultant uncertainty faced by resource managers, has been the major factor driving an interest in learning. As a result, the term social learning in this literature has been used increasingly to describe processes in which experimentation and reflective practice are at focus, with the goal of improving decision making. In the case of collaborative management, the primary reason that social learning became a prominent theme was because rights-based discourses led to management situations in which multiple stakeholders, with different worldviews and values, were brought into interaction. These situations were inherently conflictual, and therefore learning how to work together was considered fundamental to successful management, and became a key outcome pursued through social learning.

We conclude that one of the primary causes of the disorientation that researchers and managers feel when



they begin to read about social learning in the context of natural resource management is that people are using the same term to refer to quite different things. Based on this review, we have developed a number of typologies about a) the processes that support learning, and b) the expected outcomes of social learning. Currently, some level of agreement appears to be taking shape around these typologies. We do not wish to create the impression of polar opposites between these typologies, for example between approaches that focus on deliberation versus those that focus on active experimentation. Indeed, it is in the nexus of these approaches that we anticipate the most innovative resource management will take place (see for example Keen et al., 2005a). Deliberative processes that do not include mechanisms that create a tight feedback between managers and ecosystems are likely to fail in their ecological goals. Likewise, processes focussed too heavily on experimentation, without due attention to the social dynamics that ultimately underlie decision making, are equally likely to fail (Cundill, Cumming, Biggs & Fabricius, 2011).

We hope that these typologies will help researchers better locate their own work within these different management paradigms, and to recognise when they actively innovate by crossing old disciplinary boundaries. We call on researchers to be explicit about the definitions that they adopt for social learning, and to locate these definitions within the historical development of thinking around social learning in this field. Active debate about appropriate definitions for social learning, as called for by Reed et al. (2010), based on empirical studies and experience, should form the basis of this field of research in the coming years.

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## REFERENCES

- Adams, W. & Hulme, D. (2001). If community conservation is the answer in Africa, what is the question? *Oryx*, 35, 193-200.
- Allen, T. & Starr, T. (1982). *Hierarchy: Perspectives for ecological complexity*. Chicago: University of Chicago Press.
- Armitage, D., Berkes, F. & Doubleday, N. (2007). Introduction: Moving beyond co-management. In *Adaptive co-management: Collaboration, learning, and multi-level governance*, D. Armitage, F. Berkes, N. Doubleday (Eds.), 1-15. Vancouver: UBC Press.
- Armitage, D., Marschke, M. & Plummer, R. (2008). Adaptive co-management and the paradox of learning. *Global environmental change*, 18, 86-98.
- Berkes, F. (1989). *Common property resources: Ecological and community based sustainable development*. London: Belhaven Press.
- Berkes, F. (2009). Evolution of co-management: role of knowledge generation, bridging organizations and social learning. *Journal of Environmental Management*, 90, 1692 – 1702
- Blackmore, C. (2010). *Social learning systems and communities of practice*. London: Springer.
- Borrini-Feyerabend, G., Pimbert, M., Farvar, M.T., Kothari, A. & Renard, Y. (2004). *Sharing Power. Learning by doing in co-management of natural resources throughout the world*. Cenesta, Tehran: IIED and IUCN/ CEESP/ CMWG.
- Bouwen, R. & Taillieu, T. (2004). Multi-party collaboration as social learning for interdependence: developing relational knowing for sustainable natural resource management. *Journal of Community & Applied Social Psychology*, 14, 137–153.
- Brockington, D. (2002). *Fortress Conservation: The Preservation of the Mkomazi Game Reserve, Tanzania*. Oxford: International African Institute and James Currey.
- Bromley, D.W. (1991). *Environment and economy: property rights and public policy*. Oxford: Basil Blackwell.

Brown, H.C., Buck, L. & Lassoie, J. (2008). Governance and social learning in the management of Non-Wood Forest Products in community forests in Cameroon. *International Journal of Agricultural Resources, Governance and Ecology*, 7, 256-275.

Brummel, R.F., Nelson, K.C., Souter, S.G., Jakes, P.J. & Williams, D.R. (2010). Social learning in a policy-mandated collaboration. *Journal of Environmental Planning and Management*, 53, 681-699.

Buck, L., Wollenberg, E. & Edmunds, D. (2001). Social learning in the collaborative management of community forests: lessons from the field. In *Social learning in community forest management*, E. Wollenberg, D. L. Buck, J. Fox, S. Brodt (Eds.), 1-20. Bogor Barat, Indonesia: CIFOR and the East-West Center.

Chambers, R. (1994). Participatory Rural Appraisal (PRA): Analysis and Experience. *World Development*, 22, 1253-1268.

Cheng, A.S. & Mattor, K.M. (2010). Place-Based Planning as a Platform for Social Learning: Insights from a National Forest Landscape Assessment Process in Western Colorado. *Society & Natural Resources*, 23, 385-400.

Collins, K., Blackmore, C., Morris, D. & Watson, D. (2007). A systemic approach to managing multiple perspectives and stakeholding in water catchments: Three UK studies. *Environmental Science and Policy*, 10, 564-574.

Cundill, G., Cumming, G.S., Biggs, D. & Fabricius, C. (2011). Soft systems thinking and social learning for adaptive management. *Conservation Biology*, 26(1), 13-20.

Carruthers, J. (1989). Creating a National Park: 1910 to 1926. *Journal of Southern African Studies*, 15, 188-216.

Dale, N. (1989). Getting to co-management: Social learning in the redesign of fisheries management. In *Cooperative management of local fisheries: New directions for improved management and community development*, E. Pinkerton (Ed.), 49-72. Canada: British Columbia Press.

Daniels, S. & Walker, G. (1996). Collaborative Learning: Improving Public Deliberation in Ecosystem-Based Management. *Environmental Impact Assessment Review*, 16, 71-102.

Davidson-Hunt, I. (2006). Adaptive Learning Networks: Developing Resource Management Knowledge through Social Learning Forums. *Human Ecology*, 34, 593-614.

Dedeurwaerdere, T. (2009). Social Learning as a Basis for Cooperative Small-Scale Forest Management. *Small-Scale Forestry*, 8, 193-209.

Elstub, S. (2010). The Third Generation of Deliberative Democracy. *Political Studies Review*, 8, 291-307.

Fabricius, C. (2004). The Fundamentals of Community-Based Natural Resource Management. In *Rights, Resources and Rural Development*, C. Fabricius, E. Koch, H. Magome, S. Turner (Eds.), 3-43. London: Earthscan.

Fernandez-Gimenez, M., Ballard, H. & Sturtevant, V. (2008). Adaptive management and social learning in collaborative and community-based monitoring: a study of five community-based forestry organisations in the western USA. *Ecology & Society*, 13, 4. <http://www.ecologyandsociety.org/vol13/iss2/art4>

Folke, C., Hahn, T., Olsson, P. & Norberg, J. (2005). Adaptive governance of social-ecological resources. *Annual review of environment and resources*, 30, 441-473.

Frost, P., Campbell, B., Medina, G. & Usongo, L. (2006). Landscape-scale approaches for integrated natural resource management in tropical forest landscapes. *Ecology & Society*, 11, 30. <http://www.ecologyandsociety.org/vol11/iss2/art30/>

Gaylard, A., Owen-Smith, N. & Redfern, J. (2003). Surface water availability: Implications for heterogeneity and ecosystems processes. In *The Kruger Experience. Ecology and Management of Savanna Heterogeneity*, J. du Toit, K. Rogers, H. Biggs (Eds.), 171-188. Washington: Island Press.

Gunderson, L.H., Holling, C.S. & Light, S. (1995). *Barriers and Bridges to the Renewal of Ecosystems and Institutions*. New York: Columbia University Press.

- Hardin, G. (1968). The Tragedy of the Commons. *Science*, 162, 1243-1248.
- Holling, C.S. (1973). Resilience and Stability of Ecological Systems. *Annual Review of Ecology and Systematics*, 4, 1-24.
- Holling, C.S. (1978). *Adaptive environmental assessment and management*. London: John Wiley and Sons.
- Holling, C.S. (1986). The Resilience of Terrestrial Ecosystems: Local Surprise and Global Change. In *Sustainable development of biosphere*, W.C. Clarke & R.E. Munn (Eds.). Cambridge: Cambridge University Press.
- Holling, C.S. & Meffe, G.K. (1996). Command and control and the pathology of natural resource management. *Conservation Biology*, 10, 328-337.
- Keen, M., Brown, V. & Dyball, R. (2005a). *Social learning in environmental management: Towards a sustainable future*. London: Earthscan.
- Keen, M., Brown, V. & Dyball, R. (2005b). Social Learning: a new Approach to Environmental Management. In *Social Learning in Environmental Management: Towards a Sustainable Future*, M. Keen, V. Brown & R. Dyball (Eds.), 3-21. London: Earthscan.
- Kendrick, A. & Manseau, M. (2008). Representing Traditional Knowledge: Resource Management and Inuit Knowledge of Barren-Ground Caribou. *Society & Natural Resources*, 21, 404-418.
- Knight, D. & Wallace, L. (1989). The Yellowstone Fires: Issues in Landscape Ecology. *Bioscience*, 39, 700-706.
- Kroma, M. (2006). Organic Farmer Networks: Facilitating Learning and Innovation for Sustainable Agriculture. *Journal of Sustainable Agriculture*, 28, 5-28.
- Kuper, M., Dionnet, M., Hammani, A., Bekkar, Y., Garin, P. & Bluemling, B. (2009). Supporting the shift from state water to community water: Lessons from a social learning approach to designing joint irrigation projects in Morocco. *Ecology & Society*, 14, 19. <http://www.ecologyandsociety.org/vol14/iss1/art19>
- Lebel, L., Grothmann, T. & Siebenhuner, B. (2010). The role of social learning in adaptiveness: Insights from water management. *International Environmental Agreements: Politics, Law and Economics*, 10, 333-353.
- Leys, A. & Vanclay, J. (2010). Stakeholder engagement in social learning to resolve controversies over land-use change to plantation forestry. *Regional Environmental Change*, 11, 175-190.
- Lee, K. (1993). *Compass and Gyroscope: Integrating science and politics for the environment*. Washington: Island Press.
- Maarleveld, M. & Dangbegnon, C. (1999). Managing natural resources: A social learning perspective. *Agriculture and Human Values*, 16, 267-280.
- Mabunda, D., Pienaar, D.J. & Verhoef, J. (2003). The Kruger National Park: A Century of Management and Research. In *The Kruger Experience. Ecology and Management of Savanna Heterogeneity*, J. du Toit, K. Rogers, H. Biggs (Eds.), 3-21. Washington Island Press.
- Mansuri, G. & Rao, V. (2004). Community-based and -driven development: A critical review. *World Bank Research Observer*, 19, 1-39.
- Maurel, P., Craps, M., Cernesson, F., Raymond, R., Valkering, P. & Ferrand, N. (2007). Concepts and methods for analysing the role of Information and Communication tools (IC-tools) in Social Learning processes for River Basin Management. *Environmental Modelling & Software*, 22, 630-639.
- Merriam, B.S. & Caffarella, S.R. (1998). *Learning in Adulthood. A comprehensive guide* (2nd ed.). San Francisco: Jossey-Bass.
- Muro, M. & Jeffrey, P. (2008). A critical review of the theory and application of social learning in participatory natural resource management. *Journal of Environmental Planning and Management*, 51, 325-344.
- Murphree, M. W. (2000). *Boundaries and borders: the question of scale in the theory and practice of common property management*. Bloomington,

Indiana, USA: Proceedings of the Eighth Biennial Conference of the International Association for the Study of Common Property.

Nerbonne, J.F. & Lentz, R. (2003). Rooted in grass: Challenging patterns of knowledge exchange as a means of fostering social change in a southeast Minnesota farm community. *Agriculture and Human Values*, 20, 65-78.

Olsson, P., Folke, C. & Berkes, F. (2004). Adaptive co-management for building resilience in social-ecological systems. *Environmental Management*, 34, 75-90.

Olsson, P., Gunderson, L., Carpenter, S., Ryan, P., Lebel, L., Folke, C. & Holling, C.S. (2006). Shooting the rapids: navigating transitions to adaptive governance of social-ecological systems. *Ecology and Society*, 11, 18. <http://www.ecologyandsociety.org/vol11/iss1/art18>.

Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press.

Pahl-Wostl, C. & Hare, M. (2004). Processes of social learning in integrated resources management. *Journal of Community & Applied Social Psychology*, 14, 193-206.

Parson, E.A. & Clark, W.C. (1995). Sustainable Development as Social Learning: Theoretical Perspectives and Practical Challenges for the Design of a Research Program. In *Barriers and Bridges to the Renewal of Ecosystems and Institutions*, L. Gunderson, C. Holling, S. Light (Eds.), 428-460. New York: Columbia University Press.

Pinkerton, E. (1994). Local fisheries co-management: A review of international experiences and their implications for salmon management in British Columbia. *Canadian Journal of Fisheries & Aquatic Science*, 51, 2363-2378.

Pollard, S., du Toit, D. & Biggs, H.C. (2011). River management under transformation: The emergence of strategic adaptive management of river systems in the Kruger National Park. *Koedoe*, 53, 2.

Reed, M.S., Evely, A.C., Cundill, G., Fazey, I., Laing, A., Newig, J., Parrish, B., Prell, C., Raymond, C. & Stringer, L.C. (2010). What is Social Learning. *Ecology & Society*, 15, 1. <http://www.ecologyandsociety.org/vol15/iss4/resp1/>

Rist, S., Chidambaranathan, M., Escobar, C., Wiesmann, U. & Zimmermann, A. (2007). Moving from sustainable management to sustainable governance of natural resources: The role of social learning processes in rural India, Bolivia and Mali. *Journal of Rural Studies*, 23, 23-37.

Rodela, R., Cundill, G. and Wals, A. 2012. Methodological underpinnings of social learning research in natural resource management: a review. *Ecological Economics*, 77, 16-26.

Rodriguez, S. & Vergara-Tenorio, M. (2007). Reflections on the social learning process for community work in rural areas of Mexico. *International Journal of Biodiversity Science & Management*, 3, 31-45.

Roling, N. (2002). Beyond the aggregation of individual preferences: Moving from multiple to distributed cognition in resource dilemmas. In *Wheelbarrows full of frogs: social learning in rural resource management*, C.Leeuwis & R.Pyburn (Eds.), 25-48. Assen, Netherlands: Koninklijke Van Gorcum.

Ruitenbeek, J. & Cartier, C. (2001). The invisible wand: Adaptive co-management as an emergent strategy in complex bio-economic systems. Occasional Paper No. 34 Bogor, Indonesia: CIFOR.

Schultz, P. W. and Oskamp, S. (1996). Effort as a moderator of the attitude-behavior relationship: General environmental concern and recycling. *Social Psychology Quarterly*, 59, 375-383.

Schusler, M.T., Decker, J.D. & Pfeffer, J.M. (2003). Social Learning for Collaborative Natural Resource Management. *Society & Natural Resources*, 15: 309-326.

Selin, S.W., Pierskalla, C., Smaldone, D. & Robinson, K. (2007). Social learning and building trust through a participatory design for natural resource planning. *Journal of Forestry*, 105, 421-425.

Sen, A.K. (1981). *Poverty and Famines: An Essay on Entitlements and Deprivation*. Oxford: Clarendon.

Sen, A.K. (1999). *Development as Freedom*. Oxford: Oxford University Press.

Standa-Gunda, W., Mutimukuru, T., Nyirenda, R., Prahbu, R., Haggith, M., & Vanclay, J. (2003). Participatory modeling to enhance social learning Zimbabwe. *Small-Scale Forestry*, 2, 313-326.

Standa-Gunda, W., Mutimukuru, T., Nyirenda, R., Prahbu, R., Haggith, M. & Vanclay, J. (2003). Participatory modelling to enhance social learning Zimbabwe. *Small-Scale Forestry*, 2, 313-326.

Steyaert, P., Barzman, M., Billaud, J., Brives, H., Hubert, B., Ollivier, G. & Roche, B. (2007). The role of knowledge and research in facilitating social learning among stakeholders in natural resources management in the French Atlantic coastal wetlands. *Environmental Science & Policy*, 10, 537-550.

Wals, A. (2007). *Social learning: towards a sustainable world*. Wageningen: Wageningen Academic Publishers.

Walters, C. (1986). *Adaptive Management of Renewable Resources*. New York: MacMillan.

Walters, C. & Holling, C.S. (1990). Large scale management experiments and learning by doing. *Ecology*, 71: 2060-2068.





## 03

# A REFLECTION ON RESEARCH DESIGN AND METHODOLOGIES USED IN THE SOCIAL LEARNING LITERATURE

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## ABSTRACT

*This paper reviews the social learning research literature related to natural resources management. It provides an overview of the social learning discourse and then comments on methodologies used by social learning researchers. The present study is part of an activity that looked at the social learning methodological agenda. As such it is a companion study to the analysis reported in Rodela, Cundill and Wals (under review) where aspects of knowledge production and validation in social learning research were considered. The present analysis adds to this a deconstruction of the research designs used and a reflection on methodologies that can best support the study of learning processes in a natural resource management context.*

*The paper is organised as follows. A brief introduction of the social learning discourse is provided, with a focus on the natural resource management context. Then, the methods used for this analysis are introduced and the results discussed. The final section provides concluding remarks and links our results to aspects pertaining to the more general development of the social learning discourse.*

## INTRODUCTION

Natural resource management aims to manage natural systems in order to reduce threats to human settlements, harvest natural products and benefit from natural resources in many other ways (for example, recreation), while at the same time trying to conserve and preserve nature and its integrity. Traditionally, resource management has centred on scientific knowledge and technical solutions used in a top-down manner to resolve environmental issues and establish predictable outcomes. However, this approach has been challenged and is now subject to critique. For instance in a seminal paper Holling and Meffe (1996) outline the limitations to what they define as a command-and-control approach, while Pahl-Wostl, Sendzimir and Jeffrey (2009) highlight that technical solutions may work well for narrowly defined environmental issues but are inadequate for environmental change processes at larger scales. Natural systems are complex and dynamic and there is an intrinsic uncertainty about how ecosystems will respond to human interventions. This counter-position highlights the importance of creating adequate opportunities for flexible, open, and participatory resource management, and it identifies a suitable alternative in learning-based approaches (Armitage, 2005; Berkes, 2009; Pahl-Wostl et al., 2008). Recently, this perspective has gained momentum and the interest for learning-based approaches and social learning in particular has grown (e.g. Keen, Brown & Dyball, 2005; Wals, 2007). This has resulted in a large body of scientific work including edited books,

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journal articles, project reports, theses and web-based materials.

An interesting aspect of this body of literature is the focus on contemporary environmental and resource issues, which explains the abundance of empirical research and analyses of real-world cases. However, while several reviews offer a valuable deconstruction of the conceptual base of the social learning literature (e.g., Armitage, Marschke & Plummer, 2008; Muro & Jeffrey, 2008; Reed et al., 2010), issues pertaining to research design have largely been ignored. It is the aim of this study to reflect on this and map out methodological aspects that characterise social learning research.

## THE SOCIAL LEARNING DISCOURSE

Learning-based approaches to resource management are reflected in both adaptive and collaborative management. Both emphasise adaptation, learning and feedbacks, and are now increasingly used in the management of resources around the world (Armitage, Marschke & Plummer, 2008; Berkes, 2009). The discourse on social learning can be located within this context of learning-based approaches, which have witnessed a broader range of interdisciplinary influences and resulted in a number of conceptual and methodological turns which now characterise the social learning discourse itself (see: Cundill & Rodela, in this monograph; Rodela et al., under review). That is, social learning is a discourse based on premises that in some ways differ from those central to the literature on adaptive and collaborative resource management. For example, the social learning literature tends to focus on change processes to be pursued with different methods and tools (e.g., workshops, games, evaluation), and is expressed in research that engages in reflexive inquiry.

Several papers have already attempted to disentangle the underlying conceptual base that underpins the social learning literature. Armitage et al. (2008) focus on how learning is used and conceptualised within adaptive management and within this turn to social learning, which they see being used in different and contrasting ways. These authors point out that while some use the term to refer to a theoretical construct along the lines as used in organisational studies, and very much focused on learning (e.g. double triple and loop learning), others

use the term 'social learning' as an umbrella concept for collaborative endeavours based on participatory approaches. Later, and after a number of publications on social learning had emerged, the heterogeneity of uses of the term was further deconstructed by Reed et al. (2010). They comment on the abundance of different frameworks used to describe and operationalise social learning as a conceptual construct and highlight a few aspects this literature shares. Recently, we added to this with a review of 54 selected publications (Rodela et al., under review), in which we focused on the methodological choices made by those engaged in social learning research.

Therefore, on the basis of our, and others', earlier analyses it is possible to summarise research into social learning in natural resource management along the following lines. Social learning is a *normative construct* used to capture the idea that solutions to contemporary challenges not only need to be open and adaptive but should also help in the transition to a more sustainable world by tapping into the variety of perspectives people with different interests and vantage points bring to the table. Researchers seem to share the view that to this end, resource management should be embedded in a *collaborative activity*, where a diversity of groups, actors, or stakeholders join and contribute to the discussion. In this, the role and value of different viewpoints is recognised and these are used in the analysis of contemporary issues. But also research contributions seem to share the view that social learning is about *change*; yet, this is operationalised in different ways, particularly with regard to how social learning contributes to resource management. This last point remains the weakest aspect of this body of literature.

## METHODS

The present review is based on a systematic approach that involved a number of steps. In a first step, electronic bibliographic databases (Web of Science; SCOPUS) were searched so to identify the body of literature of interest. Detail about material selection is reported in Rodela et al. (under review). The process resulted in 116 publications of which 54 were selected and used for the present analysis. To be included in this review, papers had to meet two criteria: i) quality (had to be a peer reviewed publication); and ii) relevance (had to be based on empirical research on

social learning *and* natural resources). Papers were excluded if they: i) used social learning superficially and ii) reported on the same research (i.e. multiple publications), in which case only the most recent publication was included.

A code-book was developed jointly by this research team and used throughout the data extraction process (see Appendix 1 of Rodela, Cundill and Wals 2012). Individual papers served as data points. Data extraction was performed by two researchers who coded a sub-set of 30 publications separately and later compared their coding results. This helped to identify disagreements that occurred over content that was not overtly discussed in the selected literature (e.g. researcher's role). Disagreements over points such as this can be handled by randomly selecting the coders' decisions, by asking an expert to serve as tie-breaker, or by discussing and resolving the disagreements (Lombard, Snyder-Duch & Campanella-Bracken, 2002). We chose to identify differences in the interpretation of the two coders and sought a settlement over these. This was extended to the whole sample.

In order to make the process as rigorous as possible, the following steps were taken: more than one person undertook the bibliographic search, a data extraction form was designed by an interdisciplinary team and more than one person undertook data extraction on the same papers. The pool of authors contributing to this research has expertise in different areas e.g. anthropology, education, ecological economics and natural resource management, which was beneficial in terms of diversity of perspectives from which the data were interpreted.

## RESULTS AND DISCUSSION

Our findings, reported in Rodela et al. (under review), suggest that researchers using a social learning perspective to the study of resource issues, tend to choose methodologies that allow for in-depth descriptions, for meaning making and enquiry as a form of action. In this, researchers frequently base their analyses on ad hoc explanations and reflective exercises for which secondary data such as reports and documented reflections of own experience is used. This suggests an ontological position in which reality is seen as socially constructed and as taking multiple meanings. However certain implications

arise from this position for the study of learning-based approaches which we explore further in the following sections.

## RESEARCH DESIGN IN THE SOCIAL LEARNING LITERATURE

Research design refers to the way different constitutive elements of the research process hold together. This includes the identification of research questions, or hypotheses, the selection of an appropriate mode of inquiry and choice of methods of data collection and analysis, and finally the delivery of research outcomes. Of interest is that half of the papers reviewed here declare an explicit interest in furthering our understanding of social learning, but the concept then is not operationalised, and used so to inform the process of data gathering for the analysis. Rather 25 of the 54 studies reviewed report on research that aimed to further the understanding of other phenomena e.g. the role of multi-stakeholder platforms, and then within this context turned to social learning. For instance Millar and Curtis (1999) searched through interviews, collected for the purpose of evaluating a project for pasture management, in order to gain insight into participants' group-learning experiences, while Schneider, Fry, Ledermann and Rist (2009) integrated interview data with observational notes, collected for the purpose of project evaluation. Thus, studies choose to investigate, and advance conclusions about, social learning and learning on the basis of data collected for other purposes. In addition, several studies were performed as a reflective exercise, or as an ad hoc explanation, where researchers' hindsight and personal experiences with one, or more, past projects was used in a non-structured way (e.g. Borowski, 2010; Bouwen & Taillieu, 2004).

Studies of this type suggest an ontological position that favours meaning-making and interpretation. However, the way secondary data and hindsight is used also brings forward questions about how different constitutive elements (e.g. research questions, methods, data) hold together and the type of conclusions that can be advanced about learning and social learning.

A first issue relates to the double hermeneutic, i.e. the interpretation of one's own interpretations (e.g. Alvesson & Skoldberg, 2000; Lincoln, 1995), and the

extent to which secondary data, reports, and archive material, centred on other phenomena, constitute a valid source for the study of learning processes. This is a methodological issue as data feeding into this material has already been filtered and assembled in a way that conveys specific interpretations. When the researcher returns to her/his own analyses and tries to extrapolate information from reports and archive material about a newly emerged aspect of interest (e.g. learning) such material will offer only a partial view on this new aspect of interest. Thus, such a reflective discussion may turn into a subjective account, a perspective on social learning and learning from the eye of the researcher. Alvesson and Skoldberg (2000) highlight that reflexive methodology is not about subjectivity and that a criterion for successful reflexive inquiry is whether it makes a productive difference in the delivery of research results, for example, challenging or deconstructing ideas. Therefore, the integration of a different theoretical perspective from which data could be interpreted could result in a more productive process, particularly when the deconstruction and reinterpretation of past research results are a collaborative endeavour between more researchers.

A second issue relates to the type of conclusions that can be advanced about learning when learning was not part of the original study. This is particularly important when there is a missing link between questions raised about social learning, and learning, and the research design that produced the material being scrutinised. Most of the selected papers do not give sufficient methodological detail to help us understand the nature of this link. For instance Borowski (2010) discusses the potential of social learning in river basin management drawing on data produced for a case study on Elbe River basin, and reported in Borowski, Kranz, Kempa and Vorwerk (2004). Hers is a valuable analysis that highlights the role of process dynamics in a multi-stakeholder platform. A good level of detail is given about how interview data was handled and re-analysed for the purpose of the 2010 study. However, the links between the objectives/research questions of the newer research with the objectives/research questions of the original study from 2004 are not openly discussed. In turn, this raises questions about the opportunities interview data used can offer to the study of social learning, which is an objective of the 2010 study.

On the other hand, if we turn to the field of adult education, and cognate research on adult learning, interesting examples can be found on how to investigate learning processes empirically. Most research within this field adheres to an interpretative worldview and therefore it is not surprising that empirical studies are based on learners' personal accounts of own experiences. For instance empirical research on transformative learning is based on interviews with learners. Researchers draw on a pool of different experiences, or interpretations, and this variety allows insights to be related to theoretical aspects, for example, the role of emotions (e.g. Taylor, 2001), and also to more practical aspects, for example, the educator's role (Merriam & Caffarella, 1998). This theory is also used by the social learning discourse yet only a few papers have followed this methodological route and based the analysis of learning on the learners' personal accounts. Yet, those who did have succeeded in gathering a good understanding of local dynamics, of learning processes and how these affected the use of natural resources, for example, Marschke and Sinclair (2009). Therefore, taking into account the generative results obtained by those who borrowed from research in pedagogy, and adult learning, future research could explore the opportunities this field might offer to the study of learning in a resource management context.

## METHODOLOGY AND METHODS IN SOCIAL LEARNING LITERATURE

Methodology, and related study design, refers to the sequence of steps researchers choose to take to address a hypothesis or get answers to research questions. Numerous methodologies are available, each consisting of an often codified progression of steps and procedures which together seek to assure validity and quality of scientific research. Four study designs appear to characterise the social learning literature reviewed: 22 publications report on a single case-study, 9 on multiple case-study comparisons, and 2 on experiments, with the remainder being ex-post analyses as described above. Large-scale surveys which allow for a certain degree of representativeness, and hence generalisation, are not reported in any of the selected papers.

Hence ex-post analyses and case studies prevail. Both allow an in-depth exploration of the phenomenon of



interest and for historical detail. Figure 1 summarises how selected studies are positioned in terms of study designs and mode of inquiry. Both the study designs and the mode of inquiry chosen suggest that social learning research does not aim for prediction and study of relationships between variables.

Case studies allow the production of context dependent knowledge and are used for the study of contemporary issues and phenomena currently unfolding (Yin, 2003). Since case studies centre on a specific unit of analysis, this allows for a good degree of information and historical detail to be gathered, and contextual knowledge to be produced (Della Porta & Keating, 2008). Case studies are frequently used for explorative purposes when preliminary evidence is sought and can be used for the identification of causal processes and theory building. Ex-post analyses stand on a different logic, and operate in retrospect often with the aim of gathering insight into something that has already occurred. Ex-post analyses are common in economics and policy studies, where they are used to extrapolate past performance and quantitative results used for future projections (Ramos-Martin, 2003). However, this is not the kind of use ex-post analyses have found in social learning research where these are based on qualitative data and are implemented as a reflexive inquiry. Thus, rather

than delivering projections, ex-post analyses in social learning research aim to deliver a summary of the “lessons learned” and highlight how these could help future practice.

Figure 2 summarises the reasons for undertaking the investigation and the centrality of social learning in the research reported in the selected publications. Although a substantial number of publications do not state the reasons clearly, for those who did there are differences that see issue-driven research prevailing in one and commissioned in the other group.

In terms of methods, the selected studies frequently employed interviews and observation for data collection. For instance, interviews with resource users or stakeholders are used in research reported in 36 papers, followed by participant observation (25), text extraction from policy documents, reports and other archival material (21), and self-reported questionnaires (14). Research reported in 9 papers integrated one or more of these with methods for collecting data about the natural environment. Choices of sample selection indicate that non-random methods were chosen for research reported in 36 papers (although several do not reveal this). Hence, it seems that qualitative data is preferred and it can be assumed that this is because it allows for in-depth understanding of the issue being investigated.

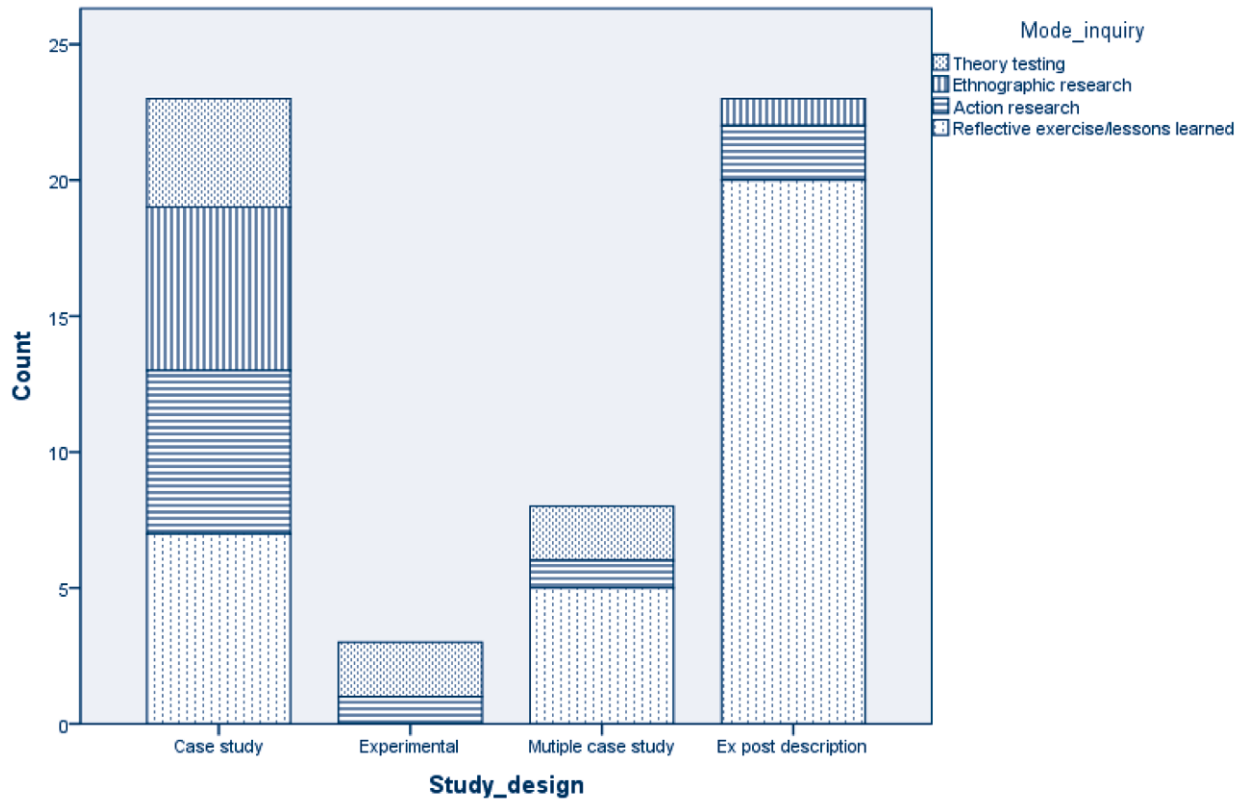


Figure 1: Study designs and mode of enquiry: summary of selected publications

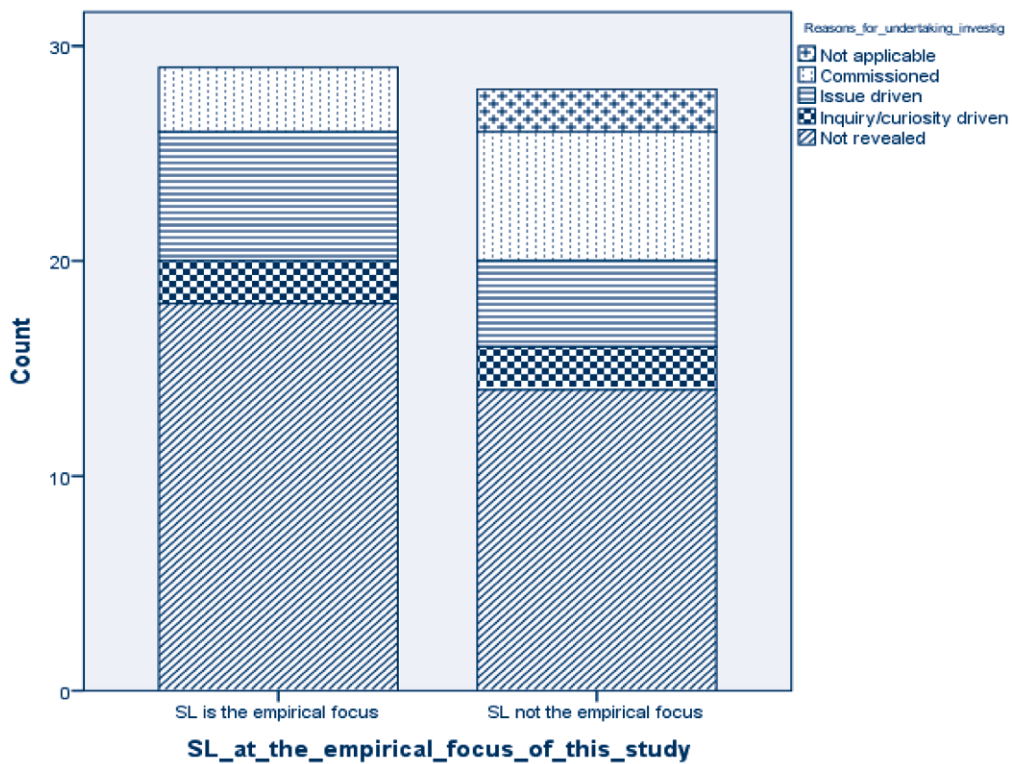


Figure 2: Study designs and mode of inquiry: summary of selected publications

## CONCLUSIONS

Through our analysis of the papers we have come to conclude that although there is a range of methodological orientations and research designs used in research on social learning oriented natural resource management, there are clearly some preferred ones: case studies and ex-post reflexive studies. It is also quite striking that in just over half of the research papers reviewed, social learning is the empirical focus of the research, meaning that in much of the research (just under 50%), social learning forms the backdrop or décor of the research, without it being analysed as an emergent generative process contributing to change in actors and the context within which they operate. Another key observation from our analysis is that in many cases there appears to be a mismatch or incongruence between the researchers' espoused ontological position and the methodologies and methods they choose. Often papers will state upfront or at least suggest that the reality in which the research takes place is 'multi-interpretable' and highly contextual, yet the methodologies and methods chosen tend to look for universal conclusions and transferable results suggesting single realities and universalism. On the other hand, the papers that do have a more flexible design and that recognise the difficulty of transferring and/or up scaling of results, while emphasising the importance of reflexivity, often fail to explain what reflexivity entails and how such studies can still inform practice, and also practice elsewhere.

Since the latter type of papers is on the rise it might be useful to revisit the work of educational theorist and researcher Elliot Eisner. Eisner (1991: 103) pointed out that: "Every particular is also a sample of a larger class. In this sense, what has to be learned about a particular can have relevance for the class to which it belongs". In other words, what we learn from one case in one particular context in which social learning is used as a catalyst for change, can raise one's consciousness of features that might be found in other contexts. The task of generalisation then is no longer the responsibility of the researcher but of those confronted with the research (often the reader): he or she has to determine for him/herself whether the particular case study resembles the context in which he or she works, but also which features speak to his or her own case and which do not. Wals and Alblas (1997) have referred to this as "case-inspired self generalization". Philosophically speaking, one

cannot generalise from one situation to another when situations are identical, only when they are different. Again referring to Eisner (1991), competences, images, ideas, perceptions and experiences are never identical; some features of situations always differ. It is therefore better to speak of the transfer of generalisable features to a different context.

Finally, our research re-affirms the importance of being explicit about ontological, epistemological and axiological positions and of employing methodologies and methods that are consistent with these positions, while recognising, indeed in the spirit of social learning, that there is no single best approach and that a diversity of such positions will be needed.

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## REFERENCES

- Alvesson, M. & Skoldberg, K. (2000). *Reflexive methodology: new vistas for qualitative research*. London: Sage.
- Armitage, D. (2005). Adaptive capacity and community-based natural resource management, *Environmental Management*, 35, 703-715.
- Armitage, D., Marschke, M. & Plummer, R. (2008). Adaptive co-management and the paradox of learning, *Global environmental change*, 18, 86-98.
- Berkes, F. (2009). Evolution of co-management: role of knowledge generation, bridging organizations and social learning, *Journal of Environmental Management*, 90(5), 1692-1702.

Borowski, I. (2010). Social Learning beyond Multi-stakeholder Platforms: A Case Study on the Elbe River Basin, *Society and Natural Resources*, 23(10), 1002-1012.

Borowski, I., Kranz, N., Kampa, E. & Vorwerk, A. (2004). *Public participation in the Elbe Basin*. Case study report produced under Work Package 5. Osnabrück, Germany: HarmoniCOP.

Bouwen, R. & Taillieu T. (2004). Multi-party collaboration as social learning for interdependence: developing relational knowing for sustainable natural resource management, *Journal of Community & Applied Social Psychology*, 14(3), 137-153.

Cundill, G. & Rodela, R. (this monograph). A search for coherence: Social learning in natural resource management.

Eisner, E.W. (1991). *The enlightened eye: qualitative inquiry and the enhancement of educational practice*. New York: Macmillan.

Della Porta, D. & Keating, M. (2008). *Approaches and Methodologies in the Social Sciences: A Pluralist Perspective*. Cambridge: Cambridge University Press.

Holling C.S. & Meffe, G.K. (1996). Command and Control and the Pathology of Natural Resource Management, *Conservation Biology*, 10(2), 328-337.

Keen, M., Brown, V. & Dyball, R. (2005). *Social learning in environmental management: Towards a sustainable future*. London: Earthscan.

Lincoln, Y.S. (1995). Emerging Criteria for Quality in Qualitative and Interpretive Research, *Qualitative Inquiry*, 1, 275-289.

Lombard, M., Snyder-Duch, J. & Campanella-Bracken, C. (2002). Content Analysis in Mass Communication: Assessment and Reporting of Inter-coder Reliability, *Human Communication Research*, 28 (4), 587-604.

Marschke, M. & Sinclair, J. (2009). Learning for Sustainability through Participatory Resource Management, *Journal of Environmental Management*, 90, 206-216.

Merriam, B.S. & Caffarella, S.R. (1998). *Learning in Adulthood*.

*A comprehensive guide* (2nd ed.). San Francisco: Jossey-Bass. Millar, J. & Curtis, A. (1999). Challenging the boundaries of local and scientific knowledge in Australia: Opportunities for social learning in managing temperate upland pastures, *Agriculture and Human Values*, 16 (4), 389-399.

Muro, M. & Jeffrey, P. (2008). A critical review of the theory and application of social learning in participatory natural resource management processes, *Journal of Environmental Planning and Management*, 51(3), 325-344.

Ramos-Martín, J. (2003). Empiricism in Ecological Economics: a perspective from complex adaptive systems, *Ecological Economics*, 46, 387-398.

Reed, M., Evely, A., Cundill, G., Fazey, I., Glass, J., Laing, A., Newig, J., Parrish, B., Prell, C., Raymond, C. & Stringer, L. (2010). What is Social Learning? *Ecology and Society*, 15, 4.

Rodela, R., Cundill, G., Wals, A. (2012). Methodological underpinnings of social learning research in natural resource management: a review. *Ecological Economics*, 77, 16-26.

Pahl-Wostl, C., Sendzimir, J. & Jeffrey, P. (2009). Resources Management in Transition. *Ecology and Society*, 14(1): 46. [online] URL: <http://www.ecologyandsociety.org/vol14/iss1/art46/>

Schneider, F., Fry, P., Ledermann, T. & Rist, S. (2009). Social Learning Processes in Swiss Soil Protection, *Human Ecology*, 37(4), 475-489.

Taylor, E. (2001). Transformative learning theory: a neurobiological perspective of the role of emotions and unconscious ways of knowing. *International Journal of Lifelong Learning*, 20(3), 218-236.

Wals, A.E.J. & Alblas, A.H. (1997). School-based research and development of environmental education: a case study, *Environmental Education Research*, 3 (3), 253-269.

Wals, A.E.J. (Ed.) (2007). *Social Learning towards a Sustainable World*. Wageningen: Wageningen Academic Publishers.

Yin, R. K. (2003). *Case study research, design and methods* (3rd ed.). Newbury Park: Sage.

## 04

# IN PURSUIT OF PARTICIPATION: TRACKING THE INFLUENCE OF LOCAL ACTION FOR SUSTAINABLE DEVELOPMENT

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## ABSTRACT

*This literature review charts the cumulative lessons that have emerged from the participatory development discourse in its various guises over the past fifty years, relating them to current emerging perspectives on social learning. Acknowledging the tensions that occur when the theoretically sound proponents of the participatory discourse are translated into practice, this review seeks to outline the practical and ethical implications of this terrain. It will do so with reference to three points in its evolution: the great influence of Participatory Development (popularly known through focuses such as Participatory Rural Appraisal), the effect of Human Development and the Capabilities Approach, and lastly, the growing discourse on Social Learning and what its ideas contribute to the discourse. As such the paper helps to 'locate' social learning discourse within the wider arena of participatory development, showing the antecedent links that exist between social learning discourse (as it is emerging today), and wider participatory development discourses. The paper argues that more attention needs to be given to the 'hidden work' involved in turning all of these theories of participatory development, learning and agency into practice, and that the discourses can only really live in practice, a process for which we can only partially be prepared for by our literature (re)views.*

## INTRODUCTION

Since the 1950s perspectives on Participatory Development, Participatory Rural Appraisal, the United Nation's understandings of Human Development, the Capabilities Approach and (more recently) the growing discourse on Social Learning have in various ways grappled with devising, catalysing and implementing a development paradigm that is deliberated, articulated and driven by the interests of those who are directly affected. In different ways each of these approaches have worked to localise and humanise the developmental agenda so that it can reflect the needs of the most vulnerable members of society. They have attempted to provide a 'holistic model' for development that provides support for the whole person: "educationally, materially, emotionally, socially and culturally" (Eversole, 2003: 784). This understanding of development, not only seeks to address the 'problem' as it manifests but is also attentive to the underlying issues that created it to begin with. Moving beyond a materialistic understanding of development has been central to the evolution of the participatory discourse because in this perspective:

*People's participation is not only about achieving the more efficient and equitable distribution of material resources; it is also about the sharing of knowledge and the transformation of the process of learning itself in the service of people's self-development. (Conell, 1997: 250)*

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Whilst the discourse on participatory development has provided an ethically appealing focus that seeks to invert the corrosive trappings of 'top-down' approaches, critics have commented on the theoretical ambiguity of its approach[es] and how this affects its potential for practical implementation (Nicholls, 2000; Buchy & Ahmed, 2007). Acknowledging the tensions that occur when the theoretically sound proponents of the participatory discourse are translated into practice, this review seeks to outline the practical and ethical implications of this terrain. It will do so with reference to three points in its evolution: the great influence of Participatory Development (popularly known through focuses such as Participatory Rural Appraisal), the effect of Human Development and the Capabilities Approach, and lastly the growing discourse on Social Learning and what its ideas contribute to the discourse. The evolution and links between these approaches will be illustrated in an effort to outline the intersections in thought and praxis that they have as the basis for further analysis. Testimonies that provide insight into the power, potential and pitfalls of this collaborative ethic, will be shared in an effort to uncover the practical and ethical implications of this work. In doing so, this review hopes to surface some aspects of the difficult work often disguised within the seductive rhetoric of participation.

## THE LURE OF PARTICIPATION: DIFFERENT GUISES ON THE PATH TO PARTICIPATION

The value of participation has evolved to be a standard principle in theoretical and practical understandings of development. The range of its influence has given it the reputation of being "one of the central influences in mainstream developmental thinking" (Parfitt, 2004: 537). Attempts at promoting participatory processes began with the rethinking of developmental initiatives that started in the 1950s and 1960s driven by concerns of "giving voice to the voiceless" and "social transformation" (Freire in Guijt & Shah, 1998:5). This rethinking helped "define basic principles to guide people's empowerment in their own development processes" (Guijt & Shah, 1998:5). The 'participation boom' in the 1980s "saw great activity amongst grassroots activists and NGOs in seeking alternatives to outsider driven development approaches" (ibid.). Following this, the term 'participatory development' rose to prominence in the 1990s with "frenzied levels of global interest in participatory methodologies, which was considered the new synonym for 'good' or 'sustainable' development" (ibid.).

More recently, participatory rhetoric's 'move from the margins to the mainstream' can be seen in the World Bank's adoption of its language in its World Development Report for 2000/1 (Williams, 2004: 557). Its popularity is also witnessed in its adoption as a central part of 'human rights principles' in development as proposed by the UNDP (Jonsson, 2005: 49) and as a key factor in Human Development (UNDP, 1994, 1997). More recently, in the field of environmental education, the discourse on Social Learning has also highlighted the importance of participation in integrated resource management, community adaptation practices and sustainable development (Van Bommel, Roiling, Aarts, & Turnhout, 2009; Pahl-Wostl & Hare 2004).

The ethic of participation has been diversely defined, performed and promoted through variable and interrelated means. The landscape of its influence demonstrates a shifting terrain which includes converging and assorted strains of Participatory Development; Participatory Rural Appraisal (PRA), Human Development (HD) and the Capabilities Approach that informs it, and more recently the prominence of Social Learning in environmental education literature. The next section gives insight into the moving trends in participation, highlighting in each instance what the movement entails and the locus for action that it proposes.

## THE BENCHMARK SET BY PARTICIPATORY RURAL APPRAISAL

The formal presence of participation on the developmental agenda was strongly instituted by the discourse on PRA. PRA was initially conceptualised as "techniques used to mobilise local knowledge in the conduct of development programmes" (Williams, 2004: 557) and was later conceptualised as techniques to "mobilise indigenous capacities for self-management of development projects" (ibid.: 559). A plethora of terms have been used to describe the growing focus of this work. Terms such as Rapid Rural Appraisal (RRA), Participatory Action Research (PAR) and Participatory Analysis and Learning Methods (PALM) show the growing thinking in this field that prompted different branches of focus (Kumar, 2002: 30). Some proponents of PRA have suggested that its work has evolved beyond a focus on appraisal (Cornwall & Pratt, 2003: 130). They prefer to describe the focus of the work as Participatory Learning and Action (PLA). Even though this has been a compelling argument, the term PRA has still maintained its prominence within this expansive field (ibid.).

## PRINCIPLES, PRACTICE AND GROWING CONTENTIONS

The principles of PRA are that local communities can “participate meaningfully in depicting their situations by making maps and diagrams, analysing the same, and coming up with plans to change their situation” (Kumar, 2002: 316). It is seen as a space where “people can articulate their problems” and “visualise and express what [can] be done” (ibid.: 316). This work requires the presence and guidance of a facilitator figure whose role it is to:

*To establish rapport, to convene and catalyse, to enquire, to help in the use of methods, and to encourage local people to choose and improvise methods for themselves. [They] watch, listen and learn. Metaphorically, and sometimes actually [they] ‘hand over the stick’ of authority. (Chambers, 1997: 131)*

The above quote draws attention to an understood source of tension in this work: the power dynamics that can be inadvertently created and the effect that this can have on the process as a whole. Historically this has been especially true when we consider that the guiding figure has often been somebody positioned outside the community who is tasked with channelling the focus and course of the process. The central role of the facilitator within this work is of mediator between the participant's objectives and that of the project as a whole. Often this role has been criticised for its ability to forcibly direct or ‘facipulate’ [facilitate + manipulate] the focus of the project to their advantage. Ideally the ethics of participatory development seek to challenge those with power and resources in projects to “acknowledge their own power [and] be aware of how they (often habitually) use it to dis-empower others” and further to “learn how to use their power to empower those with less power” (Chambers, 2005: 114). According to this approach, the development agent should work as a catalyst or facilitator who presents ideas but does not give orders, and who encourages participation but does not organise people around his or her preconceived ideas of what is best for them (Connell, 1997: 257). This relationship “demands a delicate and evolving balance between guidance and support, facilitation and response, on the part of the development agent” (Connell, 1997: 248). Kapoor (2005) comments on the potential threats hidden within the portrayed neutrality of a facilitator:

*The convenor or facilitator may well portray him/herself as a neutral and fair arbiter, but the fact that s/he manages the proceedings almost every step of the way: deciding on the need for, and purpose of the meeting; selecting whom to include/exclude on the invitation list; making up the agenda ... power is tilted decidedly in favour of the convenor, and, while it may be used accountably and democratically (as Chambers hopes for) it can just as easily be abused. (1207)*

This point provides a sober representation of the issues which come into play with regard to the role of facilitator. It highlights how the role of the facilitator is not a ‘neutral’ role but one that can impact quite seriously on the nature of the project being proposed. This role can easily feed the ego of ‘benevolent interveners’ (Kapoor, 2005: 1207) and create a form of development that creates as many problems as it wishes to ameliorate. Indeed, the relationship of the facilitator and the participants may be sometimes be so skewed that the participation of the locals becomes pre-empted and conditioned; assuming people's responses in the same way as a situational comedy includes dubbed canned laughter on behalf of its audience (ibid.: 1209). We need to be open to assessing our role in this way.

Critics point out that participatory rhetoric has often been used in projects that are “far from being inclusive and bottom-up, [they] reconfigure power and value systems which may end up being exclusionary, if not tyrannical” (Mosse, 1994; see also Cooke & Kothari, 2001 and Mikkelsen, 2005). The word tyrannical implies that the participatory development rhetoric may insidiously impose a form of development that favours top-down approaches and is prescriptive. This reconfiguration of power towards those who already have it, may happen because the rhetoric of participatory development could be used as simply another method of integrating the poor or ‘grassroots’ into development initiatives that uphold traditional top-down methodology and leave little room for their influence and opinions (Parfitt, 2004: 537-8). As such, a stated commitment to participation in this vein does not necessary reflect the ability of the intervention in question to work fundamentally towards the transformation of power dynamics in a given context. In fact, in some instances it can be said to exacerbate such issues. What is needed is an agenda that balances the values of the participants and the agenda of the facilitator. Figure 1 demonstrates such a balance.

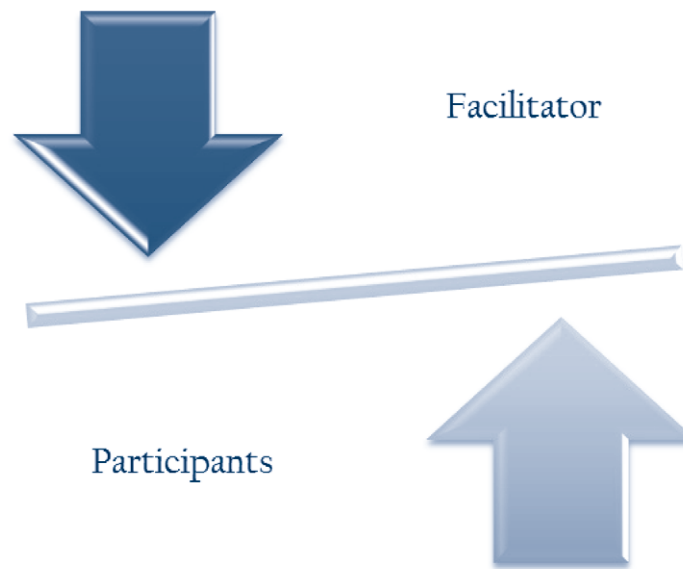


Figure 1: Finding the balance between the valued beings of the participants and the agenda of the facilitator or convenor

Emphasis needs to be placed on aspects such as social reciprocity, participation and interdependence, discussion and deliberation (Desai, 1991:35). Gaining consensus using these methodologies makes sense but does not preclude the fact that complex interactions between diverse groups can be laden with hidden dynamics that can compromise the exercise. Dean (2009) substantiates this view by insisting that:

*...consensual agreements achieved in the process of public deliberation – whether in the course of participative poverty assessments or through citizens' juries or focus groups – may hide fundamental conflicts and hidden oppression. They may do nothing more than reflect prevailing hegemonic assumptions. (270)*

Perceptive sensibilities are needed to discern the power dynamics within a group, otherwise the exercise may lead to an entrenchment of dynamics that curtail the objectives of the exercise.

Additionally, critics have distinguished between the intention and effects of pursuing participation as a means of development and employing its strategies as an end in itself. Parfitt is opposed to the use of participation solely as a means, commenting that in such instances participation is a "short term exercise;

the local population is mobilised, there is direct involvement in the task at hand but the participation evaporates once the task is completed" (Parfitt, 2004: 539). This understanding of participation does not sustain itself and does not gain the local legitimacy or ownership to build on itself or become a holistic part of the life of the community.

In a field that mostly relies on the work of non-state actors that are externally funded, an element that is said to influence the values of participatory development and PRA is the institutionalisation of its practice (Kapoor, 2005: 1211). The institutionalisation of participatory development, through pressure from external funders, may inhibit the realisation of its aims in many ways. Some examples are given:

*It [participatory practice] is made to conform, for example, to bureaucratic review and approval procedures, budgetary deadlines, and/or reporting requirements... As a consequence participatory development is transformed into a package – discrete and manageable – to suit institutional culture. (Kapoor, 2005: 1211)*

Because of this external influence, participatory development initiatives that conform to these pressures can be trapped in a situation where they

adhere to some of participatory development's values whilst diluting other important ones. The value of having a process driven by local initiatives in which their desires could be translated to a working project can be undermined by a pre-packaged structure that is rigid in its explorations of "preconceived proposals" (Botes & van Rensburg, 2000: 43). The creation of an open-ended process, in which the project can take on a life of its own and continually respond to the needs of the people as they emerge, is in tension with the funders' desire for a safe, delineated project. As Parfitt (2004: 548) points out:

*[Funders] want a clearly delimited product that would serve to meet the procedural obligation for consultation, not a process that could throw up challenges and possibilities beyond the bounds of the projects that they had in mind.*

While funding bodies may apparently support participatory development, this support becomes tokenistic in the sense that they assume that participation can happen within their defined boundaries for the project. This tension is succinctly captured by Parfitt (2004: 549):

*This raises complex interrelated problems concerning how to reconcile the somewhat contradictory demands of many development agencies for rules, regularity and efficient delivery of outputs (which imply top-down hierarchy) with the demands of empowerment for a more processual approach involving handing over the stick.*

By structuring participation according to a set of rules, we risk eroding possibilities that might have been far better suited to the vision of development upheld by the participants. Organisations that are forced to take on these bureaucratic demands run the risk of playing to the tune of the funders and the demands of the proposal rather than supporting a work in progress that is continually responsive to the needs of those the development project is supposed to empower. Nelson and Wright substantiate this view by stating that "participation which truly empowers implies a process which is unpredictable" (1995: 41). Tension between product and process manifest in the way that "excessive pressures for immediate results can undermine

the process" (Botes & van Rensburg, 2000: 50). A question that can quickly put into focus the presence of these tensions is "how much influence do locals actually have to express and address their real concerns?" (Eversole, 2003: 783).

There is a complex web of factors that may underpin the character of a particular project. This point is elucidated through the assertion that the word 'participation' itself is too loaded and complex a term to capture the essence of the many relationships, networks, interests, and voices that come into play in its quest (Eversole, 2003: 791). In this way, the touting of participation in projects runs the risk of underestimating what the term implies. In order to understand the nature of a project which claims to be participatory, we need to explore the levels and characteristics of power, motivation, legitimacy and trust within the developmental relationship (ibid.: 792). Furthermore, the character of the development left behind after an initiative can be assessed in order to ascertain whether it:

*Enables people traditionally objectified and silenced, to be recognised as legitimate 'knowers', to extend their understanding of power relations, widen their choices and determine the ideas of development ... And are such 'people' centred perspectives transforming the apparatus of development... or does the flow of events surrounding participatory development produce side effects which incorporate marginalised people more effectively within a decentralised ...system of power, working invisibly and 'behind our backs'. (Nelson & Wright, 1995: 18)*

Debates articulated in this field also highlight the *language* of participation in itself: this has been criticised for promoting a discourse of salvation in which the benevolent development body comes into a community and conducts participatory activities that are supposed to be beneficial to the community. Kothari (2001) goes as far as stating that the participatory rhetoric has 'quasi-religious associations' in its preaching and dissemination of the development agenda. The reputation of such development initiatives has suffered in contexts that have experienced the comings and goings of organisations, actors and projects promoting one form of intervention after another.

The ethics of PRA have been debated, contested and amended in numerous books and journals and these tensions continue to characterise the domain of PRA. The mobilisation of local knowledge and the promotion of indigenous capacities for self management have often prioritised the ways of seeing and the systems of understanding that are framed by the development brokers. Whilst there are many examples of how this relationship has been oppressive or has been an enabling impact that is owned by the community, the discourse of PRA still does not always manage to mobilise the valued 'beings and doings' of the community within the focus and direction of the development touted.

The fundamental shift that I see in the language of PRA versus that of the ideas formulated around human development is a language of inclusion that centres around the experience, desires and pursuits of the 'development subject'. Despite the fact that it is still a perspective that is created from the 'outside' it attempts to bring the development subject into focus as the primary referent of development by charting their capabilities and valued options for a better life (Gasper, 2004: 166). By doing so, it attempts to lessen the impact of initiatives that are driven by outside interests. The details of this approach are explored in the next section highlighting what this understanding of development has contributed to the field of participation and questions that it still leaves lingering.

### FOCUS ON THE DEVELOPMENT SUBJECT: HUMAN DEVELOPMENT AND THE CAPABILITIES APPROACH

It has been argued that traditional approaches to development over-emphasise economic indicators as a barometer of the welfare of the society (Desai, 1991: 353). The United Nation's Development Programme's (UNDP) perspective on Human Development appeals for a human-centred form of development that reconceptualises what development means to the individual with reference to a wide range of factors including political threats, economic scarcity, food security, health concerns, environmental issues and personal or community matters (UNDP, 1994: 25). It accepts that there are myriad conditions that may impact upon an individual's efforts to attain a state of 'well-being' and seeks to foster a developmental environment where people can widen their range of

choices. People should be able to "exercise these choices safely and freely" in a manner that enables them to be "empowered enough to take care of themselves" (UNDP, 1994: 230). Emphasis is placed on aspects such as social reciprocity, participation and interdependence (Desai, 1991: 35). This perspective of development is heavily influenced by the work of Amartya Sen. He contributed to the development of the idea of Human Development by stressing the importance of people expressing their 'valued options' for life and emphasising people's "capabilities to lead the lives they value" (Gasper, 2004: 166). In this perspective, a person's acknowledgement of what it is they value is seen as an important part of their freedom, not only by making their "lives richer and more unfettered, but also by allowing them to be fuller social persons, exercising our own volitions and interacting with – and influencing – the world in which [they] live" (Sen, 2000: 15).

### THE PROCESS AND CRITIQUE OF HUMAN DEVELOPMENT DISCOURSE

Human development discourse prioritises 'democratic discussion' and 'decision-making' as the way in which 'priority capabilities' should emerge for individuals (Gasper, 2004: 177). Once these valued capabilities emerge, support should be provided to help people to be empowered enough to work towards these capabilities for themselves (UNDP, 1994: 230). Initiatives of this nature require collaboration between different principles that are necessary in the steering and facilitation of development:

*At one level it is about the fulfilment of basic material needs, and at another it is about the achievement of human dignity, which incorporates personal autonomy, control over one's life and unhindered participation in the life of the community. (Thomas & Wilkin, 1999: 3)*

Collectively these understandings of participatory development have moved strongly to concentrate on the members of an affected community as the primary medium for development. The language of capabilities focuses on the work that is necessary for an individual to work towards their valued options for life. The ideas around self-management, interdependence, participation and working towards valued capabilities situates the locus of development around an individual whose visions are supported through interdependent



networks and strategic collaborators. Here we see the 'development subject' acting upon his desires, challenging and changing the world that he inhabits through the support of concerned collaborators.

The viewpoint on individual agency that is upheld in this vision has come under scrutiny particularly because of the way in which it underestimates the context in which this individual's agency can be exercised:

*Without sacrificing the value of agential freedom, which is the principle commitment to liberalism, the capabilities approach nevertheless insists that the reification of agential freedom abstracts from the concrete context and conditions under which chosen ends can be*

*effectively pursued ... For all heady exhilaration and vertiginous delights that agential freedom as the selection and achievement of personal goals, seems to promise, human beings are not defined or fulfilled simply on the basis of some implacable will to freedom but are physical and social creatures whose ambitions and aspirations, even of the humblest variety, require that certain minimal conditions obtain. (Tobias: 2005, 70)*

This quote questions how much individuals can actually achieve on their own and what this focus legitimises. Concerns about the burden that this focus might place on individuals are raised, surfacing the indelible impact that the surrounding environment can have on the realisation of their valued options.

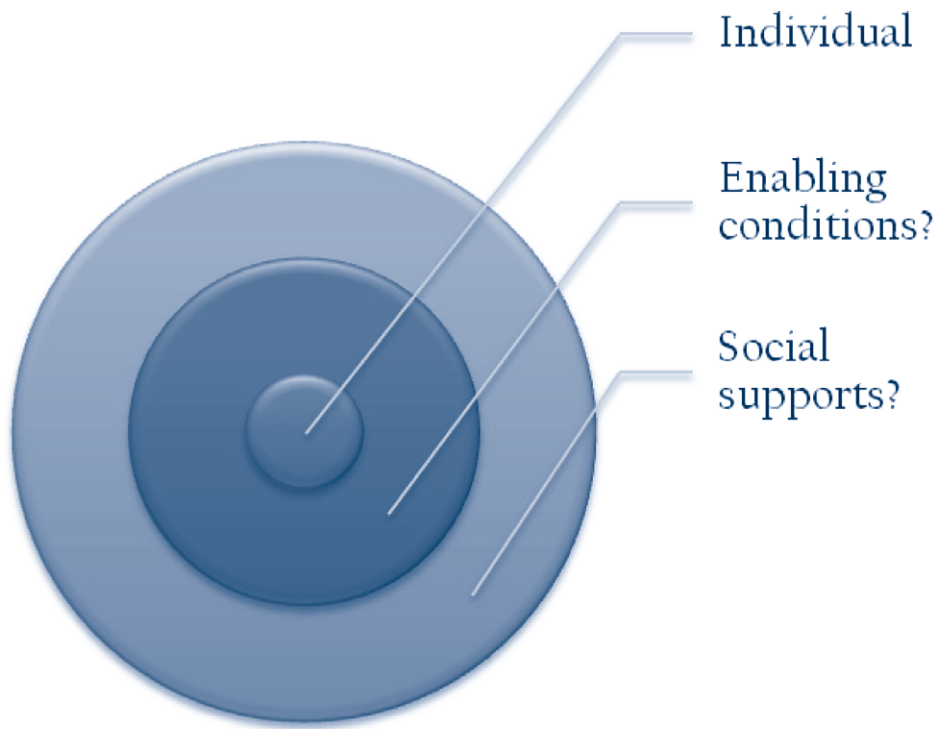


Figure 2: Focus on the individual in the capabilities approach is laudable but needs to take into account the enabling conditions and social supports that can help an individual work towards their valued beings and doings

The reference made to the “requirements of minimal conditions” acknowledges (see Figure 2) factors inherent within the status quo that stifle an individual's expression and the mobilisation of their valued options. Dean (2009) provides a scathing indictment of this shortcoming:

*Under capitalist social relations of production, individuals can be free neither from hegemonic controls over their participation in the public realm, nor from the direct or indirect consequences of the exploitation of human labour. (267)*

This point seems to be the most revisited critique of Sen's, but to his credit his work does acknowledge factors that can influence a person's valued options for life. Sen (1999) boldly states:

*what people can positively achieve is influenced by economic opportunities, political liberties, social powers, and the enabling conditions of good health, basic education, and the encouragement and cultivation of initiatives. (5)*

This view takes into consideration the fact that even if individuals are able to articulate and work towards a realisation of themselves based on their values, they are still going to be susceptible to the pressure of the pervading social climate that may undermine their efforts. In this way he admits that the process through which these capabilities can be realised remains questionable without an understanding of relational agency and societal pressures within a context. In addition to this point, mention must be made of the understanding of the ‘individual’ proposed in the capabilities approach. For Sen the individual in this perspective is not to be understood in a “neo-liberal” sense “grounded in selfish self-interest” (Walker, 2005: 106). Instead, he maintains that the individual in this perspective “strengthens social life rather than fragments it” (ibid.). He refers to this form of individualism as “ethical individualism”, a perspective that would perhaps challenge us to represent the relationship between the individual and social support not as a relationship rooted in one individual's perspective but rather as a series of interrelated individuals that are, through different vantage points, collectively affected by the surrounding conditions of a context (ibid.) (see Figure 3).

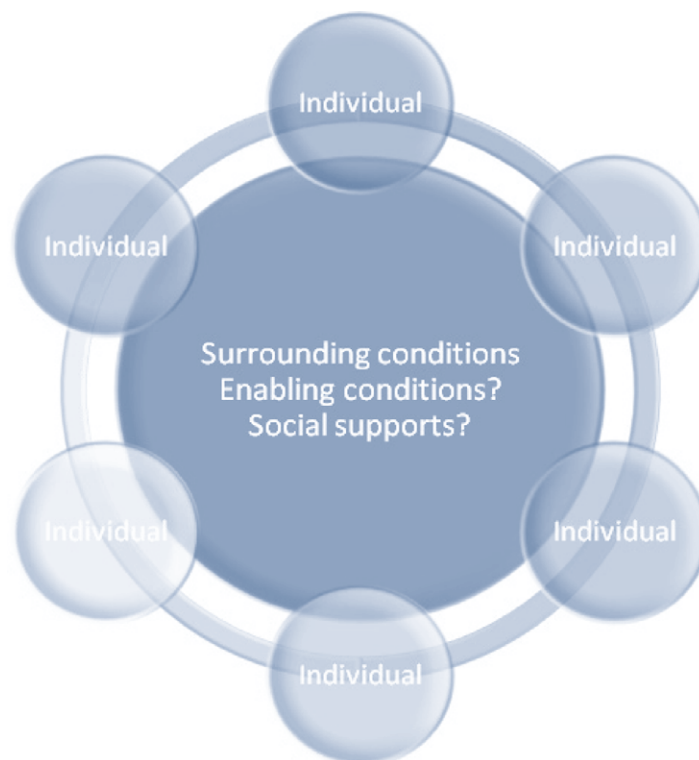


Figure 3: Re-representing the perspective of individuality presented in the capability approach

This point emphasises the fact that human beings do not exist independently but are part of a broader context. The perpetuation of the myth that “communities are capable of anything, that all that is required is sufficient mobilisation moves the responsibility for the consequences of these projects from the agencies and development workers and on to the participants themselves” (Cleaver in Williams, 2004: 561). Dean further substantiates this view by stating that:

*Social solidarity is not necessarily inimical to freedom, but a social being cannot wholly be free from others because the terms on which she belongs within a family, a community or a society will matter as much as her freedom to do or be. (Dean, 2000: 268)*

Understanding the full picture of related actors in this perspective is essential. Only through seeing these relationships can we understand the way in which an individual's valued options for life can turn into functioning capabilities. Interestingly enough the discourse on human development brings up questions that we considered when looking at understandings of PRA. It was clear that in the instance of PRA we were missing an understanding of what the developmental process should ideally mean for the ‘development subject’. Here within the language that includes the ‘development subject’ one can inadvertently lose sight of the surrounding set of actors and conditions that can influence one's capabilities.

In addition to this concern, many scholars take issue with the open-endedness and ambiguity that the approach presents. One of the major critiques of the capabilities approach that persists within the literature, is that the perspective does not provide a clear practical understanding about how such a process could develop to the benefit of a capable individual. Zimmerman (2006) critiques the absence of a practical understanding of how the capability approach works in action, stating that the theory of capabilities contains “no concept of situated action in a pragmatist sense, just a loose understanding of positional agency within a broader environment” (475). Particular attention has been given to the fact that Sen refuses to classify what some of these capabilities might be. He does so because he believes that the valued options of an individual or a community need to be articulated through a deliberative process specific to each community (Sen, 1999: 242).

The process of thinking through how capabilities can be supported and sustained in an environment thus remains a context specific response that cannot be predetermined. Some practitioners find this ambiguity to be a significant challenge. What type of processes can honour both communal processes of deliberating and working together whilst giving specific attention to the values of each individual? I find the duality between relationships and the perspective of the individual to be inferred and presented clearly in the growing discourse on social learning. Here we have a language that can accommodate the values of an individual whilst acknowledging the relational capacity of all those that are affected as a collective effort through which objectives of social justice and transformation can be addressed.

## **SOCIAL LEARNING: THE MOBILISATION OF THE DEVELOPMENT COMMUNITY AS A WHOLE**

Recently, in the field of environmental education, understandings of social learning have added to the field of participatory development by focusing on the work needed to foster sustainable development. The literature on social learning draws from different disciplines i.e. human psychology, sociology management studies, policy studies, organisational studies and communication studies and as such is understood in many varying ways (Van Bommel et al., 2009: 403). It ranges from an understanding of “socially conditioned individual learning” (Bandura, 1977) to “collective learning” (Ostrom, 1990). For the purposes of this discussion I draw on a collective learning view of social learning, which can be conceptualised as a process for learning collectively to foster systemic changes (Mutimkuru, Nyirenda & Matose, 2002). The impetus of this understanding of development stemmed from the claim that:

*Traditional approaches to solving societal problems and fostering social change, such as reliance on development of appropriate technologies or market forces have failed and an alternative approach is required, namely a learning approach. (Roling, Maarleveld, Ison & Woodhill in Muro & Jeffrey, 2008: 329)*

Interestingly enough this approach, much like the capabilities approach, is also driven by the desire to work beyond traditional market driven focus.

Learning is presented as an alternative methodology in development praxis. It is premised on the understanding that:

*Through communicative learning a person constructs an inter-subjective understanding of a situation with others, which becomes especially relevant in the context of wicked problems where there is no clear knowledge, or perhaps there is conflicting knowledge about the situation or the best solution. (Muro & Jeffrey, 2008: 329)*

This perspective not only defines what kind of change is needed (i.e. a focus of self-reflexivity, interdependence for transformation and change) but more importantly, it defines the **active space** in which this learning and change can happen. It thus gives us insight into a space of 'situated action' that is channelled towards its aims. It presents those who are interested and affected by external circumstances as a collective working together towards a solution. The emphasis on learning describes a space in which self-reflexive responsiveness can result in collective action. Reflective practice in this perspective is conceptualised as:

*Learning and developing through examining what we think happened [and] opening our practice to scrutiny by others. Reflexivity is finding strategies for looking at our own thought processes, values, prejudices and habitual action as if we were onlookers. (Bolton, 2005: 7)*

By collectively reflecting upon the practices and structures that constrain action and change, participants are able to think through ways in which they can challenge the prevailing conditions and act upon them. Sarpong provides more insight into this practice:

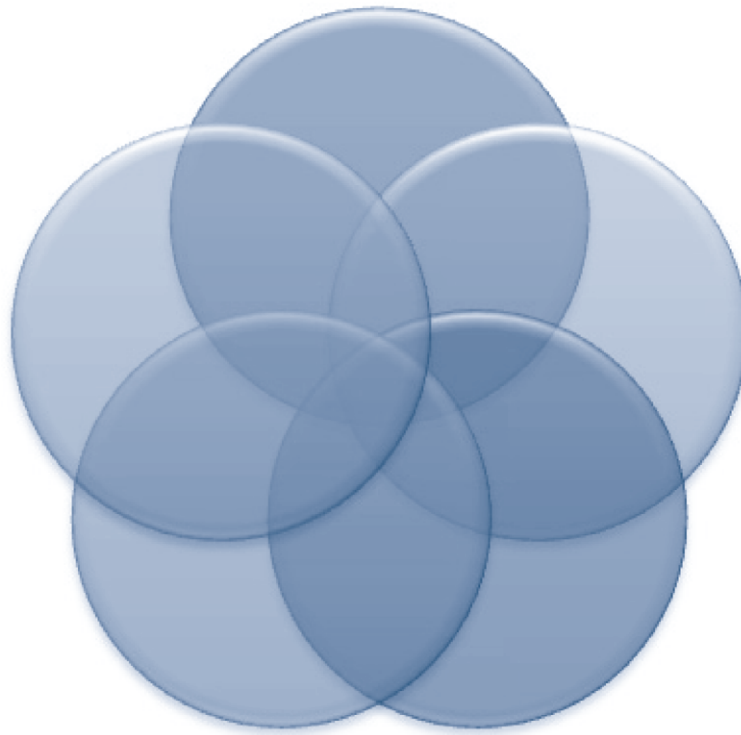
*In this sense actors as intelligible human beings engaged in their practice can reflect on the activities that constitutes the practice and challenge some of the constraints imposed on their actions in practice in creative ways which then come to transform or*

*reconfigure the very structures that enabled them to engage in the practice. (2008: 25)*

The understanding of systems or structures within the above quotes highlights a commitment towards challenging the status quo in social learning. It implies an interrogation of the constraints faced to the extent that the alternative values articulated surface the hidden tensions between their valued ways of being and the prevailing order. In this way, the discourse on social learning reveals itself to be "system transforming" and not "system maintaining" in nature (De Beer in Svenkerud, 2003: 24). So in this way social learning implies a triple learning process: one that looks into the practice of the individual, and relates it to what is happening to other members of the group, whilst collectively relating these reflections to what is happening in the broader system that frames their practice. Some theorists have conceptualised this learning as a "succession of loops where the learner moves from following the rules (single loop) to changing the rules (double loop) to eventually learning about learning (triple loop learning) (Argyris & Schon in Buchy & Ahmed, 2007: 361). Critical reflection is seen as essential for moving from one step to the next (Buchy & Ahmed, 2007: 361). Through this a heterogeneous group of participants analyse possibilities for action within a given environment by personally questioning their role within the system and thinking through the way in which the given environment can be challenged to respond to alternative values. This practice implies a process of conscientisation on the part of its participants.

Social learning further distinguishes itself by emphasising the ability of **diverse groups** to address and critically reflect on difficult situations (Wals, van der Hoeven & Blanken, 2009: 13). The emphasis on diversity seemingly combines the focus of PRA related strategies and the discourse on Human Development. It does so by conceptualising a space in which different actors that come from different backgrounds can contribute to or work towards deliberating, understanding and responding to an issue with which they all identify.

## Interrelated Individuals



**Figure 4: Social learning: a group of diverse and interrelated individuals working together to solve complex problems**

The understanding is that by involving people from different vantage points and backgrounds, the process of deliberation and action will be informed by a range of points of view that can collectively work to strengthen responses to complex problems. This is conceptualised within the social learning literature as creating a 'community of practice' which refers to a group of people who share the same vision and work together in a concerted effort to achieve a particular aim (Sarpong, 2008: 25). It prioritises values such as social cohesion, in which trust and safety creates a space in which concerned members can reflect on pertinent issues as part of a network (Wals et al., 2009: 13).

### USEFUL CONSIDERATIONS FOR SOCIAL LEARNING IN PRACTICE

Despite the shifts in discourse that social learning presents, it has received useful considerations that need to be acknowledged. Practitioners have critiqued the assumptions that underpin understandings of

social learning. They take our attention to the first premise of social learning, that is, the 'problem definition' of the issue to be deliberated by different actors. They ask questions about *who* defines the problem and *how* their particular viewpoint can impact upon the process of self-reflection and deliberation. The worst case scenario is highlighted:

*Imposing a problem definition and restricting possible solutions, can be seen as a strategy to reduce complexity and achieve order in complexity. Dominant actors prefer to approach problems as if they understand the problem and are in control i.e. in a position, and with access to solve it. (Van Bommel et al., 2009: 409)*

The result of such guidance on behalf of dominant actors is that it "minimises uncertainty" and "limits the need for search activities and constricts the range of possible solutions" (Van Bommel et al., 2009: 410).



Power dimensions that were criticised within the discourse on PRA rear their ugly heads in the caution provided by Van Bommel et al. Here the rhetoric of democratic deliberation may mask certain factors that condition the focus and aim of the project. In this sense the definition of the problem is an assumption in itself that needs to be collectively considered. This point draws our attention to another fundamental element in the social learning discourse: interdependence as a foundation for transformation and change. The equality and interdependence that is the common ground for social learning is not something that exists of its own accord but is something that needs to be cultivated as part of the participatory process; the absence of this groundwork impacts upon the probability of social learning actually happening. This point is succinctly put across in the same literature:

*Given that unequal power relations are inevitable and powerful actors will try to reduce complexity and in that way impose their views on what the problem is and what the possible solutions are, we conclude that social learning is indeed wishful thinking. However this does not necessarily mean that the ideal of convergence of ideas, goals and methods needs to be abandoned. [It] means that it is important to rethink the criterion of interdependence. (Van Bommel et al., 2009: 410)*

This challenges practitioners to move beyond the seemingly attainable language that the criterion of interdependence proposes and focus on the work that it takes to nurture such conditions. This requires an in-depth understanding of the power dynamics at play and how this impacts group solidarity and negotiation. Caution is provided against neglecting such issues: “when such problems do not surface directly and remain unaddressed, they constitute a hidden conflict which is likely to resurface sooner or later, possibly with increased intensity” (Morgan in Van Bommel et al., 2009: 410).

Other contentions distinguish between the process of social learning and its outcomes. In this perspective the participatory process that happens within the practice of social learning is not enough to infer that indeed social learning has occurred:

*Social learning is not an automatic outcome of a participatory process ... if one is going to assert that the process can affect people as environmental citizens, then what happens to people, not just outside of, but also after the process, is critical. The question is whether or not through a process of public participation, people can learn to see beyond their own agenda and pursue a collective one of responsible citizenship. (Bull, Petts & Evans, 2008: 703)*

Moving beyond process into a space where the knowledge gained can translate into premeditated action is what defines social learning in its entirety. This point echoes previous reflections on participation as a means and participation as an end in PRA:

*The key question has been whether participants of deliberative processes stop learning when the facilitator and information providers walk out of the door, or whether, a more complicated process is set in motion that has the capacity to change hearts and minds resulting in a greater sense of environmental citizenship. (Bull et al., 2008: 703)*

Change is a key aspect of this definition, challenging practitioners to see through the process and analyse the quality of the end result and what it enables. It is a long term vision that is not merely satisfied with participation but the momentum and desired impact that this participation can have in a community over time.

## TRACING THE COMMON GROUND

This next section thematically explores elements that practitioners engaging in participatory approaches ought to reflect on in order to strengthen their praxis. Issues that become apparent when looking at the related field of participatory development, participatory rural appraisal, human development, the capabilities approach and the discourse on social learning are highlighted in Table 1.1, showing the trends across these three fields and slight variations that occur. This section also probes deeper into some of the common issues found in this work in order to reveal a summary of some of the additional thought that this work requires.

**TABLE 1: BREAKING DOWN THE COMMON GROUND BETWEEN PARTICIPATORY DEVELOPMENT, THE CAPABILITIES APPROACH AND SOCIAL LEARNING**

Participatory Development / Participatory Rural Appraisal	Human Development and the Capabilities Approach	Social Learning
Power dynamics/ hidden dynamics	Power relations? Not explicitly explored but feature	Power relations/ hidden dynamics
Facilitation/facipulation	Facilitation? Its impact?	Facilitation and its impact?
Reconfiguring power to those at the top, challenging the status quo	Minimal conditions must be there, challenging the status quo	Reconfiguring power to those at the top, challenging the status quo
Participation as a means versus participation as an end	Bolstering capability and agency as an end	Participation and change as an end
Interdependence	Limits of individual agency / interdependence	Interdependence
Legitimacy, prioritising the values of the development subject not the development broker	Championing the values of the development subject	Legitimacy the issue that is being explored - whose is it? Problem definition?
Trust	Trust between actors? Actors not explicitly defined	Trust
Participation/ motivation how can we build this?	Participation/ motivation how to build this?	Participation/ motivation how to build this?
Institutionalisation of participation Process versus product	Presumable institutionalisation can play a hand here	Process versus product, minimising uncertainty

## BROADENING UNDERSTANDINGS OF THE PERFORMANCE OF POWER

Reflecting on, acknowledging and working with power dynamics is an important part of all of the participatory practices because they all essentially involve collaboration between different parties. A broader understanding of power relations is also necessary within Human Development because of the way in which the concept of capabilities requires an understanding of social relations and how this can impinge upon or bolster an individual's capabilities in social context.

Perceptive sensibilities are needed to discern the power dynamics within a group; otherwise the exercise may lead to an entrenchment of dynamics that curtail the objectives of the exercise. Taylor describes the sensibilities needed for this work as a 'sixth sense' or a 'wisdom' that allows one to deal with issues of power and politics (Taylor, 2008: 361). Adhering to ethics on democracy in these instances is not enough. The ethic in itself cannot ensure that democracy exists in practice. This point is echoed in the statement that "democratic ideals do not eliminate a gradual construction of power relations during participatory projects - experts will snatch up and tap local discourse to promote their own" (Læssøe, 2008: 146). This quote puts emphasis on how experts might use the participatory forum to their own ends. However, such manipulation is not only unique to them. Local actors themselves are not value free or homogenous. It must be said that the voluntarism that characterises a lot of participation in development projects is an inadequate measure of freedom simply because this voluntarism masks the power dimensions and desires that may underpin people's participation. Additionally, the participants may have competing interests in being a part of the development project. Humble substantiates this view by stating that:

*In much of the PRA literature the insider/outsider relationship is virtually the only one discussed in terms of power. The internal dynamics of 'communities', the relationships between those who take part in the PRA exercise, those who stand up to present or make a case and those who watch from the sidelines, are rarely given sufficient consideration. (Humble in Guijt & Shah, 1998: 48)*

In particular, the issue of gender presents interesting challenges that in themselves cannot be easily demarcated into 'hard and fast categories' but display a myriad of complexities according to each specific context (Humble in Guijt & Shah, 1998: 48). Acknowledging the tensions that may occur when different interests converge, working towards recognising instances where there is a palpable or undercurrent of conflict between the interests of those who make up the collective, is an important endeavour. The point here is to build a common language amongst the group that allows the complex negotiations that inform the process as a whole.

This is relevant in the collaborative ethic of Participatory Development, the emphasis on networking in Human Development and the diversity advocated for in the literature on Social Learning. All of these understandings revolve around an understanding of interdependence as the cornerstone for change. They basically share an understanding of a relationship based model in which change can happen only through meaningful interactions between individuals. The power of diversity is promoted through this view. Essentially, this process of negotiation is about learning; when diverse groups of people deliberate issues together it "requires that we not only accept one another's differences but are also able to put these to use" (Wals et al., 2009: 8). It requires that ideas around complexity and diversity are embraced by the conscious "seeking and enabling [of] the expression and analysis of complex and diverse information and judgements. This includes looking for and learning from exceptions, oddities, dissenters and outliers in any distribution" (Chambers, 2003: 57)

This understanding forces us to see power as something that circulates amongst all those present, not something that is owned by a particular party (Foucault, 1980: 98). It helps us move beyond understanding of oppositional models of power, towards an understanding of power as something that "is exercised through networks and relations" (Gallagher, 2008: 399). Within this understanding it is additionally important to acknowledge that power should not always be understood as a negative coercive element. Drawing on Foucault's work on power and desire an understanding of the positive production power is shared:

*Power traverses and produces things, it induces pleasure, forms knowledge, and produces discourse. It needs to be considered as a productive network which runs through the whole social body, much more than as a negative instance whose function is repression. (Foucault, 1980: 118-119)*

This description challenges us to map the performance and influence of power as something that permeates many aspects of our work with communities and represents itself in a myriad of ways, beyond a traditional oppositional lens.

### ON FACILITATION: LEGITIMACY, OWNERSHIP AND THE ROLE OF THE 'OUTSIDER'

Looking at facilitation and its impact is an interesting feature that Participatory Development and Social Learning share because of the recognised role of the facilitator. For Human Development not much is said on whether this process is one that should be facilitated: perhaps it is a process that can be facilitated or one that can emerge organically. Working towards what one has reason to value is a process intrinsic to everyday experience, whilst also being something that can be facilitated as part of an ongoing project (especially the aspects of public deliberation touted as part of it). Working with diversity is an endeavour that requires the effort of all those present. However, traditionally the surfacing of pertinent issues that arise lies in the hands of a mediator, facilitator figure or a responsible participant whose task it is to bring out the tensions that are within a group in order to create a space in which people feel free to contribute to the ongoing conversation. This role is defined as "the communicative practice of mobilising participants and managing the dialogue" (Læssøe, 2008: 149). It requires "a delicate and evolving balance between guidance and support, facilitation and response" (Connell, 1997: 248). These neutral descriptions of the facilitator side-step the complications mentioned earlier by Kapoor about the managerial role that the facilitator can play and its possible negative effects. Let us remind ourselves of his warning:

*The convenor or facilitator may well portray him/herself as a neutral and fair arbiter, but the fact that s/he manages the proceedings almost every step of the way: deciding on the need for, and purpose of*

*the meeting; selecting whom to include/exclude on the invitation list; making up the agenda... power is tilted decidedly in favour of the convenor, and, while it may be used accountably and democratically (as Chambers hopes for) it can just as easily be abused. (Kapoor, 2005: 1207)*

Despite the fact that facilitation could be handled in a more democratic way with a more communal steering of the agenda, these points are useful in alerting us about the way this role can be abused. Additionally, this point helps us unpack the role of this arbitrator in terms of their role in the mobilisation of participation. Participatory Development, Human Development and Social Learning all demand the 'active pursuit' of those who seek to benefit from the development desired. Ideally this implies a level of ownership on the part of the participants besides the role of the facilitator or mediator figure. In order for there to be a level of legitimacy within a project, it goes without saying that there must be consensus about the issue being explored in the first place and the vision of the group in itself.

Questions such as who defines the issue, and how is it defined direct our attention to factors of facilitation that can inadvertently override the involvement of the participants. Perhaps a better question to ask is: in what ways does the issue being explored effectively tap into the experiences faced by individuals in a context? This question challenges us to look into and work with the conditions already present in a context. It sees any context as one that is already demonstrating certain capabilities rather than one that is devoid of any action (Ingamells, 2006: 240). The ongoing life of a community should essentially provide the baseline for exploring further action.

This issue becomes particularly relevant when viewed in terms of the fact that historically development is often something that is either sponsored, supported, stimulated, mediated or facilitated by outside agents. When we speak about stimulating collective agency in communities there is a tendency to conveniently dissociate the role that outsiders might play by concentrating on what we believe should be the will of the community. It is imperative that we think through the way that the presence and power that 'outsiders' affects the participation that they hope to support.

Sometimes participatory interventions can override an organic mobilisation (Taylor, 2008: 363).

Interestingly enough, the discourse on social learning might at least provide the space for the facilitators themselves to assess themselves as part of the process as a whole. This is inferred because social learning presents everybody present as having something particular to contribute and learn, therefore implying that it is a process that nobody is outside of: a process in which each person brings their particular viewpoint as part of the ongoing conversation and is open to learning from each other. Whether this works in practice needs to be researched, but in theory this is an instance in which the role of an outsider can be useful. In accordance with social learning, Chambers substantiates this view by stating that: "in this perspective, learning should not only be the task of those for whom the 'development' is intended, but should also be acknowledged as part of the process for those facilitating and collaborating towards this end" (Chambers, 2005: 216).

## TRANSFORMATION AND CHANGE: HOW AND AT WHAT EXPENSE?

These approaches also have in common a focus on challenging the status quo. Participatory Development has been critiqued for its ability to easily monopolise the agenda to the favour of those who have the power. Human Development takes this into account by stating that minimum conditions must be obtained in order for one to be able to work towards valued options for life. An understanding of the way in which the political, economic, social status quo can impact upon an individual's capabilities requires a response that is able to discern what is within someone's power, what stands in their way and what can be done to challenge it. Within the discourse on social learning, bringing together diverse groups of

people allows the reflection on current practices and the "constraints that are imposed on their actions" so that they can in turn "come to transform or change the very structures that enabled them to engage in the practice" (Sarpong, 2008: 25). This implies an analysis of the prevailing social conditions, with the aim of challenging aspects thereof that continue to constrain efforts towards transformation and change.

The importance of 'dialogue' and 'conscientisation' within this perspective draws on Freire's understanding of emancipatory education in which the process of learning includes "perceiving social, political and economic contradictions and taking action against the oppressive elements of reality" (Mayo, 1999: 64). Empowerment for Freire means that non-literate people need to challenge dominant views of themselves by naming their world (Freire, 1971).

Whilst the need for advocacy is an important one, it remains important to gain insight into the delicate social institutions or the politics of a community as a part of this mobilisation. It is all well and good to say that we should challenge the status quo, but it is important to remember that political linkages have profound effects on communities and that resistance is not always met with a buckling of knees – especially in the face a resilient system that has effectively kept the social order in the state that it is in. Often such activism can lead to social exclusion that may have significant implications for those who take on certain issues in their community. The point here is not to condone the oppression within a community, but to be mindful of the implications that such advocacy can have on the immediate safety and well-being of those involved. Adequate support and solidarity is needed in such instances, as well as the ability to be cognisant of the implications of action and a long-term strategy going forward.

## PARTICIPATION: ELUSIVE ATTAINABILITY AND SITUATED PRACTICE

The great trap of the theoretical underpinnings of participatory approaches is that they are seductive in the way that their rhetoric clearly isolates and apports focus on collective agency as the cornerstone of development and transformation. It does so in a language of attainability, a language that presents the proposition as a complete project, not as one that requires significant work to achieve.

Translating this language into practice brings up a host of concerns. These issues can be understood as hidden work that often lies unaccounted for when one superficially works with the values and themes highlighted in the different strains of participatory discourse explored in this literature review.

Each point in the evolution of participation seems to probe deeper into clarifying what the subject of development should be whilst trying to give a natural representation of the relationships and collaborative input that underpins such work. Figure 5 demonstrates this movement.

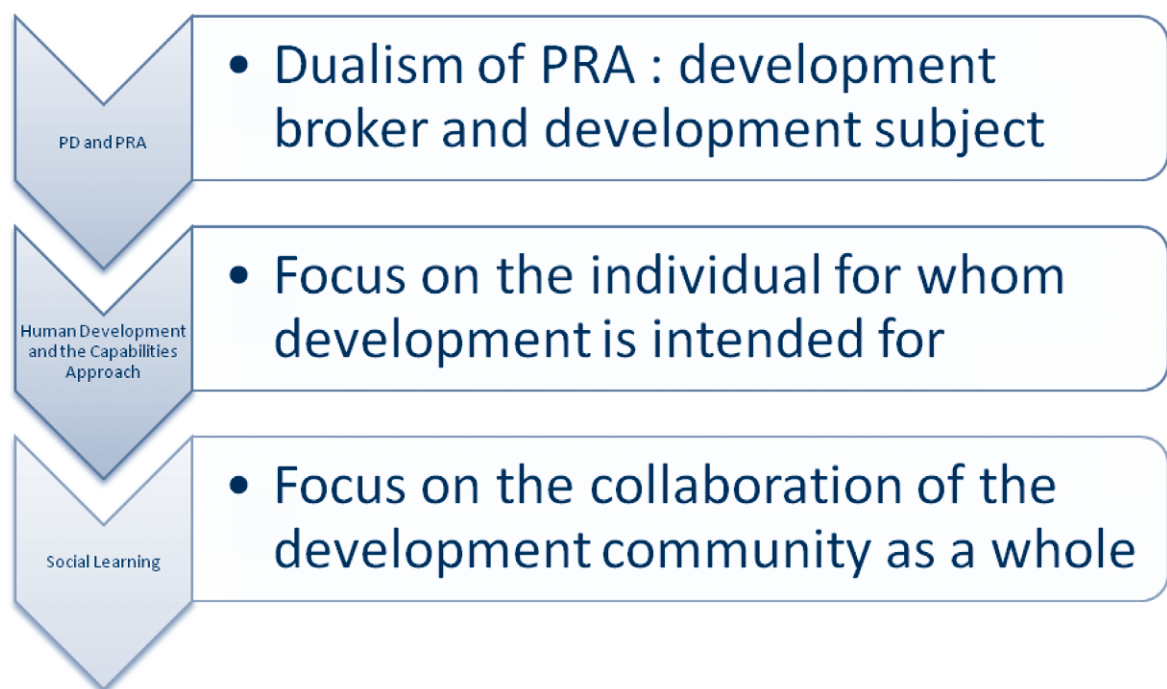


Figure 5: The evolution of participatory discourse

Each stage in the evolution of participatory discourse gives us useful considerations that in turn help define the next step in thinking about participatory processes for transformation and change. Regardless of what remains defined in each phase there is a dimension to this work that cannot be captured, defined or replicated in theory. Additionally the boundaries presented as conclusive in each instance are actually porous resulting in hybrid discourses that often draw from different sources.

Motivating and nurturing any kind of participation requires more work than may be perceived at the

outset. It requires a level of bonding between a group, a kind of collective synergy that is not a given, but needs to be cultivated as part of a process.

Legitimacy underpins the ethics of the issues being explored in participation, that is, a commitment towards making sure that the issue explored reflects the concerns and desires of those who congregate to deliberate it. The building of trust is fundamental to such explorations and this in turn demands an understanding that the **process** is what this work is about and not reaching a defined product.



Despite the attempts to provide signposts for practice in this review, no amount of critique can prepare one to do this work, for it lives in practice. It requires that we go beyond looking at the intended consequences of what we are doing and rather find the reflexivity to look at and respond to the unintended consequences of our practice (Gallagher, 2008: 400). Without this flexibility any project that is in pursuit of participation risks missing and working with the unique character and challenges of the endeavour being undertaken. In this regard, the biggest challenge in the pursuit of participation is forging forward in flawed ways and missing the opportunity to collectively define the path undertaken one step at a time.

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## REFERENCES

- Bandura, A. (1977). *Social Learning Theory*. London: Prentice Hall.
- Bolton, G. (2005). *Reflective practice: Writing and professional development*. London: Sage.
- Botes, L. & van Rensburg, D. (2000). Community Participation in Development: Nine plagues and Twelve Commandments, *Community Development Journal*, 35(1), 41-58.
- Buchy, M. & Ahmed, S. (2007). Social Learning, Academics and NGOs, Can the Collaborative Formula Work? *Action Research*, 5(4), 358-377.
- Bull, R., Petts, J. & Evans, J. (2008). Social Learning From Public Engagement: Dreaming the Impossible?, *Journal of Environmental Planning and Management*, 51(5), 701-716.
- Chambers, R. (1997). *Whose Reality Counts? Putting the Last First*. Warwickshire: ITDG Publishing.
- Chambers, R. (2005). *Ideas for development*. New York: Earthscan.
- Connell, D. (1997). Participatory Development: An Approach Sensitive to Class and Gender, *Development in Practice*, 7(3), 248-259.
- Cooke, B. & Kothari, U. (Eds.) (2001). *Participation the New Tyranny?* London: Zed Books.
- Cornwall, A. & Brock, K. (2005). What do Buzzwords do for Development Policy? A Critical Look at 'Participation', 'Empowerment' and 'Poverty Reduction', *Third World Quarterly*, 26(7), 1043-1060.
- Dean, H. (2009). Critiquing Capabilities: The Distractions of a Beguiling Concept, *Critical Social Policy*, 29(2), 261-278.
- Desai, M. (1991). Human Development Concepts and Measurement, *European Economic Review*, 35(1), 350-357.
- Eversole, R. (2003). Managing the Pitfalls of Participatory Development: Some Insight From Australia, *World Development* 31(5), 781-795.
- Foucault, M. (1980). Prison Talk. In C. Gordon, C (Ed.), *Power/Knowledge: Selected Interviews and Other Writings 1972-1977*. Hemel Hempstead: Harvester Wheatsheaf.
- Freire, P. (1997). *Pedagogy of the oppressed*. New York: Continuum.
- Gallagher, M. (2008). Foucault, Power and Participation, *International Journal of Children's Rights*, 16(1), 395-406.
- Gaspar, D. (2004). *The ethics of development: From economism to human development*. Edinburgh: Edinburgh University Press.
- Guijt, I. & Shah, M. (Eds.) (1998). *The Myth of Community, Gender Issues in Participatory Development*. London: Intermediate Technology Publications.
- Ingamells, A. (2006). Community Development and

Community Renewal: Tracing the Workings of Power, *Community Development Journal*, 42(2), 237-250.

Jonsson, U. (2005). A Human Rights-Based Approach to Programming. In P. Gready & J. Ensor (Eds.), *Reinventing Development? Translating Rights Based Approaches From Theory to Practice*. London: Zed Books.

Kapoor, I. (2005). Participatory Development: Complicity and Desire, *Third World Quarterly*, 26(8), 1203-1220.

Kumar, S. (2002). *Methods for Community Participation, A Complete Guide for Practitioners*. Michigan: Vistaar Publications.

Laessøe, J. (2008). Participation and Sustainable Development, the Role and Challenges of Mediating Agents. In A. Reid, B. Jensen, J. Nikkel, & V. Simovska (Eds.), *Participation and Learning, Perspectives on Education and the Environment, Health and Sustainability*. UK: Springer Publishers.

Mayo, P. (1999). *Gramsci Freire and Adult Education, Possibilities for Transformative Action*. New York: Saint Martins Press.

Mikkelsen, B. (2005). *Methods for Development Work and Research. A New Guide for Practitioners*. New Delhi: Sage Publications.

Mosse, D. (1994). Authority, Gender and Knowledge: Theoretical Reflections on the Practice of Participatory Rural Appraisal, *Development as Change*, 25(4), 497-526.

Muro, M. & Jeffrey, P. (2008). A Critical Review of the Theory and Application of Social Learning in Participatory Natural Resource Management Processes, *Journal of Environmental Planning and Management*, 51(3): 325-344.

Mutumkuru, T., Nyirenda, R. & Matose, F. (2002). *Learning Amongst Ourselves' Towards Adaptiveness by Stakeholders in Forest Management through Social Learning in Mafungautsif*. Paper presented at 'The Commons in an age of Globalization' the 9<sup>th</sup> Conference of the International Association for the

Study of Common Property, Zimbabwe.

Nelson, N. & Wright, S. (Eds.) (1995). *Power and Participatory Development; Theory and Practice*. London: Intermediate Technology Publications.

Nicholls, L. (2000). Birds of a Feather? UNDP and Action Aid Implementation of Sustainable Human Development. In D. Eade (Ed.), *Development, NGO's and Civil Society, A Development in Practice Reader*. Oxford: Oxfam.

Ostrom, E. (1990). *Governing the Commons. The Evolution of Institutions for Collective Action*. New York: Cambridge University Press.

Pahl-Wostl, C. & Hare, M. (2004). Processes of Social Learning in Intergrated Resource Management, *Journal of Community and Applied Social Psychology*, 14(1), 193-206.

Parfitt, T. (2004). The Ambiguity of Participation: A Qualified Defence of Participatory Development, *Third World Quarterly*, 25(3), 537-556.

Reid, A., Jensen, B.B., Nikel, J., & Simovska, V., (Eds.) (2008). *Participation and learning: Perspectives on education and the environment, health and sustainability*. Dordrecht: Springer.

Sarpong, D. (2008). A Practice Centred Approach to Understanding Social Learning and Knowledge Creation in a 'Community of Practice', *International Journal of Business and Management*, 3(4), 23-36.

Sen, A. (1999). *Development as freedom*. New York: Alfred A. Knopf.

Svenkerud, M. (2003). *Community Participation and Participatory Development in Post-Apartheid South Africa, from the Reconstruction and Development Programme to the Growth Employment Redistribution Strategy*. Unpublished masters thesis, Cape Town: University of Cape Town.

Taylor, P. (2008). Where Crocodiles Find their Power: Learning and Teaching Participation for Community Development, *Community Development Journal*, 43(3), 358-370.

Thomas, C. & Wilkin, P. (Eds.) (1999). *Globalisation, Human Security and the African Experience*. London: Lynne Rienner Publishers.

Tobias, S. (2005). Foucault on Freedom and Capabilities, *Theory, Culture and Society*, 22 (4), 65-85.

United Nations Development Programme (1997). *Human Development Report*, New York: Oxford University Press.

United Nations Development Programme. (1994). *Human Development Report*, New York: Oxford University Press.

Van Bommel, S, Roiling, N, Aarts, N. & Turnhout, E. (2009). Social Learning for Solving Complex Problems: a Promising Solution or Wishful Thinking? A Case Study of

Multi-Actor Negotiation for the Intergrated Management and Sustainable Use of the Drensche Aa Area in the Netherlands, *Environmental Policy and Governance*, 19 (1), 400-412.

Wals, A. Van der hoeven, E. & Blanken, H. (2009). *The Acoustics of Social Learning: Designing Learning Processes that Contribute to a More Sustainable World*. Wageningen: Wageningen Academic Publishing.

Williams, G. (2004). Evaluating Participatory Development: Tyranny, Power and (Re) Politicisation, *Third World Quarterly*, 25(3), 557-578.

Zimmermann, B. (2006). Pragmatism and the Capability Approach: Challenges in Social Theory and Empirical Research, *European Journal of Social Research*, 9(4), 467-484.



## 05

# THE 'SOCIAL' AND 'LEARNING' IN SOCIAL LEARNING RESEARCH: AVOIDING ONTOLOGICAL COLLAPSE WITH ANTECEDENT LITERATURES AS STARTING POINTS FOR RESEARCH

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## ABSTRACT

*This paper contributes to the social learning literature. It argues that there is a need to give attention to the antecedent literatures that inform understandings of the social in social learning; and the learning in social learning. These antecedent literatures (drawn mainly from socio-cultural psychology, learning theory and realist social theory in this paper) are necessary in social learning research, if we are to avoid the problem of ontological collapse in social learning research. The concept of ontological collapse (after Sfard, 2006) refers to a tendency in modern sciences to objectify social processes. It is used in this paper to draw attention to the need to understand the complex social processes involved in social learning (and the antecedent literatures that may enable us to do so). As such, it warns against reification in social learning research; and also warns against turning*

*social learning into an object, devoid of complex learning processes and agentive reflexions, decision making and practices. To clarify this concept, the paper shares examples of instances of ontological collapse, showing that at times, the social learning literature itself can fall victim to the problem of ontological collapse. Drawing on the literature review work in two cases studies of social learning research that work carefully with the antecedent literatures, the paper demonstrates the importance of engaging carefully with these literatures to avoid ontological collapse in social learning research in the fields of environmental education and natural resources management.*

## INTRODUCTION

Learning is necessary for the adaptations and transformations that will be required to deal with growing social-ecological change at multiple scales (Berkes et al., 2003; Folke, Carpenter, Walker, Scheffer, Chapin & Rockström Folke, 2010). To support such learning, deep changes in understanding about the inter-relationships between people and their life support systems are required. The scope of this

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learning is as yet unknown, but is deeply connected to a fundamental re-orientation of the place of humanity in nature (Bhaskar, 1998; Steffen et al., 2004). These changes in understanding must go beyond small groups of people in specific contexts, and become located within society as a whole. They require nothing less than society-wide social learning and transformative praxis (Cundill, Lotz-Sisitka, Belay, Mukute & Kulundu, in press). However, this creates an ontological problem in our understandings of learning: for how is learning, which emerges in local places amongst individual people who interact socially in various social units, ultimately to be transferred to global scales? Expectations embedded in social learning research are most often *change oriented*, particularly when used in the environmental education

and natural resource management contexts (Cundill et al., in press). This paper is particularly interested in sharing literature that provides perspectives on *how* the social changes associated with social learning may emerge, and how these are deeply embedded in understandings of the 'social' nature of learning, and in understandings of learning itself.

Figure 1 below illustrates how antecedent literatures have shaped in-depth understandings of social learning. In terms of this diagram, this paper explores the importance of *engaging with the first two 'layers' of literature* if the *processes* and *associated results* of social learning are to be fully understood, and if researchers engaging in social learning research are to avoid 'ontological collapse'.

## Antecedent literatures shaping in-depth understandings of social learning

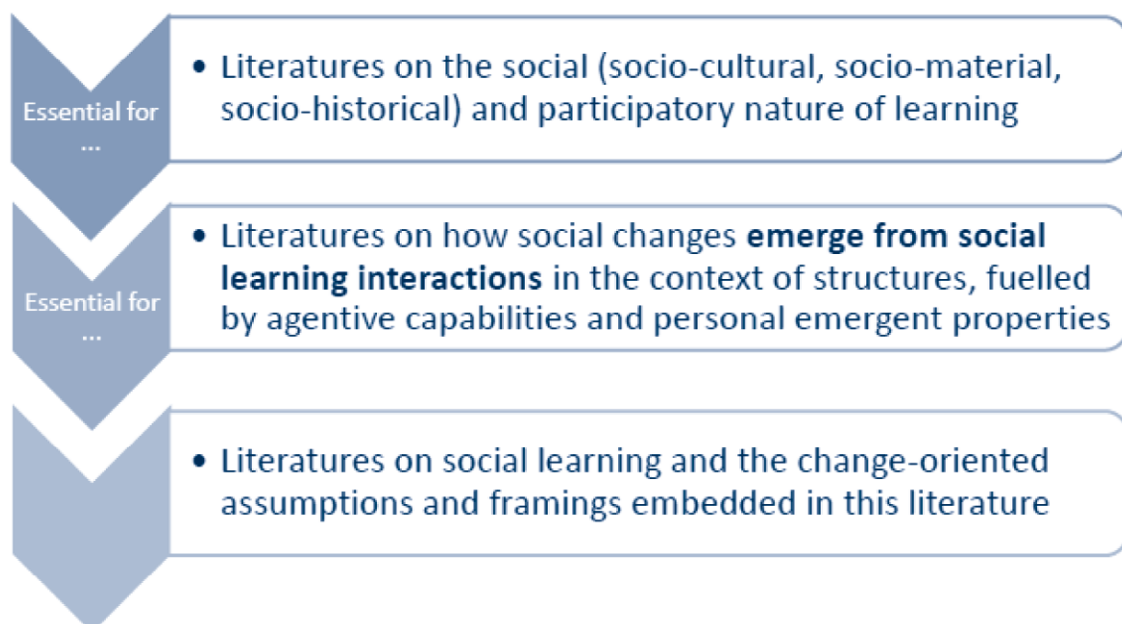


Figure 1: Antecedent literatures shaping in-depth understandings of social learning (source: Lotz-Sisitka, 2012)

The body of literature (associated with the two upper layers in the diagram above) is enormous, and this paper does not intend to provide a comprehensive or systematic overview of this literature. Rather, its purpose is to demonstrate the *kinds of insights* one might gain from undertaking such literature review work in social learning research. To do this, the

paper works **dialogically with extracts from two recent PhD literature reviews** that have sought to engage such understandings (Belay, 2012; Mukute, 2010). It shows that these literatures are richly textured and offer important understandings within the wider emerging body of literature on social learning theory.



## SOCIAL LEARNING RESEARCH: AVOIDING THE PROBLEM OF ONTOLOGICAL COLLAPSE

The term 'social learning' is a relatively new descriptor signifying an interest in the sociological expansion and uptake of learning processes in wider societal contexts (Wals, 2007). This paper does not offer new definitions of social learning. Rather, it traces the *necessary antecedents for understanding what social learning might be, how it emerges in and as a social process of learning, and how it can be understood in relation to human agency, the mobilisation of which is a necessary condition for social learning results to emerge*. As such, the paper reviews literature that can shed further insight into some of the key assumptions underpinning social learning theory and practice. Failure to give attention to understanding the *social processes of learning and social change*, can lead to 'ontological collapse' in social learning research. Here Sfard's (2006) notion of 'ontological collapse' is used to explain the manner in which *important social processes become objectified through reification and alienation*. She explains that ontological collapse occurs when "accounts of actions and events have been translated into statements about states and properties" (p. 24).

She uses the example of identity to illustrate her point. She explains how difficult it is to understand identity, when it becomes objectified and 'fixed' as 'this identity' or 'that identity'. Such objectification, she argues, obscures *the complex socio-cultural processes involved in constructing and re-constructing identities reflexively*. She argues instead for the use of the *term* 'identifying' *to indicate that identity is constituted in and through a range of ongoing, reflexive identification processes*. Applied to the social learning research arena, we may see value in thinking about *social learning processes* rather than 'social learning' if we are to take the issue of ontological collapse into account.

In further considering this phenomenon in the context of social learning research, it is useful to consider more carefully Sfard's explanation that "... objectification, although extremely useful in mathematics and sciences, may be less than helpful in discourses on people and their actions" (p. 24).

This is not unlike many social science researchers who consider *processes of social change and learning to be significant* in and as science (Bourdieu, 2004; Latour, 1987; Archer, 2000). She explains that objectification takes place through two intellectual moves: the first being reification and the second, alienation.

Reification, she explains "... consists in replacing talk about actions, with talk about objects" (Sfard, 2006: 24). For example, we see talk in environmental science literature on what environmental management is; and less on how it is to be done and by whom, when and in what context. Somewhat paradoxically, it is also possible to detect this phenomenon emerging in the social learning literature. Here we see some instances of talk about *what social learning is (or might be)*, or what the outcomes of social learning might be, or what competencies are needed for social learning, without the same emphasis on the processes and actions that enable social learning processes to occur, or careful rendition of what the complex processes embedded in emergent social learning processes are (here 'what is', is emphasised over the processes needed to attain the 'what is').

Sfard (2006) describes the process of objectification as a process of [social] alienation, which consists in "... presenting phenomenon in an impersonal way, as if they were occurring of themselves, without the participation of human beings" (p. 24). Some of the more typical examples of this ontological error in environmental science literature includes use of concepts such as "natural resource management" or "public participation" or "co-management" without giving adequate attention to who is to be doing these processes and how.

One could argue that the emerging popularity and emphasis on social learning in the natural resources management arena is a response to ontological collapse associated with natural resources management sciences (see Cundill, this volume). There are other examples, from the field of environmental education, where 'environmental education' also becomes objectified, and little is said of who is to be educated, by whom, how, in what context and when, and what the environmental education *processes* are to be.



While a few examples of this phenomenon are listed here for illustrative purposes it is encouraging to note that not all social learning literature reveals the phenomenon of ontological collapse, as can be seen in some of the research that, for example, considers how people speak about climate change in social learning processes (Blackstock, Dunglinson, Dilley, Matthews, Futter & Marshall, 2009); or research that considers the complex events that take place in multi-stakeholder platforms (Van Bommel, Roiling, Aarts & Turnhout, 2009); or research that stresses understanding process attributes that can aid managers in the design of public participation processes (Schusler, Decker & Pfeffer, 2003) and Wals' (2007) continued focus on the processes of dissonance and action in social learning interactions. Researchers such as these are seeking ways of explaining *social learning processes and their emergence*. However, few of these studies show in-depth engagement with the antecedent literatures broadly outlined in Figure 1.

The two literature review extracts that follow (and that are dialogically engaged from this perspective) provide insight into some of the literatures available to social learning researchers wanting to avoid the problem of ontological collapse in social learning research. Both literature reviews draw on theoretical perspectives that avoid the errors of reification and objectification outlined above. They engage literatures that help us, as researchers, to understand the social-cultural and social-material contexts of learning, and that allow us to understand social-cultural processes of learning and meaning making. This paper argues that these literatures explain the **social** in social learning, not simply in terms of whether change has occurred in social units as a result of learning, or in the cognitive resources or behaviours of individuals (i.e. by committing the error of ontological collapse). Rather, they shed light on the very processes that constitute what it is to be **social**, and to engage socially in learning and change processes. A literature review of this nature is a necessary *addition to existing social learning literature*, as it may help avoid superficially constituted understandings of social learning research.

While the antecedent literatures on participation in learning, expansive forms of social-cultural learning, situated learning etc. have not been termed 'social

learning' and are often excluded from social learning literature (except mainly references to Bandura's (1977) earlier work on social modelling; and popular 'borrowings' of Lave and Wenger's (1991) and Wenger's (1998) communities of practice theory; and use of Bateson's (1973) influential work on theories of triple loop learning), this paper argues that it is not possible to develop a full understanding of *social learning* without recourse to these antecedent literatures. In doing this, it also speaks to a recent finding in a systematic review of social learning literature in the natural resources management arena which noted that researchers tended mainly to 'borrow' from learning theories such as community of practice theory without engaging with these in much depth (Rodela, Cundill & Wals, 2012 [this monograph]). Despite this, Rodela et al. (ibid.) report that this 'borrowing' enhances social learning research. This paper, in the spirit of inter-disciplinary research, seeks therefore to share deeper insights into learning and learning theory with social learning theory 'borrowers' who apply concepts such as 'communities of practice' or 'triple loop learning' to empirical social learning contexts without deep engagement with antecedent social and learning theory literatures.

## EARLY ANTECEDENTS OF SOCIAL LEARNING RESEARCH LITERATURES

A review of the emergence of social learning research in the cognitive and behavioural sciences (psychology and education) shows dissatisfaction with narrow theories of learning that focused on individual behaviour change and/or individual cognition. In response educational theorists such as Vygotsky (1978) turned their attention to the relationship between language, culture, society and learning. Vygotsky, in fact was so dissatisfied with earlier forms of psychological research that he re-invented the unit of analysis in psychological studies to focus on the 'meaning unit' that existed between subject, object and mediation tools (language, cultural artefacts etc.) which are social and cultural in nature (Daniels, 2008). While this link is seldom mentioned in the social learning literature, it is possible (and probably necessary) to trace the antecedents of some of today's work on social learning to Vygotsky's work, for without situating social learning in social-cultural contexts of meaning making, it is difficult to understand how meaning making in social learning contexts occurs;

and it would be difficult to fully explain the meaning making processes that are integral to first, second and third loop learning; or meaning making in communities of practice and so forth. Processes of participation in learning are integral to social learning processes, they cannot occur otherwise, hence they need to be more fully understood as **social** processes.

Therefore it is also useful to follow the post-Vygotskian research project which has extended Vygotsky's earlier work on the essentially social nature of participation in learning to the socio-cultural and historical contexts of activity; and the processes of learning or meaning making associated with expanding activities or objects of activity in cultural historical activity theory research (after Engeström, 1999a, b, 2001, 2007) in collective social contexts. Here the meaning making processes of the individual remain socially embedded and influenced, but there is greater interest in the nature of collective engagement or meaning making in relation to a shared or common activity or practice, in which meanings are embedded, and out of which new meanings are socially constructed. The possibility also exists that agency can emerge from the meaning making processes (Mukute, 2010; Engeström, 1999a,b, 2001, 2007).

Critical realist social theorists (Bhaskar, 1998; Archer, 1995, 2000) emphasise the relational nature of society; and social [learning] interactions, emphasising that such relations include emergence of knowledge and action from situation, culture, person and context. They see learning processes and interactions as **emergent and reflexive**, shaped by structural emergent properties, cultural emergent properties and personal emergent properties that **interact**, resulting in new meaning making possibilities and possibilities for agents to act which always occur in the 'concrete universal' (i.e. the specific context or case, but in relation to the whole). They explicitly recognise the socially and ontologically located nature of learning and agency.

Critical realism and cultural historical activity theory have both brought reflexivity into focus in social learning research. Reflexivity, as worked with here is both an 'internal conversation' which is central to the emergence of agency (Archer, 2007; 2012); but is also socially, historically and materially situated.

Such reflexivity, if mobilised, allows for engaging with diversity and dissonance that exist in contexts, potentially contributing to the shaping of collaborative learning and change in social-ecological contexts (Wals, 2007; Mukute, 2010; Belay, 2012; Scott & Gough, 2004). Reflexivity also involves engagement with values, and reflects ethical struggles in relation to moral perspectives on 'what might be right to do': a form of situated ethics or ethical practice (Hartwig, 2007). These understandings, which have some roots in earlier socio-cultural and historical materialist understandings of society and learning (i.e. meaning making in a societal contexts) provide ways of understanding that social learning is, or can be a process of change towards sustainability, or that sustainability is a process of learning. They do not commit the error of ontological collapse.

We now turn to the dialogical engagement with two PhD literature reviews (produced by two of us: Belay (2012) and Mukute (2010)), which provide more detailed insight into some of what we might learn from these 'antecedent' literatures.

## IN DIALOGUE WITH PHD LITERATURE REVIEW 1: MILLION BELAY

Belay, M. (2012). *Participatory Mapping, Learning and Change in the context of Biocultural Diversity and Resilience*. Unpublished doctoral thesis, Rhodes University, Grahamstown. This study set out to investigate the learning and change that emerged in and through participatory mapping in the context of biocultural diversity and resilience in rural Ethiopia.

**Heila:** *Million, your research was focussed mainly on how learning and agency emerges from participatory mapping processes in rural communities. Could you tell us how you started to constitute your literature review?*

**Million:** My thesis literature review focussed on learning and change theories that were used to understand, interpret and explain the processes and results of Participatory Mapping (PM) activities undertaken in two study sites. These theories were required to address one of three questions in the study: "How did learning interactions take place during participatory mapping; and did these influence agency?" The focus was on finding theoretical

frameworks and literature that provided insight into *how* social learning processes occur. These frameworks were used later in the thesis to analyse both the process and the result of the learning that occurred in and through the participatory mapping activities that were the core focus of the study.

**Heila:** *How did you frame this literature review?*

**Million:** I framed the discussion on learning (and the literature I chose) through consideration of the metaphors used by Sfard (1998): 'acquisitive learning' and 'participatory learning'. She uses these to describe two main theoretical traditions or explanations of learning. I drew on this to discuss Vygotsky's (1978) theory of semiotic mediation in and through the Zone of Proximal Development (ZPD) (an acquisitive learning theory according to Sfard); and its potential relevance for providing a language of description for discussing both the individual and the collective construction of knowledge of landscape. This was followed by a discussion of Lave and Wenger's (1991) theory of Legitimate Peripheral Participation and Communities of Practice (participatory learning theories according to Sfard), and their potential relevance for providing a language of description for discussing the learning that may have happened in the participatory mapping activities. In particular, I focused on Communities of Practice theory to discuss how meaning making processes occur through the dual interaction of participation and reification, and how identity is created in and through participation in practices (in the case of this study, mapping practices). Sfard's (1998) argument is that one needs *both* acquisitive and participatory metaphors to adequately explain learning processes and outcomes.

**Heila:** *But how did this help you to understand the relationship between learning and agency?*

**Million:** As indicated in the research questions, my study was interested in both learning and agency, and to fully describe and understand the relationship

between learning and change, theories of structure and agency were needed. I drew particularly on Archer's (1995) morphogenetic approach as it provides a well-developed language of description for analysing change in ways that emphasise both structural conditions and social interactions. To contextualise Archer's theory of morphogenesis, however, the literature review also needed to include a brief discussion on Critical Realism, especially its ontology of stratification into the real, the actual and the empirical and its emphasis on emergence, as these are important to understand morphogenesis. Analytical dualism, Archer's methodology, was also discussed to pave the way for understanding the analytical strategies to provide morphogenetic explanations. The literature review was constructed to explain how the learning theories discussed, and Archer's theory of morphogenesis were used together in this study.

**Heila:** *But how did this relate to social learning theory?*

**Million:** I included a section in my literature review entitled '*Social learning systems*'. It explained that in recent years environmental educators have become particularly interested in social and situated approaches to learning (Wals, 2007; Glasser, 2007; O'Donoghue, 2007; Reid & Nikel, 2008; Blackmore et al., 2011) as these help to explain how learning is influenced and mediated not only by social interactions, but also by situated experiences in changing environments. As my study is located broadly in the field of environmental education and it has a similar interest, I drew on social learning theory to locate the learning theory interest of this study. Wals, Van der Hoeven and Blanken (2009, drawing on Hurst, 1995) present a very useful figure (see Figure 2 below), which I found helpful to begin to understand and analyse the learning processes in the participatory mapping activities. This is extended descriptively by the social learning framework that Wals (2007) presents as descriptive analytical means for examining social learning processes.

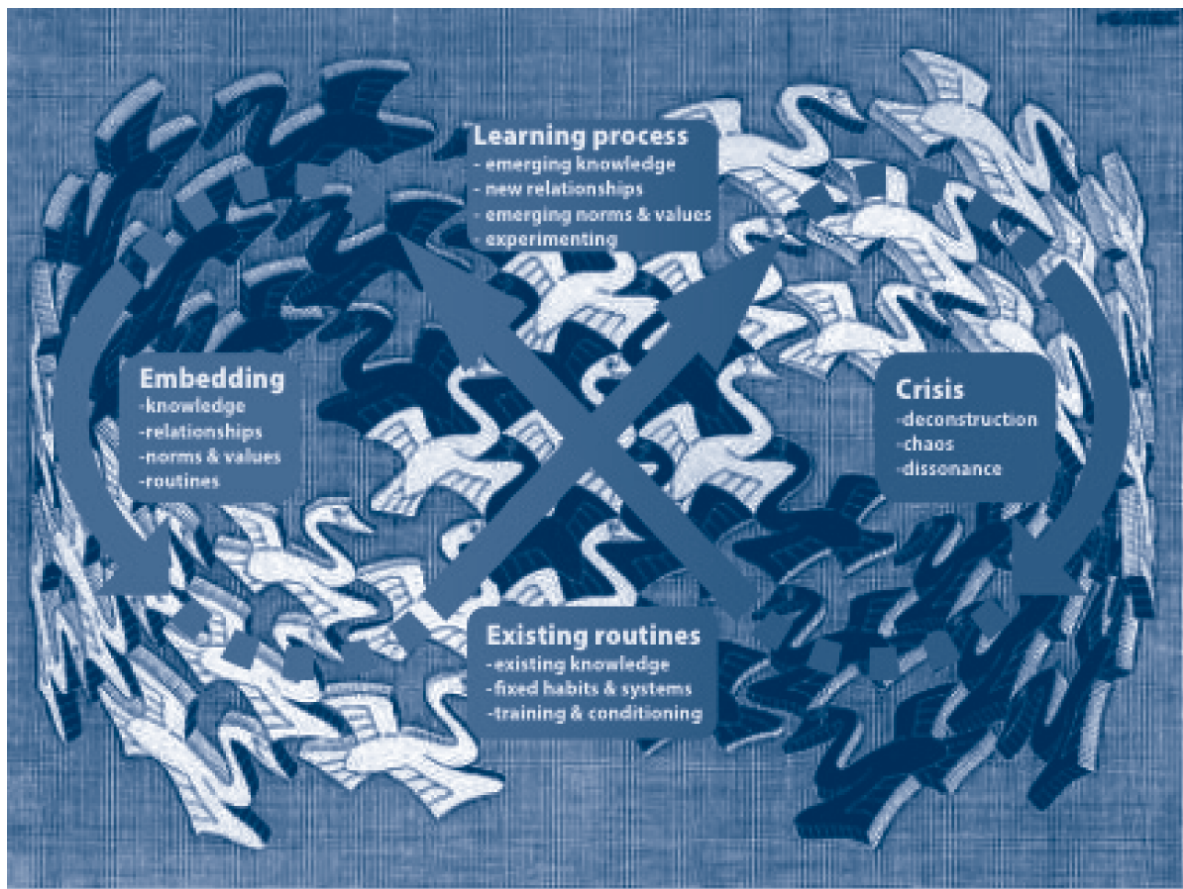


Figure 2: Learning system, Wals et al. (2009, based on Hurst, 1995)

Wals et al. (2009) use this figure to argue that social learning systems involve complex processes of engaging with dissonance and crisis, challenging accepted routines, and embedding new concepts and practices in and through learning. They explain that social systems are full of setbacks; they are insecure, complex and risky and there is a need for people to engage in social learning processes to meet these challenges. They say in particular:

*... as is the case in eco-systems, periods of relative stability and calm can alternate with periods of increased dynamics and a greater degree of insecurity caused by a disruption or a new challenge. It is particularly in a period of dynamics and insecurity that one must rely on the learning ability of the system and, with that, on social learning. A period of stability and calm will once again present itself once the system is able to cope with the disruption as a result of its learning process. (p. 8)*

**Heila:** *But how did this relate to your research interest in participatory mapping?*

**Million:** Working with Figure 2 showed that it is possible to surmise that 'Existing Routines' are the situations that exist before the participatory mapping, 'Crisis' could mean the dissonance created or 'brought out' by the mapping experience, 'Learning Process' could be the new understanding that may emerge, and the new relationships that may have been created; and 'Embedding' may be consolidating the learning that has come about and implementing this through new discourses and practices. I thought that I could use this to review data on the mapping process to see if this is indeed the case or not.

**Heila:** *Did you find this an adequate framework for theorising how the learning may have taken place?*

**Million:** I found it useful to also go through Wals (2007)

earlier work, where he, using a similar *processural* framework, tries to describe social learning processes as sequential moments that are related to the learning system described in Figure 2. The main thrust of his argument is that a key precondition for social learning is dissonance. He claims that “there is no learning without dissonance, and there is no learning with too much dissonance” (p. 40). He asks “How can the dissonance created by introducing new knowledge, alternative values and ways of looking at the world become a stimulating force for learning, creativity and change?” (ibid.). It was significant to this study that Wals’ (2007) work provides theory for understanding learning in complex, rapidly changing social-ecological systems; and he argues that such learning processes are reflexive, and must engage with the dissonance created through current social-ecological issues and risks.

Given my role in the mapping work, I also found it interesting that Wals (2007) sees the facilitator as an important actor in creating the right level of dissonance so that people are moved from their ‘comfort zone’ and, in the process, their zone of understanding expands. Mukute (2010) working on expanding sustainable agriculture learning in southern Africa also emphasised the significance of the facilitator or what he termed the ‘intervention researcher’ in managing levels of dissonance in boundary zones where expanding social learning takes place (drawing on Engeström’s expansive social learning theory, see below). The significance of the facilitator’s role in creating and managing dissonance in an education or learning situation is also brought to the fore in Vygotsky’s theory of social mediation in a Zone of Proximal Development, which I discussed in some depth. I saw this as an important point of reflection in the study, as MELCA-Ethiopia, the organisation that I work for, is a facilitator of the participatory mapping processes, and as a researcher, I had a significant role to play in facilitating the learning processes reflected on in the study.

**Heila:** *But what were the ‘sequential moments’ of social learning that Wals describes, and how were they useful to your study? How did they help you interpret the processes of social learning?*

**Million:** As I already mentioned, Wals (2007) sets

up dissonance as a prerequisite for social learning process and reorganising the learning that has come after the ‘chaos’, and then uses a six-phase process structure to frame social learning (outlined below). The six-phase structure further unpacks Figure 2, which in combination can potentially provide a useful language of description for the learning processes in the participatory mapping activities. Wals’ (2007) framework is presented with the caveat that is important not to view these processes as *necessarily linear*; in other words they can occur in more complex combinations (as was shown by Masara’s 2010 work on social learning amongst beekeepers in southern Africa). The six-phase process framework includes:

**Orientation and exploration** – identifying key actors and, with them, key issues of concern or key challenges to address in a way that connects with their own prior experiences and background, thereby increasing their motivation and sense of purpose;

**(Self) awareness raising** – eliciting one’s own frames relevant to the issues or challenges identified;

**De-framing or deconstructing** – articulating and challenging one’s own and each other’s frames through a process of clarification and exposure to conflicting or alternative frames;

**Co-creating** – joint (re)constructing of ideas, prompted by the discomfort with one’s own deconstructed frames and inspired by alternative ideas provided by others;

**Applying/experimenting** – translating emergent ideas into collaborative actions based on the newly co-created frames, and testing them in an attempt to meet the challenges identified;

**Reviewing** – assessing the degree to which the self-determined issues or challenges have been addressed, but also a review of the changes that have occurred in the way the issues/challenges were originally framed, through a reflective and evaluative process.

Applying this framework to possible interpretation of the mapping activities, it is possible to surmise that the first processes of orientation and exploration can be termed the pre-mapping phase activity. The three



processes that follow – (self) awareness raising, de-framing or deconstructing and co-creating – can occur through the actual mapping process. The applying and experimenting phase can be linked to the carrying out of the decisions that are agreed upon as a result of the mapping process, while the reviewing phase could involve looking back at the process of the mapping and following up on the results of the changes in practices after the mapping activities are done. I also noted a finding in Sinyama's (2011) environmental education research which particularly emphasises the importance of critical questioning in the de-framing and co-constructing social learning phases for change to occur in and through the learning process, which was of interest to this study.

**Heila:** *How did you think about the 'socio-cultural and historically situatedness' of the social learning processes; or did you just take for granted that they were 'automatically there'?*

**Million:** No, I considered how social learning theory, as it is being developed in the field of environmental education and in engagements with social-ecological issues and change interests (Wals, 2007; Glasser, 2007; O'Donoghue, 2007; Reid & Nikel, 2008; Mukute, 2010; Masara 2010; Sinyama, 2011; Blackmore et al., 2011) is located within broader learning theory, particularly the social-cultural and situated learning theory tradition, which emerges mainly from Vygotsky's early research on social mediation in social and cultural contexts.

**Heila:** *But was this not a bit 'far removed' from the study's interest?*

**Million:** After reading a lot, I realised that there is a long and established history of learning theory, which has been particularly dynamic over the past 100-150 years as research in the social sciences, and particularly in psychology, sociology and education, rose in stature. Of most interest to this study, are environmental education social learning theories (discussed above), which in turn are related to socio-cultural learning theory informed by Vygotsky, and situated social learning theories, particularly the theory named 'Communities of Practice' by Lave and Wenger (1991). These theories provide robust languages of description for the kinds of participatory learning that I was interested in.

I found that the genesis of learning theories including social learning theory, legitimate peripheral participation and communities of practice theory (Lave & Wenger, 1991; Wenger, 1998) seem to emanate from the frustration of social scientists, anthropologists and environmentalists with the separation of mind and body, man and environment, and thought and action, which was informed by philosophy of the 17th century, mainly the work of Rene Descartes. Theorists critiquing such reductionist thinking equate the rise and dominance of acquisitive learning with the idea that knowledge can be presented as a discrete and de-contextualised activity in a classroom situation (Handley, Sturdy, Fincham & Clark, 2006; Lave, 2008; Lemke, 1997; Salmon & Perkins, 1998; Sfard, 1998; Wenger, 1998).

Sfard (1998), in her paper describing the acquisition and participatory metaphors of learning, talks about the acquisition and participation metaphor as representing major divisions in the current field of educational research. She locates behavioural, cognitive and even constructivist theories of learning within the acquisition metaphor as, ultimately, they talk about *concept development and the acquisition and accumulation of knowledge* by the learner as the ultimate goal of learning (emphasis mine). In contrast, she argues that the participatory metaphor has replaced the word 'concept' or 'knowledge' with 'knowing' which indicates action while "the permanence of *having* gives way to the constant flux of *doing*", which in turn foregrounds learning as participation in social practices (Sfard, 1998: 6, emphasis in original). Of the participation metaphor, she says:

*The original learning activities are never considered separately from the context within which they take place. The context, in its turn, is rich and multifarious, and its importance is pronounced by talk about situatedness, contextuality, cultural embeddedness and social mediation. (p. 6)*

Learning in the case of the participatory metaphor involves becoming a member of community, a participant, and knowing is belonging, participating and communicating. The goal of learning is community building, unlike the acquisition metaphor, which is individual conceptual or cognitive



enrichment (p. 6). Sfard (1998) concludes her paper by cautioning against an over reliance on one of the metaphors to the neglect of the other. She says that "the most powerful research is the one that stands on more than one metaphorical leg" (p. 11). In this research, I therefore found it important to draw on both metaphors to analyse the learning processes.

**Heila:** *From this, it seems that you needed to understand both what knowledge people gained from the mapping, as well as how they were participating in the learning? How did you explain how people acquire knowledge?*

**Million:** I included a section in the literature review entitled '*Socio-cultural learning theory and knowledge acquisition*'. In this section I explained that socio-cultural approaches emphasise the interdependence of social and individual processes in the co-construction of knowledge. Socio-cultural approaches to learning and development were first systematised and applied by Vygotsky (1978). In contrast to behaviourist approaches, which focused on the external, Vygotsky conceptualised development as the transformation of socially shared activities into internalised processes. The major theme of Vygotsky's theoretical framework is that social interaction plays a fundamental role in the development of cognition (John-Steiner & Mahn, 1996; Daniels, 2008).

Most useful to this study, however, were the three concepts that Vygotsky uses to describe processes associated with the acquisition of knowledge: internalisation, semiotic mediation, and Zone of Proximal Development (ZPD). **Internalisation** refers to the transfer of activities carried out in the external plane, within the social context, to the internal plane, individual cognition. **Semiotic mediation** differentiates between lower natural behaviours and higher natural behaviours and describes how culture, language and social context act as a psychological tool to bring the individual from a lower to a higher level of cultural behaviour. **Zone of Proximal Development** conceptualises the learner having an actual development level, which is actively performed and evident without external support and a proximal or possible development level, which the learner can attain through the guidance and support of others. This gap between the actual independent problem

solving level and the potential or possible problem solving level that can be attained with the support of others, is called the ZPD. The support that is given is called scaffolding (Daniels, 2008). Scaffolding is a kind of support normally provided by a more experienced other (facilitator, interventionist researcher, educator, elder, parent, peer etc.), which does not alter the nature of the task for the learner. It holds the task constant while adjusting the nature of the learner's participation through graduated assistance (Daniels, 2008; Hodson & Hodson, 1998; Wang, 2003)

I found semiotic mediation and ZPD useful to analyse the learning that may have happened as a result of participatory mapping. According to Vygotsky, semiotic mediation is key to knowledge construction. It mediates social and individual functioning and connects the external and the social and the individual. It includes language, art, writings, schemas, paintbrushes and computers (amongst other mediation tools). In the case of my particular study, it includes maps and mapping technologies and approaches. As John-Steiner and Mahn (1996) describe, maps are central to the appropriation of knowledge through representational activity by developing the individual. John-Steiner (1995) coined the term 'cognitive pluralism' to remove the monistic focus on language and bring in other mediation tools including ecology, history and culture. The concept of cognitive pluralism provides a broader means of discussing maps as semiotic tools, particularly in a context where the mapping work is closely linked to exploring understandings of local socio-ecological environments, which in turn are influenced by cultural and ecological experience. It is also possible to see the links between individual and social learning within the definition of ZPD provided by Del Rio and Alvarez (2007). They define ZPD as "...a zone of human development, the frontier where we can find the links between the situated-embodied mind and the cognitive mind; the individual mind and the social mind; the development already attained and the development to be attained". This definition is useful for helping to explain both the cognitive and the social development of participating community members.

Working with the semiotic mediation and ZPD concepts in this study, helped me to reflect on questions such as 'How did the mapping activity help with knowledge

acquisition amongst the community members who took part in the mapping activities? What was my role as facilitator in the process? How did MELCA-Ethiopia, and myself as facilitator scaffold the learning?' Such reflections on the data are important to address the research questions.

**Heila:** *I can see that this would help you to address these questions, but how did it help you to understand the participatory dynamics of the learning outside of how these influenced cognition and meaning making, which I agree, are important for understanding social learning processes?*

**Million:** I included a section in the literature review on '*Legitimate peripheral participation in communities of practice*'. This helped me to explain other facets of the social learning process. Learning, as described by theories of legitimate peripheral participation and as participation in communities of practice, are categorised by Sfard (1998) within the participatory metaphor. I found the concept of legitimate peripheral participation to be useful for the study because it describes the learning process when newcomers join old-timers in a practice.

As I have indicated already, the principal aim of this study was to explore how learning happens in the practice of participatory mapping, and if and how this learning creates agency. Legitimate peripheral participation and communities of practice theory talk about how all practice involves ongoing learning and how legitimate peripheral participation involves relations of newcomers to old-timers in the fields of practice. It also involves identity building and production of artefacts (Lave & Wenger, 1991). In the case of the study, this could mean that those who know the landscape are the experts (old-timers) and those who know little about the landscape are the novices (newcomers), although it may be difficult to say how much the novices do not know about the landscape, especially since they may well have other forms of knowledge relevant to the landscape and its management which may not appear relevant at first glance. Those newcomers who are at the periphery also have an important role, which is to develop, with the support of the more experienced other, and use skills required for collaboration. This mixing of expertise and involvement of the novices has potential

to produce new knowledge for all (Lave & Wenger, 1991; Barab & Duffy, 2000).

Barab and Duffy (2000) call this 'reproducibility': newcomers are able to become central to and expand the community and its practices. Communities are continually replicating themselves in and through their social practices, with new members moving from peripheral participant to core member through a process of enculturation (Lave & Wenger, 1991). Barab and Duffy (ibid.) claim that it is essential that the community reproduce itself if it is to have a common cultural heritage. It is a process that is continually occurring in all communities of practice. It is also these reproduction cycles that define learning. In other words, they say, the social and physical structure that defines and is defined by this cycle defines the possibilities, and is what is called legitimate peripheral participation in learning (p. 39). In fact, for Lave and Wenger (1991) legitimate peripheral participation is learning. Any discussions of learning, therefore, according to them, "must begin within a community of practice and must consider the individual's position with respect to the hierarchical trajectory of the social and power structures of that community" (pp. 39-40).

**Heila:** *So how then, did you find the concept of legitimate peripheral participation to be relevant to the study?*

**Million:** What makes the concept of legitimate peripheral participation significant in this study, is not that it is an instructional tool but, rather, in the words of Brown and Duguid (1991: 48), that it is "...an analytical category or tool for understanding learning across different methods, different historical periods, and different social and physical environments". Relating legitimate peripheral participation to communities of practice theory, Lave (2008) notes that the theory of legitimate peripheral participation opens up a way of analysing learning in historical, cultural and political milieus, while community of practice theory helps us to talk about the practice that is taking place in these learning environments. So both are analytical tools even though the focus of community of practice theory is more on the participation in the practices, the practice itself and how it is changed and shaped in and through learning, as well as the identity created in the process of learning and participation in practices.

In the case of the study, I see legitimate peripheral participation as a useful theory for contextualising the learning relationships in the participatory mapping process, and also their location in a broader socio-economic reality, history and cultures of practice. I also see legitimate peripheral participation as a way to potentially explain how members of the community said they gained understanding because of their participation in the mapping activities. Communities of practice theory complements this analysis, and provides explanatory tools for describing the mapping practice including the participation and reification that may occur, and the meaning making that community members may engage in, and also how this may influence their identities.

**Heila:** *Were any other concepts in this body of theory useful for understanding social learning processes?*

**Million:** Yes, another set of concepts related to legitimate peripheral participation, is continuity and displacement. Continuity refers to old-timers' insistence on continuities, and displacement refers to the changing of ideas and practices as a result of the newcomers' addition or subtraction (Lave, 2008). This of course assumes that old-timers are interested in preserving cultures of practice, and newcomers are interested in changing these practices, which may or may not be the case. There is also a central

contradiction between continuity and displacement. Culture needs continuity in terms of history and the shared stories of people. It also needs to change, which may come from outside or inside. There is always a conflict among the two and the change may be both desirable and/or undesirable. Desirable changes build the resilience of the community in positive ways, and undesirable changes may destabilise or negatively affect the community (ibid.).

**Heila:** *So far you have concentrated a lot on legitimate peripheral participation, and not on the other dimensions of community of practice theory? Did you find a need to do so?*

**Million:** Yes, I also included a section in the literature review on '*Communities of Practice*'. I have already mentioned that communities of practice theory draws attention to participation in practices, to community, identity, meaning making and practice. I found that this theory has value for understanding community learning in the context of the study. Wenger (1998) provides a contextual framework for describing a social theory of learning, presented in Figure 3 below. As Wenger (1998, p. 5) says, the elements in the figure are "... deeply interconnected and mutually defining"; it is therefore necessary to understand the elements and their relationality within the learning process.

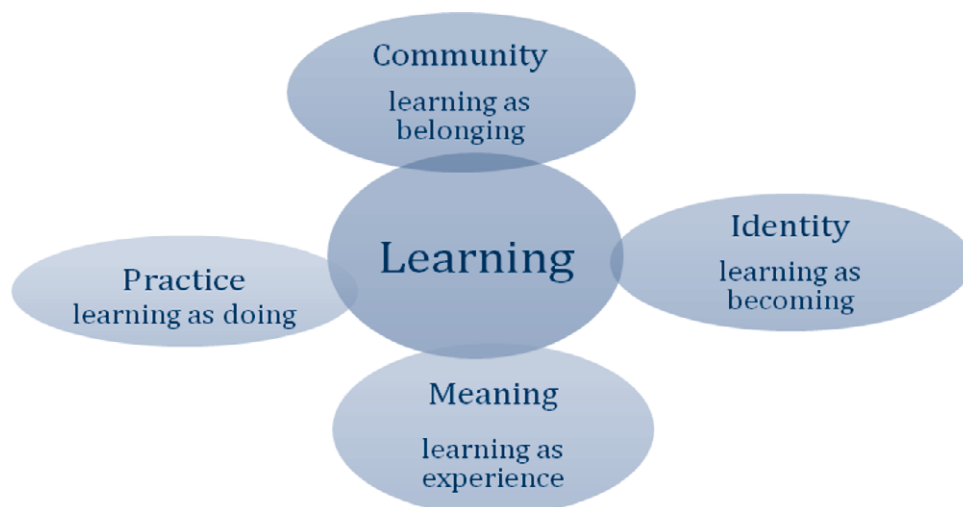


Figure 3: Components of a social theory of learning: an initial inventory adapted from Wenger (1998)

In discussing Figure 3, Wenger (1998: 5) says that 'meaning' means a way of talking about our changing abilities, individually and collectively, to experience life and the world as meaningful; while 'practice' for him is a way of talking about shared historical and social resources frameworks, and perspectives that can sustain mutual engagement in action. 'Community', on the other hand, is a way of talking about the social configuration in which social enterprises are defined as worth pursuing, and in which participation is recognisable as competence. 'Identity', for Wenger (ibid.) means a way of talking about how learning changes who we are, and how learning creates personal and social histories of becoming in the context of communities and their social practices. In my literature review I tried to understand each of these components more carefully, and especially how they are related.

**Heila:** *What were some of the more interesting insights that you gained from this literature review for understanding social learning processes?*

**Million:** I learned to think differently about the idea of a 'shared repertoire of resources' in a social learning setting including experiences, stories, tools, and ways of addressing problems, in short, shared practice (Wenger, 1998). I also found Barab and Duffy's (2000: 38) point useful: they say that a community is an "interdependent system in terms of the collaborative efforts of its members", as well as in terms of "... the greater societal systems in which it is nested". They go on to say that "when learning as part of a community of practice, the learner has access to this history of previous negotiations as well as responsiveness from the current context on the functional value of a particular meaning" (ibid.). This gave me insight into how learning can 'spread' and influence larger societal units. I also found Wenger's (1998: 51-55) points about how daily practice or interactions, however routine, give meaning. He says it is not the experience that matters but the meaning that we make out of it. Applied to this study, it is not so much participating in the mapping activities, but the meaning that we make out of the experience that matters. Practice is about meaning as experience of everyday life, Wenger continued. Living is a continuous process of producing meaning. This means meaning making is

a continuous process of adjusting and re-adjusting our interpretation of the world, a continuous process of social learning that needs to be understood if we are to effect change.

This drew my attention to the potential of the mediation power of participatory mapping in adjusting and re-adjusting interpretations of the world in the communities concerned. I realised too that I needed to interpret the meaning making processes in the mapping activities as dynamic, historical, contextual and unique, and to recognise the importance of participation in meaning making. On this point Lemke (1997: 38) says:

*Our activity, our participation, our "cognition" is always bound up with, codependent with, the participation and the activity of others, be they persons, tools, symbols, processes, or things. How we participate, what practices we come to engage in, is a function of the whole community ecology... As we participate, we change. Our identity-in-practice develops, for we are no longer autonomous Persons in this model, but Persons-in-Activity.*

I also found Wenger's discussions on reification in Communities of Practice (Wenger, 1998: 57-71) on reification useful for developing an understanding of the knowledge and learning processes in participatory mapping. This helped me to differentiate the maps as products from the social learning taking place in and through the map making process. Wenger uses the concept of reification to refer to "...the process of giving form to experience by producing objects that congeal this experience into 'thingness'. This creates a point of focus around which the negotiating of focus becomes organized" (ibid.: 58). Maps can be considered as reified meanings of the process of participatory mapping. Reification, Wenger continues, "... shapes our experience and helps us to abstract our ideas" (p. 59).

**Heila:** *Wenger's model also emphasises identity. Of what significance is identity theory to social learning theory in your view?*

**Million:** Identity is a critical concept in communities of practice theory. It is said by Wenger (1998) that individuals exist in relationship with each other.

Other theorists that adopt this socio-cultural view of identity include Sfard and Prusak (2005). Wenger (1998), along with similar theorists, holds that people are engaged in doing things together and in the process they develop their identity. Lave and Wenger (1991), in their discussion on legitimate peripheral participation, say that the primary motivation for learning involves participating in authentic activities and creating an identity that moves the individual toward becoming more centripetal to a community of practice. Learning is described as an “integral and inseparable aspect of social practice” which involves the construction of identity (p. 53) through changing forms of participation in communities of practice. In this line of thinking, developing an identity as a member of the community and becoming able to engage in the practices of the community is one and the same thing (Lave & Wenger, 1991; Lave, 2008; Wenger, 1998). In the context of participatory mapping and resilience, participants in a workshop on resilience in Kenya that I participated in, identified identity building as one of the outcomes of participating in participatory mapping (ABN, 2011). Handley, Sturdy, Fincham and Clark (2006) argue that identity building is the process of understanding who we are and where we belong; and it is through active participation in communities that individuals develop and possibly adapt and thereby reconstruct their identities and practice. The centrality of ‘participation’ in situated learning theory is related to the emergence of identities and practice through participation in communities of practice (ibid.).

Barab and Duffy (2000) add that:

*... from an anthropological perspective, it is not only meanings that are produced but also entire identities that are shaped by and shape the experience. In other words, the interaction constitutes and is constituted by all of the components of individual, content, and context. There are no clear boundaries between the development of knowledgeable skills and the development of identities; both arise as individuals participate and both become central to the community of practice. However, through participation in the community over time, an individual comes to accept the historical context and the importance of socially negotiated norms for defining community and his or her own identity. (p. 30)*

**Heila:** *You have focused a lot on the learning interactions, and issues of identity building in developing your understanding of social learning, but what about the ‘practice’ in community of practice? How is this related to social learning theory?*

**Million:** It is the practice aspect which makes a community of practice a community of practice. Not any community is a community of practice. Duguid (2005) laments that those who are working with communities of practice theory have forgotten the ‘practice’ and are emphasising ‘community’. In the case of my study, I therefore had to stay focused on the mapping practices around which the learning was to take place.

**Heila:** *These views of communities of practice assume that such communities of practice already exist and are busy with social learning processes all the time. Can such communities of practice be established – as you seem to be doing with the mapping practices?*

**Million:** This is an important point. Significant for social-ecological change and resilience building in the face of environmental degradation responses and the emergence of social change, is the point made by Wenger, McDermott and Snyder (2002) that communities of practice can be cultivated or established around the introduction of new practices, such as participatory mapping. As I discussed in earlier chapters of the study, participatory mapping is an introduced and facilitated practice (by MELCA-Ethiopia – the NGO that I work for) in the context of the two communities involved in this study. In this regard, Wenger et al. (2002: 12) argue that communities of practice have the “ability to steward knowledge as a living process”, and they argue that it is possible to *cultivate* communities of practice actively and systematically. They clarify their analogy of cultivation as follows:

*Cultivate is an apt analogy. A plant does its own growing, whether its seed was carefully planted or blown into place by the wind. You cannot pull the stem, leaves or petals to make a plant grow faster or taller. However, you can do much to encourage healthy plants: till the soil, ensure they have enough nutrients, supply water, secure the right amount of sun exposure, and protect*

*them from pests and weeds ... Similarly, some communities of practice grow spontaneously while others may require careful seeding ... communities of practice may exist, but [without cultivation] may not reach their full potential... (ibid.:13)*

Wenger et al. (2002: 13) go on to explain that you cannot cultivate communities of practice in the same way that you develop traditional organisational structures since cultivating communities of practice is more about “*eliciting and fostering participation*” than planning, directing and organizing their activities”. This means that social learning processes can be facilitated, by eliciting and facilitating participation.

**Heila:** *All this provides very useful insight into social learning theory and how social learning processes emerge. But what are the critiques of this body of literature?*

**Million:** Ah yes, the critiques! They are so helpful for really strengthening one’s understanding of something. One of the main critiques of communities of practice theory is its focus on the participation metaphor alone at the expense of the acquisition metaphor (Smith, 2003), an issue that I have already discussed and addressed. Additionally, it is said that communities of practice theory neglects to take full account of the predisposition that participants bring to the participation process (Roberts, 2006), the power differences at play in participatory processes which may impede the engagement of those with limited power (Lave, 2008; Roberts, 2006; Hogan, 2002) and the problem of assigning communities of practice concepts to every kind of group activity or participatory action (Amin & Roberts, 2008).

Lave (2008), reflecting on their seminal book on legitimate peripheral participation (Lave & Wenger, 1991), recognises two problems of legitimate peripheral participation that were not adequately dealt with in their earlier theorising. One is that it did not emphasise enough masters as co-producers of (new) knowledge with the apprentice or with the newcomers. They focused, she said, on newcomers becoming masters, and not as masters involved in co-production of knowledge, thus neglecting the possibility that masters may well learn from newcomers, as newcomers learn from them. The second critique raised of their

earlier work, is the neglect of political, economic and institutional structuring and its effects on participation. This problem can be addressed with the underlabouring of critical realism, which I have done in my study. Lave (2008) comments that their earlier work did not give enough emphasis to the way in which the political and economic environment can influence the participation of the learner (p. 287). Issues of political enfranchisement and poverty (access to economic power) have been identified as being critical issues in the Ethiopian context. Given the focus of this study on the social-ecological, it is also possible to note that Lave (2008), even in her later work, neglects the human-environment relationship, or the influence of nature on culture and vice versa. Mukute (2010, see below) who researched sustainable agricultural practices and expansive learning in southern African countries, noted that expansive learning theories and cultural historical activity theory also neglect the influence of ecological conditions (e.g. drought, flooding, climate change, soil condition etc.) on people’s learning and agency. This would seem to be a broader problem with socio-cultural [learning] theory i.e. that it tends to neglect the influence of nature on culture and social practices.

**Heila:** *How did you seek to avoid these problems in your study?*

**Million:** I tried to avoid the pitfalls outlined above by using the concept of communities of practice to talk about the participatory mapping community of practice within wider communities of practice; and by working with both the acquisition metaphor and the participation metaphor in theorising and analysing the learning taking place. I also took account of issues such as power relations, and structural factors (political, economic *and ecological*) as being influential in the learning and change processes. To avoid superficial use of communities of practice theory, I tried to delineate the concepts that I was working with carefully, and to use them carefully within analytical processes. Critical realist theory, as underlabouring philosophy to the learning theory deployed in this study, also helped to make the structural mechanisms (political, social, economic and ecological) visible as shaping forces in the learning and change process.

**Heila:** *Firstly, can you explain what critical realism is, and why you worked with it, and most importantly,*



*how did it extend your understanding of social learning?*

**Million:** In the section of my literature review on 'Critical realism' I explained that Critical Realism, a philosophy of reality developed in three main phases mainly through the work of Roy Bhaskar (1978), is ontologically realist, empirically relativist, judgementally rational, and is critical, i.e. it has an interest in emancipation (Norrie, 2010). Being real refers to two concepts: first, it considers the world as structured, differentiated and changing; and second, it is stratified into structure/context and agency. Critical realism proposes that structures are not reducible to the events and discourses (empirical experiences) that created them; and that reality can therefore be stratified into the real, the actual and the empirical. It also believes that the world is both intransitive (realities that are not simply constructed) and transitive (our constructed experiences of intransitive reality). It is intransitive in that it does not change even if our (transitive) view of it changes. The basic thesis of critical realism is, then, that a world exists outside of our knowledge of it; and that our knowledge of the world (because of its constructed, transitive nature) can and does change (Bates, 2006; Sayer, 2000).

It is also critical in two ways. One is methodological and the other is political. Methodologically critical realists reject the downward, upward and central conflation of structure and agency. Critical realists (Bhaskar, 1978; 1998) and social realists working with critical realism as foundational philosophy (Archer, 1995; 1998) put forward a concept called 'emergence' which proposes that structure and agency are linked, or emergent from each other; and that one influences the other but one cannot be reducible to the other. It is also political in that it is emancipatory in its approach. It is based on understanding and changing structures through transformative praxis or transformative social action via the agency of people (Bhaskar, 1998; Archer, 2000). Change or morphogenesis (Archer's term for social change) is then a critical component of critical realism (Bates, 2006).

I found critical realism to be of significance to this study in two ways. One is that it provides a carefully constructed theory of morphogenesis or change, which provides a language of description that can

provide tools for describing change processes that do or don't emerge in and through the learning and participatory mapping work. It provides a way of examining agents (members of the two communities involved in the mapping processes) and the structural factors (which are social, cultural and ecological), separately (using Archer's strategy of analytical dualism discussed below), in order to analyse their interaction over time and explore whether the mapping project has contributed to change or not. The declared emancipatory nature of critical realism also aligned with the interests of MELCA-Ethiopia, who in the tradition of 'counter mapping', seek to make use of mapping for mobilising local actors to change aspects of their socio-ecological system in response to ongoing degradation and loss of resources and diversity.

**Heila:** *Can you explain why the concept of emergence was significant to your understanding of social learning and change?*

**Million:** The theory of critical realism proposes that two or more features in a world come together (often in unpredictable relations) to create new phenomena or to generate new properties; but the new phenomena cannot simply be explained by or reduced to the constituent parts of the interaction. This notion of emergence that is irreducible to constituent parts, is one of the key concepts on which Archer's (1995) notion of morphogenesis rests. With this in mind, she argues that the structural elaboration (change) that results from social interaction [i.e. the social learning interactions referred to above] cannot be reduced to the agency and/or the structures involved in the interaction that creates the change. In the case of this study, this may imply that the learning and change that can happen during the mapping exercise cannot be reduced or attributed to the mapping technologies or the social and cultural structures that exist prior to the mapping process; nor can they be attributed to the features or characteristics of the agents. Rather that the explanations for the learning and changes should be sought by examining the interactions that emerge between structural pre-conditions, and social interactions in and through the mapping processes. The unit of analysis would be what emerges at the interface of structural pre-conditions and new social interactions. Archer

explains this process of emergence as taking place within a 'morphogenetic cycle'.

**Heila:** *And what does the morphogenic cycle have to offer social learning researchers?*

**Million:** As indicated above, critical realism works with a concept of emergence to explain structure-agency relations and interactions, and the emergence of social change. Core to this is the irreducibility of structure and agency, a process which Archer proposes can only be studied through using the methodological strategy of analytical dualism, which is the backbone of the morphogenesis approach. Within this methodological strategy is a time factor, which is critical for the separation of structure and agency for analytical purposes. Archer makes the important point that analytical dualism is a *methodological strategy*, and not an ontological reality (i.e. things are more messily inter-twined in the 'real world', but that they can be analytically separated out to understand that reality better for research or other social purposes).

I undertook historical, ecological and cultural analyses of the two study areas in order to gain a fuller understanding of the change that may have happened and may still happen from the learning that took place in the participatory mapping processes. This is to provide perspective on what has or may be changing and how. To interpret these changes in learning and action, I drew on critical social realist theory, especially Archer's morphogenetic analysis (Archer, 1995), as this provided a language of description for analysing the causal powers that influence agents' (in this case local community members) capacity to reinterpret their socio-ecological environment and mobilise an array of resources in terms of cultural schema (norms) to effect change on structures (schemas and resources, both human and non-human) to produce the resulting structural elaboration or new action and learning system. In the case of this study, the morphogenetic analysis will provide further insight into how learning related to landscape came about or emerged, how it has changed over time and why, as well as what change oriented results emerged from the learning interactions. It therefore provided a way to *interpret and recognise if and when social learning, with its change oriented assumptions had taken place (or not)*.

**Heila:** *What are the key elements of morphogenesis that you 'differentiated analytically' in your observations of social learning and change?*

**Million:** Archer's account of social structure was influenced by Buckley's (1967) concepts of morphostasis and morphogenesis and Lockwood's (1964) concept of social and system integration (Elder-Vass, 2007; King, 1999). Buckley (1967) used morphostasis to refer to those processes in complex system environment exchanges that tend to preserve or maintain a system's given form, organisation or state; and morphogenesis to refer to those processes which tend to elaborate or change a system's given form, structure or state. The major theoretical claim for separating agency or individual action and structure rests, though, on Lockwood's temporal argument since it enables a visualisation of the temporal interplay between agency and structure and their close interrelationships (King; 1999; Elder-Vass, 2007). Archer says:

*Fundamentally the morphogenetic argument that structure and agency operate over different time periods is based on two simple propositions: that structure necessarily pre-dates the action(s) which transform it; and that structural elaboration necessarily post-dates those actions. (p. 76)*

The morphogenetic cycle breaks down the structure and agency interactions into three temporal phases: structural conditioning (i.e. the context in which individuals find themselves), socio-cultural interaction (i.e. what individuals do), and the resulting structural elaboration (morphogenesis or change) or structural reproduction (morphostasis or continuity).

Archer explains structural conditionings, social interaction and structural elaboration in the following way (summarised and adapted from Archer, 1995: 90-91):

**Structural conditioning** means the influence of past actions on subsequent interaction. They have this influence by shaping situations in which later generations of actors find themselves. In the context of the study, these are the contextual elements (e.g. history, biocultural diversity, and socio-economic environment).

**Social interaction** implies interaction that people have among themselves and with structure. Social interaction is structurally conditioned but not structurally determined (since agents have their irreducible powers). In any society there are members who benefit from the system and who want the system to be changed because it is not worthwhile to them. Groups experiencing exigencies want to eradicate the structure, and so pursue structural change, and groups who benefit from it want to maintain its stability. So social interaction can mean the interaction between these groups. In the context of this study this could involve interaction between communities, NGOs and government agents, and amongst homogenous or heterogeneous members of communities themselves (amongst others).

**Structural elaboration** results from social interaction in the context of pre-existing structures, and is a largely unintended consequence. This is because the outcome is the combined product of those who want to maintain the stability of the previous structure and those who want to change it. Archer says this is what separates the morphogenetic approach from simple cybernetic models, as the outcome is more open-ended than the simple models imply. Structural elaboration can potentially be enhanced by learning and agency, and in later work Archer (2003) explains that reflexivity of persons and communities can enhance agency that brings about structural elaboration. She explains too that education and learning interactions can potentially enhance the agency of individuals and communities, a point which is of particular interest to this study. If structural elaboration does not take place, stasis or reproduction of existing structures occurs.

**Heila:** *But how did you actually observe this, and what scale of time does one need to include to observe morphogenic changes that emerge from social learning interactions?*

**Million:** In my study, I produced a contextual profile which provided some insight into the pre-existing structural conditions that existed prior to the mapping interactions. This helps to explain what influences the learning and agency of members of the communities involved in the mapping. I also described, in some detail, the social interactions at play during the mapping process that may or may not

contribute to structural elaboration (morphogenesis) or reproduction (morphostasis) emerging from the interaction between the structural conditions, and the learning interactions associated with the mapping process. As the study was fixed over a short period of time, notably the mapping process a full and longer term analysis of the structural elaboration was not really possible, and was limited to the change that could be observed due to the participatory mapping process, mainly the learning. It was not fully possible to provide insight into wider changes in the political, economic or ecological structural features of the system, but in some cases I **was** able to discern clear changes in practice and structural change was visible to some extent. Observing the relationship between the learning interactions and processes and actual structural change would therefore seem to require longer periods of observation (at least longer than the three year period of my study).

**Heila:** *Thank you Million, it seems that your literature review work provided many useful tools for you to understand how the social learning process takes place, and how change emerges from social learning interactions.*

## IN DIALOGUE WITH PHD LITERATURE REVIEW 2: MUTIZWA MUKUTE

Mukute, M. (2010). *Exploring and expanding learning in sustainable agriculture practices in Southern Africa*. Unpublished doctoral thesis, Rhodes University, Grahamstown. This study was conducted in three case study sites in Lesotho, South Africa and Zimbabwe. Its purpose was to explore and expand farmer learning in small scale sustainable agriculture practice contexts.

**Heila:** *Mutizwa, I noticed in your literature review work that you were interested in learning and social change theory that would help you to understand existing and expanded farmers' learning. How did you begin your literature review work?*

**Mutizwa:** I started the literature review by discussing the theories in the study which have a learning and transformative interest with potential to enhance the agency and capabilities of the research participants, who in this case were, primarily small-scale farmers involved in sustainable agriculture. Two related

ontological theories which I drew on were relationalism and critical realism to allow for enquiries into questions of relatedness and causal mechanisms. I drew on the epistemological theory of Cultural Historical Activity Theory (CHAT) and Theory of Practice to enable me to illuminate current learning processes and expand them with research participants.

**Heila:** *Like Million, you also worked with critical realism for ontological depth in your study? How did you approach this work?*

**Mutizwa:** I started the literature review chapter with a review of critical realism based in the work of Bhaskar (1998), Sayer (2000) and Benton and Craib (2001), as it provides an ontological framing that permits one to delve beyond the current and the surface into the history and the underlying, to find 'real reality' that lies beneath the empirical and the actual. This philosophical base underpins the epistemological framework that I used. One thing that connects CHAT to critical realism is emancipatory politics, in particular those associated with Marxism and neo-Marxism as can be inferred from this statement, "Critical realism was developed during the 1970s at a time when Marxism was strongly represented among social scientists. Marxism was one of the few approaches to social science whose explicit philosophical commitments coincided with the main outlines of critical realism" (Benton & Craib, 2001, p. 136). The roots of CHAT also lie in Marxism and this makes the theories potentially compatible. The original developers of CHAT (Vygotsky, Luria and Leont'ev) set out to develop Marxist psychology from about 1927, ten years after the revolutionary successes of 1917 (Edwards, 2005a).

**Heila:** *But what does critical realism as ontological theory bring to an understanding of social learning amongst farmers?*

**Mutizwa:** I found critical realism to be useful as an ontological theory because it potentially provides important lenses for understanding change oriented social learning, which my study was interested in, as it wanted to expand farmers' learning and practice through inquiry based interventionist research. Benton and Craib (200: 120-121) share some insights into the power of critical realism for under-labouring social learning research in sustainable agricultural contexts: Parker (2001) commented on the dialectical foundation

of critical realism when she drew on Bhaskar's '*fertility of contradiction*' and pointed out that inconsistency in knowledge can be resolved by seeking the grounds of the two until they can be re-described in a non-contradictory way. This can help address the nature of both science and lay knowledge as partial and fallible. For example, Pesanayi (2008: 118) argued that instead of ignoring "value-laden ambivalent messages conveyed by stakeholders [in agriculture] to communities of practice [which] tend to confuse their domain, and expose disharmony among the stakeholders" he recommended the need for the stakeholders to be alert to and address such ambivalence. In the context of critical realism such ambivalence can be fertile ground for generating new knowledge and solutions in sustainable agriculture;

Critical realism is emancipatory in that is committed to **changing** unsatisfactory and oppressive realities. Dean (2009) underscored the need of this kind of freedom to be freedom with other humans not from others. Changing unsatisfactory conditions could mean addressing extension and infrastructure needs of farming communities in southern Africa;

Critical realism is based on **reflexivity** which recognises the possibility of thought, or that language can represent something outside itself. In the study this means creating opportunities for research participants to think, reflect and plan together, using language to engage and model solutions to risks and uncertainties that have become commonplace. Pesanayi (2008: 120) underlined the need to develop capacities in farming communities of practice to "build on a wide range of learning interactions and learning processes";

Critical realism assumes that the surface appearance of experience (empirical) is potentially misleading and insists on **getting beyond** or behind surface appearances. Earlier in the thesis, I noted that some of the things that appear to be solutions in agriculture, such as Genetically Modified Organisms to increase food production, are actually problematic for smallholder farmers because they are unable to save and share the seed but must depend on the agro-companies, who may end up controlling the agricultural production chain; and

Critical realism asserts that our knowledge of the natural and social world is both **fallible and provisional** because our experience of the world is always theory laden and should always be open to correction in the light of further work such as dialogue, experiments, interpretations and observation. This explains why people-centred learning and innovation approaches in agriculture and extension bring together different knowledge creators and users and argue for being aware of the political ecology of knowledge.

The above aspects of critical realism were also useful in addressing the research questions. For example, the fertility of contradictions described by Parker, and the focus on reflexivity that draws on thought and language as discussed above, enabled me to view and work with tensions and contradictions in a constructive manner to address two research questions in the study:

What are the current limitations and contradictions of sustainable agriculture learning processes among farmers?

How can sustainability be better learnt and more reflexively practised in the farmer's workplace?

Price (2008) identified the critical features of critical realism as: being an under-labouring science; aimed at human well-being and emancipation; seeking theory-practice congruence; and based on immanent critique of what it examines by looking for internal inconsistencies, which we can describe as contradictions. The study therefore used critical realism to under-labour epistemological theories. It also used critical realism's concept of emancipation to support the development of responsible agency among research participants, while at the same time seeking out internal inconsistencies in sustainable agricultural practices that were under review and looking at what may have caused them at historical and structural levels. Going beyond the surface also enabled me to draw out contradictions from problems in order to assist research participants to develop model solutions to address some of their limitations. Lather (1991, in Babikwa, 2003) argued that emancipatory research should go beyond the concern for more and better data to a concern for

research as praxis, which aims to enable participants, not only understand, but also change their situations. Pesanayi (2008) went further to argue that such changes should enhance the adaptation capabilities of farmers to cope with risk. Critical realism's commitment to changing unsatisfactory conditions helped me to address another research question in the study, which is:

What conceptual artefacts can the study develop to support expansive learning for sustainability in farmers' workplaces?

**Heila:** *Are you suggesting then that critical realism helped you to conceptualise the emancipatory aspects of expansive social learning? This is interesting, because I have read (Glasser, 2007) that not all social learning or expansive learning is 'transformative' per se.*

**Mutizwa:** Yes, and I was able to conceptualise this emancipation in ways that are not relativist. Critical realism, while encouraging the valuing of different knowledge systems, does not go as far as claiming that anything goes. Parker (2001) cautioned "Overall, critical realists will need to become more reflexively critical of the grounds for pluralist toleration of marginalised knowledges, in particular, exploring the grounds for enabling their development and protecting them from potential destruction by hegemonic powers" (Parker, 2001: 258). One of the three sustainable agriculture case studies in my study was the Machobane Farming System, which was largely based on the local Basotho culture, one of the marginalised knowledges. By examining the practice with research participants, the study sought to help develop and scale out the practice in a manner that gets protected from potential destruction. Critical realism therefore helped me to think about power and knowledge in expansive social learning practice, which is an area that has often been under-theorised in CHAT.

Bridges and Smith (2007: 2) encouraged the use of a philosophical framework to underpin or 'underlabour' research in social sciences. Similarly, Archer (1995 in Leesa, 2007) explains that ontology "acts as both gatekeeper and bouncer of methodology" because how society is held to be affects how it is studied.

Critical realism builds on the ideas of reflexivity and dialectics, which are central in the pursuit of understanding learning and practice in this study. Critical realism enables the development of an explanatory critique, with ontological depth, that goes beyond the actual and the observed to the causal mechanisms that are invisible, thus avoiding the fallacy of actualism (Lotz-Sisitka, Motsa, Mukute & Olvitt, 2008). Bhaskar cautions against 'epistemic fallacy', which happens when empirical reality is conflated with ontology – when what is experienced or observed is seen as the whole reality (Parker, 2001). For example, in agriculture a cabbage that looks big and spotless may appear as healthy but in fact, it could have been sprayed with carcinogenic pesticides that harm the consumer as well as the ecology of the garden in which the cabbage was grown. The point about surface appearances being potentially misleading was also highlighted by Babikwa (2003) when he discussed causal mechanisms influencing why farmers did not farm sustainably on rented land. The reasons for this behaviour had nothing to do with the skills to farm sustainably but were political:

*Some of the conditions set by landowners bred a sense of insecurity for the landless and became a disincentive to sound land management and in turn a strong factor behind environmental degradation. Farmers knowingly violated sustainable agricultural principles through such actions like over-cultivation of land and intercropping of incompatible crops just because they had insufficient land. (Babikwa, 2003: 202)*

**Heila:** *It seems therefore that critical realism provided further depth to the empirical and historical analysis that you were able to develop using the CHAT framework. Why did you choose to work with the CHAT framework to explain the expansive social learning processes that you were interested in?*

**Mutizwa:** As indicated above, the epistemological theory that formed the backbone of my thesis was Cultural Historical Activity Theory (CHAT), especially the second and third generation CHAT (Engeström, 1999a, 1999b). This theory of learning and development (Vygotsky, 1978) is built on contradictions which are a form of dialectics as well as on reflexivity and agency (Engeström, 1987, 2008),

and offers an explanation of learning through activity that helps to develop understandings of workplace learning (Sawchuk, 2009), which is the thrust of the study. In CHAT, knowledge is viewed as contextual and transformative. It is generated through processes of reflexive investigation and learning. CHAT posits that learning takes place through collective activities that are purposefully conducted towards a common object.

**Heila:** *How did you differentiate this theory of learning from individual cognition centred theories of learning? How was it relevant to your interest in change oriented learning and practice, or what some have defined as social learning?*

**Mutizwa:** I drew on Edwards (2005b: 50) who defined learning as: "concerned with within-person changes, which modify the way in which we interpret and may act on our world ... and in turn change it by our actions". The learning is facilitated by the use of conceptual and material tools which help the learners to understand the object better. The incorporation of new knowledge and concepts into the individual happens first at the interface of the community and the individual through internalisation – inter-mental, and secondly within the individual, intra-mental. Discussing CHAT, Edwards (2007) made it clear that individuals and their society interact dialectically when she says "the way we see, think and act in our worlds are shaped by the cultures in which we are formed and in turn we shape those cultures by our actions" (p. 259), essentially proposing the foundations of what constitutes a social learning theory. Dean (2009: 132) noted that culture "is composed of a patterned relatively stable set of social relations, practices and processes which are capable of reproducing a built habitat in which newborns can learn how to behave in ways which will ensure reproduction of both themselves and the culture in which they are vitally dependent". The individual externalises acquired knowledge through applying it to the object towards an intended outcome. Billett (1994) pointed out that the Vygotskian school uses the concept of knowledge appropriation in learning to refer to what happens when inter-psychological processes happen and before the knowledge becomes an intra-personal attribute, because the knowledge is not absorbed unaltered. "Appropriation refers to a personally active – and at the same time – multi-



dimensional process; it indicates that new knowledge and competence are actively transformed rather than simply internalised by the learner" (Simovska, 2008: 64). Discussing three forms of learning in groups – which entail internalisation, appropriation and externalisation – within the broader framework of social learning process, Glasser (2007) noted:

*Hierarchical and non-hierarchical active social learning are widely used and applied with great benefit to expand the penetration of existing knowledge. Co-learning, because of its requirements for team building, complete engagement, 'learning by doing' ... and accountability, in addition to supporting the penetration of existing knowledge, supports the generation of new knowledge and novel strategies for addressing real-world problems. Co-learning supports change, positive change in particular by building capacity in three fundamental areas: critical evaluation of existing knowledge and problems, knowledge generation and penetration, and application of this new knowledge to policy, practice and everyday life. (p. 51)*

Glasser's argument above resonates with that of people-centred innovation and development which I had identified as a key contemporary trend in agricultural training and extension. It resonates with the notion of expansive learning found within CHAT, and it also underlines the change oriented nature of co-learning in social learning, which is central to this study.

**Heila:** *There is a complex body of literature on CHAT and its three generations. I will not ask you to reflect on all three generations of CHAT here, as this has been done numerous times in other places (Engeström, 1999a,b, 2001, 2007), but rather, I would be interested in understanding how you approached your work with third generation activity theory and expansive social learning with the farmer groups?*

**Mutizwa:** To understand social learning processes one needs to define a unit of analysis. Social learning literature refers to 'changes in social units' as being defining in terms of how one can identify social learning (Reed et al., 2009). Sawchuk (2003) explained an activity system as the minimal meaningful social context for understanding individual or collective action (and how such actions are socially and

collaboratively constituted). An activity system consists of a group, of any size, pursuing, a specific goal in a purposeful way (Peal & Wilson, 2001). Billett (1994) pointed out that social practice utilises activities to construct knowledge and that activities are developed socio-historically through a community of practice. Third generation activity theory was developed by Engeström (Edwards, 2005b) and focuses on the interaction between different activity systems. In more recent literature, the nature of the interaction seems to have shifted from the notion of a central activity system interacting with others (see Figure 4) to that of a number of activity systems that are in interaction and have a shared object (see Figure 5). Learning between such systems involves boundary crossing, a concept which is central to this study. For example Pretty (2002), Wals and van der Leij (2007) and others discuss social learning and how it needs to work with different knowledge sources and people, and in particular how people-centred learning and innovation is built on boundary crossing. Pimbert's (2009) notion of a peer reviewed network discussed under the same sections also underlines the notion of boundary crossing.

**Heila:** *Can you explain the boundary crossing process in a little more detail?*

**Mutizwa:** Boundary crossing involves engaging with different types of contradictions that emerge at the interface of different activity systems, all concerned with the same object. If you look at Figure 4 below, it captures the notion of a central activity system (in the case of my research this was the farmers' activity systems), and effectively provides the basis for the notion of four levels of contradictions that can form the basis of learning and change (Engeström, 1987). In third generation CHAT the farmer activity system would interact with government as a rule producing activity system, agricultural colleges and universities as tool producing activity systems, and HIV and AIDS as a subject producing activity system which has a bearing on division of labour as well. The main use of showing these connections is to show what kinds of contradictions are caused by these relationships and to use them as potential sources of learning. Such contradictions are called *quaternary*. Pesanayi's (2008) issue about conflicting messages from extension workers and NGO facilitators to farmers and

creating ambivalence for the farmers exemplifies how tool producing activity systems can cause quaternary contradictions.

The other kind of contradiction is the one that arises when the object of the current activity system changes and becomes more advanced. In the example of farmers, the new additional object could be to produce herbs for medicinal purposes or to produce crops for bio-fuel or to improve the micro-life in soils in order to facilitate the sinking of excess carbon. Such a contradiction between objects of the current and new activity system is called *tertiary*. The other two forms of contradictions are *primary and secondary*. The primary contradiction exists within an element of an activity system. For example, structural tensions between farmers as subjects of the same activity system are primary with farmers. Babikwa (2003: 193-194) identified such a contradiction in his study of farmers involved in sustainable agriculture in Uganda:

*There was a fascinating coexistence between a strong spirit of dependency and self-pity, side-by-side with clear individualism and selfishness. The very people who shunned attempts towards cooperation and collective problem-solving were not only eager to receive, but were also at the forefront of demanding free handouts.*

In a study on organic farming in Finland, Seppänen (2004) identified and worked with research participants' primary contradiction which lay in the economic and ecological interests of the farming family. There was a primary contradiction within the object. Secondary contradictions occur between elements of the same activity system such as between the tools and the object. For example, if a farmer wants to use organic chemicals to control pests and thus avoid or minimise ecological harm and maintain food safety, and fails to find an effective biological or mechanical tool, she/he faces a contradiction between the tools available and the social and ecological object of farming. I found this (see Figure 4) conceptualisation useful for identifying contradictions that farmers and sustainable agriculture facilitators were facing. These formed the foundations for expanding their learning, or for the emergence of new social learning processes and outcomes that were oriented towards resolving these contradictions and tensions and creating new practices or a change in the object.

**Heila:** *This seems to provide a process model for Wals's (2007) claim that social learning involves dissonance? Would you agree with this?*

**Mutizwa:** The main thrust and value of third generation CHAT as represented in Figure 5 is when actors belonging to the different activity systems are prepared to work together towards a shared object which they construct collectively. It is in this conceptualisation of third generation CHAT that the idea of boundary crossing gains significance because the actors from the different activity systems, after jointly developing a shared object, must cross into unfamiliar territory and develop new solutions with people who have different perspectives and backgrounds. The study used this representation of third generation CHAT in the change laboratory workshops which are a methodological process developed by Engeström to provide a 'process space' for engaging with contradictions and new solution building processes. It is here where the researcher plays an important role in facilitating the production and sharing of 'mirror data' in the form of contradictions that are used to trigger learning and development processes along the expansive learning cycle. Of course, it was necessary to adjust the 'CHAT language' in the field, as these terms are quite technical and meaning laden, but I found that understanding the meanings of these terms was very helpful in structuring and supporting the processes of social learning, boundary crossing and engagement.

**Heila:** *I noticed in your literature review work that you further deepened your perspectives on social learning with other theoretical tools and lenses. Can you share some of these with us, along with why you did this?*

**Mutizwa:** I will focus on two that are related to what I have already discussed here: *Expansive learning* and *Learning and Agency*, as these are both important concepts for understanding how social learning emerges and occurs.

*Expansive learning* is based on the dialectics of ascending from the abstract to the concrete, where abstract refers to partial, separated from the concrete whole and begins with a subject questioning the accepted practice and gradually expands into a collective movement (Engeström, 1999b). *Expansive*

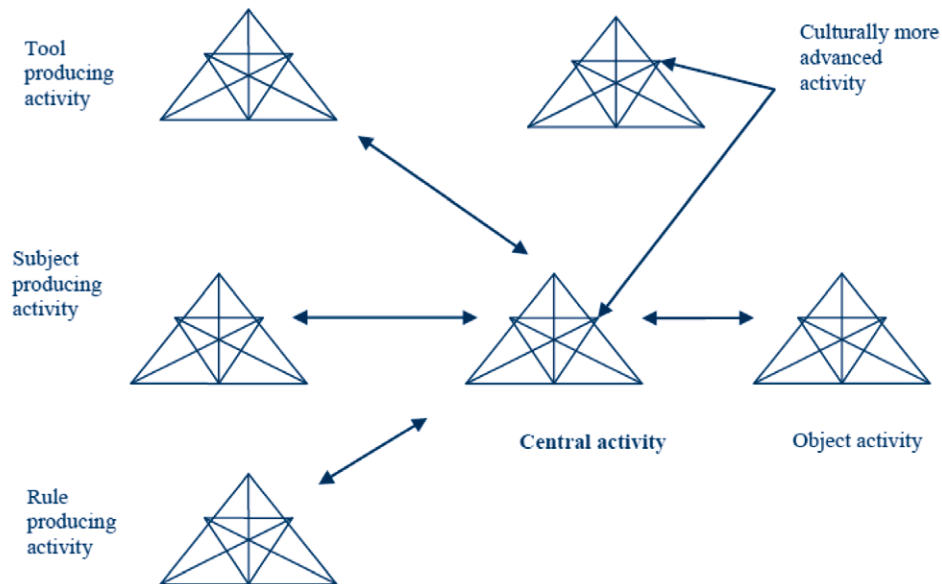


Figure 4: Third generation activity theory: Idealised network of activity systems (Source: Adapted from Engeström, 1987: 89)

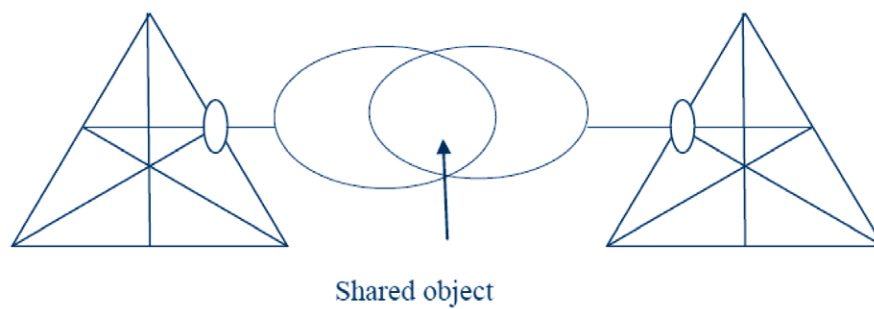


Figure 5: Two interacting activity systems as minimal model for the third generation of activity theory (Source: Engeström, 2001, Figure 3: 136)

learning is built on overcoming current contradictions and draws on the strengths of joint analysis and concrete transformation of current practice (Engeström, 2005). The process of expansive learning is concerned with the resolution of evolving tensions and contradictions in a complex system that involves objects, artefacts and perspectives of participants (Engeström, 1999b). It involves doing, reflecting and improving the practice, which essentially is praxis at one level, while at the same time it looks at how everyday and scientific knowledge interact (Daniels, 2001; 2005). Expansive learning entails collaborative learning and seeks to address new and emerging problems, creating new knowledge, and building local resilience. Expansive learning offers a framework for understanding forms of learning that do not adhere to standard models of vertical mastery (Engeström, 2001). It is concerned with knowledge creation, and application iteratively (Warmington et al., 2005). Roth and Lee (2007) explained that learning becomes expansive when it contributes to an enlarged room for

manoeuvre for the individual whereby new learning possibilities are formed. Individual and collective learning takes place by going beyond the boundaries of individual subjectivity through immediate cooperation towards the realisation of common interests of collective self-determination against dominant partial interests (Roth & Lee, 2007).

Expansive learning takes place within three major and inter-related contexts: the context of criticism that is concerned with powers of resisting, questioning, contradicting and debating; the context of discovery, which is concerned with powers of experimenting, modelling, symbolising, and generalising; and the context of application highlighting powers of social relevance and embeddedness of knowledge, community involvement and guided practice (Engeström, 2005).

One of the critical aspects of expansive learning is its reliance on 'self-organisation from below', which

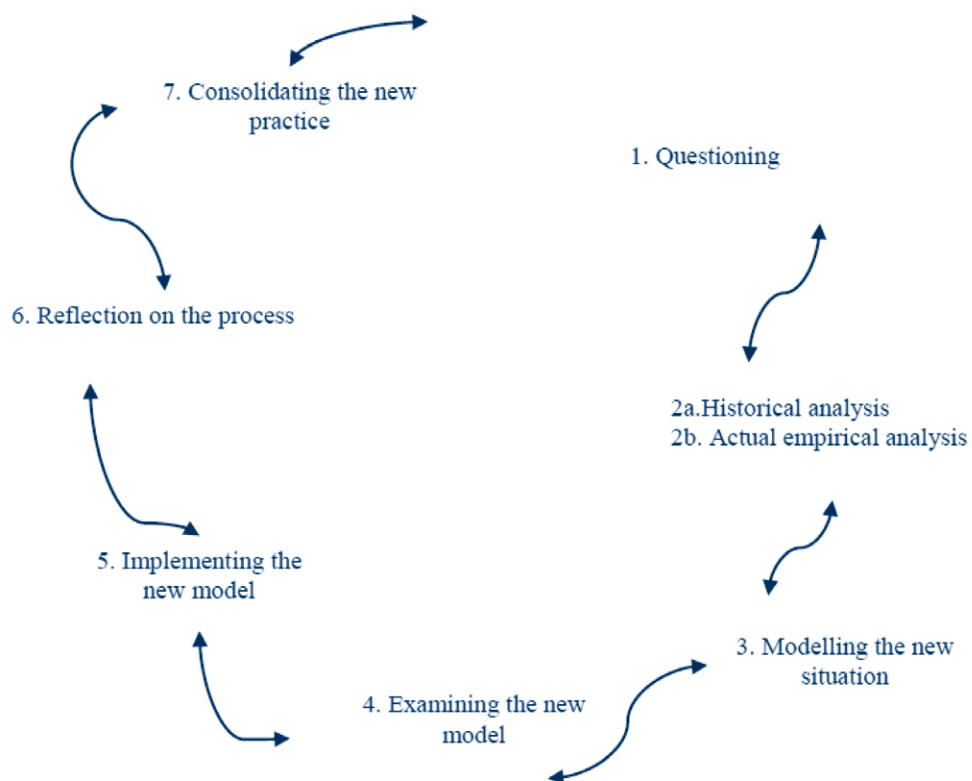


Figure 6: Sequence of epistemic actions in the expansive learning cycle (Source: Engeström, 1999a: 136)

manifests itself in the 'creation of networks of learning' that transcend institutional boundaries (ibid.: 174). This is similar to the concept of 'citizen-led innovation and socio-cultural networks' as discussed by Pimbert (2009) and the diverse groups engaging in boundary crossing re-framings as discussed by Wals (2007). It also resonates with Scoones, Thompson and Chambers' (2008) notion of people-centred learning and innovation. In this study farmers and development workers constituted the core of the network of learning. The study was able to bring in agricultural extension workers and entrepreneurs to interact with the activity system of farmers in keeping with the critical aspect of transcending boundaries (Engeström, Engeström & Kärkkäinen, 1995; Warmington et al., 2005) following the expansive learning cycle outlined below in Figure 6. Expansive learning has the following stages:

Questioning: drawing on researched evidence to question existing practice or existing wisdom;

Analysing: invoking 'why' questions to seek out explanatory principles. Historical-genetic analysis aims to explain the situation by tracing the origin and evolution of the contradiction, while the empirical analyses the inner systemic relations;

Modelling: involves the construction of new ways of working or engaging with practice;

Examining the model: experimenting with the new model to fully grasp its dynamics, potentials and limitations;

Implementing the model: working with the model in real life situations and monitoring its impacts;

Reflecting: using monitoring data to evaluate the model for refinement; and

Consolidation: implementing the refined model into a new, stable form or part of practice (Engeström, 1999a; Pihlaja, 2005).

Wals and van der Leij (2007) pointed out in their social learning research that we cannot think about sustainability in terms of problems that are out there to be solved that need to be addressed. We need to think in terms of challenges "to be taken on in the full realisation that as soon as we appear to have

met the challenge, things will have changed and the horizon will have shifted again" (p. 17), meaning that the more advanced activity system will create new contradictions and learning will continue to happen. This resonates with the Ndebele concept reflected in the development song composed with ORAP "It's nearer, getting nearer where we are going. It's far, very far where we are going".

**Heila:** *Thank you for that overview of expansive learning. To me it resonates with the process model of social learning that Wals (2007) proposes, and of course, it requires time, just as Million indicated above when he was discussing morphogenesis. How did you work with the notion of learning and agency?*

**Mutizwa:** The concept of agency has already been discussed by Million above. So here I will highlight some of its main elements and how I worked with the idea. In intervention studies (CHAT is a form of interventionist research), one of the researcher's objectives is concerned with building the agency of research participants to improve their situation. This entails helping enhance their individual, collective and relational capabilities to change those things which work against their needs and interests. There are two main weaknesses of CHAT which are relevant to this study. These require paying attention to relationships between subjects in and between interacting activity systems, how people with different knowledge, expertise and other forms of backgrounds can work together to jointly analyse situations and reciprocally co-construct solutions. The question that is not answered in CHAT is: how do subjects with different expertise responsibly and reciprocally work together to jointly interpret their object and take joint action to transform it?

Relational agency is important in activity systems because of the fluidity of relationships and the need to work with different people in and across systems. Edwards (2005a) noted that there is always the possibility of contested interpretation of the object by the subjects. A related gap appears to be the making explicit of the relations between the subjects and the structures that may enable or constrain their actions because Lister, drawing on Sen's (1999) capability thesis, argued that "what makes a difference is not only how those in poverty choose to act, but also how those with more power choose

to act in relation to them" (Lister, 2004: 128). Walker (2006: 5) defined one dimension of Sen's capability theory as a broad commitment to democratising our lives and institutions, "learning that is informed by an understanding of its impact on the welfare and interests of those who are likely to be affected by it" (citing Bagnall, 2002). Walker (2006) argues for education that is not only interested in economic development but that fosters 'educated hope' and ethical, critical citizens.

Ahonen and Virkkunen (2001), drawing on Woolcock, when discussing social capital (which I see as closely related to the notion of relational agency) pointed out that it is concerned with the building of social relationships, cooperation, linking activities, bridging specialties and bonding actors – and that the bonding is mediated by a shared challenge or object of a developmental activity. Relational agency occupies the space between Engeström's systemic change and Vygotsky's individual sense making. It resonates well with the concepts of reciprocity and mutual strengthening of expertise and competence to increase the collective competence of a community; which is central to all social learning process. Relational agency requires the development of a knowing how to know who capacity, which is "the social ability to cooperate and communicate with different kinds of people and experts" (Edwards, 2005a: 10). Warmington et al. (2005) used the term 'interagency' to denote relational agency. They define it as more than one agency working together in a planned and formal way, rather than simply through informal networking (although the latter may support and develop the former). This can be at the strategic or operational level (Warmington et al., 2005: 6). In my study I use it to refer to the ability of relations of ties and trust between different groups of people to enable them to work towards a shared object through taking responsible action.

Collective agency is concerned with harnessing the collective strength of people to address a limitation. In the study research participants were able to put together their resources (material and intellectual) to address challenges they were facing following an intervention workshop. Relational agency was built between groups of people who did not ordinarily work and reflect together to address such issues:

teachers and farmers, farming system promoters and conventional agriculture extension workers.

Leesa (2007) criticised CHAT for not paying enough attention to individual needs by subordinating them to those of the activity and of society and yet the individual is relatively autonomous. Similarly, Edwards (2005b) noted:

*CHAT has not dealt easily with the idea of the active agent. Writing from a socio-cultural practice end of the field, Dreier comments that 'The concrete location of individual subjects in social practice remains strangely implicit or ambiguous... Within Engeström's systems version of activity theory, the subject almost emerges by default where there is enough slippage in the system to allow it to happen. (p. 11)*

Dean (2009) pointed out the necessity for both relational and collective agency in bringing about change in contemporary globalised and industrialised society in a manner that makes individual agency inadequate. She noted, "it follows that emancipation can only be a relational-collective undertaking" and disagreed with Bhaskar concerning the power of the individual actor to change things because more and more change is brought about through systems rather than individuals (Dean, 2009: 124). She also argued that cultures vary in terms of their need for individually intentional, causally efficacious agency: "Under capitalism commonsense knowledge is displaced by science, and relatedly, the individual intentionality of the artisanal practices borne by face to face social relations is displaced by 'system'" (Dean 2009: 136). Collective and relational agency becomes especially important when dealing with open systems, which social sciences often operate in, and in which this study was located. I therefore worked with these three concepts of agency in observing how the expansive social learning process emerged, and what resulted from the mobilisation of people's agency for change.

Heila: *Thank you Mutizwa, it seems that you, like Million, developed some in-depth, sophisticated ways of understanding how social learning processes are constituted and how social learning (as changes in social units and practices) emerges.*



## CONCLUSION

In our dialogue above, we have tried to illustrate ways of working with literature in social learning research that draws on antecedent literature from the field of psychology and learning theory as well as social change theory (theory of structure and agency) to develop *in-depth insight* into the *social* nature of social learning, focusing also on *how* social learning processes take place, and emerge in social-cultural and socio-material contexts of activity and practice. These literatures also shed light on how change oriented social learning emerges, and how change emerges in and through social learning interactions through the mobilisation of human agency in individual and relational ways. Understanding social learning processes in this way does not commit the error of ontological collapse, as it recognises social learning processes as ongoing processes of learning and change involving human actors who collectively and reflexively make their way through the world in various ways (Archer, 2007, 2012). Archer makes the important point that without reflexivity, there can be no society (2007); a process which involves “all normal people considering themselves in relation to social contexts and vice versa” (Archer, 2012: 1). As indicated in some detail in the two literature review dialogues above, such *process oriented insights* are necessary for full engagement with social learning processes.

The two literature reviews brought into dialogue above show some similarity, but also key differences in theory and approach, but in both cases critical realist and socio-cultural theories appeared to be significant for understanding social learning processes, their emergence and the emergence of change that results from social learning interactions. Two literature reviews were purposefully chosen to demonstrate the diversity of approach that is possible when working with antecedent literatures. The paper is lengthy, but was purposefully kept this way to allow for detailed exposure to some of these literatures. As shown in the two dialogues, the research question and interest is always a key shaping influence on what literatures are most useful to what research question and context.

In both cases, researchers had adequate tools to develop in-depth insight into the *processes of emergence, both of social learning interactions and practices; and associated change processes*

*and practices*. If social learning theory is to live up to its promise of providing a theory of learning that is indeed *change oriented* (Reed et al., 2009) then these literatures would seem to be important if social learning theory is to be developed in ways that are not paradoxically superficially self-referential and de-ontological.

*Note: The dialogues above are adapted versions of the actual literature reviews of the two PhD studies discussed. The full literature reviews can be found in the dissertations. These are available on the Rhodes University eResearch Repository ([www.eprints.ru.ac.za](http://www.eprints.ru.ac.za)).*

## REFERENCES

- ABN. (2011). Report on the Workshop on Resilience. 17-22 June 2011, Kenya.
- Ahonen, H., & Virkkunen, J. (2001). Creating social capital for managing change: linking frontline teams and business managers' perspectives on future. In. *Activity theory and social capital*, Y. Engeström (Ed.), 37-48. Helsinki: University of Helsinki.
- Amin, A., & Roberts, J. (2008). Knowing in action: beyond communities of practice. *Research Policy*, 37(2), 353–369.
- Archer, M. (1995). Realist social theory: *The morphogenetic approach*. Cambridge: Cambridge University Press.
- Archer, M. (1998). Realism and Morphogenesis. In *Critical Realism Essential Reading*, M. Archer, R. Bhaskar, A. Collier, T. Lawson, & A. Norrie, (Eds.), 356-381. London: Routledge.
- Archer, M.S. (2000). *Being Human: The Problem of Agency*. Cambridge: Cambridge University Press.
- Babikwa, D. (2003). *Environmental action to community action: Methodology and approaches in community-based environmental education programmes in Uganda*. Unpublished PhD thesis, Rhodes University, Grahamstown.
- Bandura, A. (1977). *Social Learning Theory*. New York: General Learning Press

Barab, S.A., & Duffy, T. M. (2000). From practice fields to communities of practice. In *Theoretical foundation of Learning Environments*, D.H. Jonassen & S.M. Land (Eds.), 25-55. Pennsylvania University.

Bates, S. (2006). Making time for change: on temporal conceptualizations within (critical realist) approaches to the relationship between structure and agency. *Sociology*, 40(1), 143-161.

Bateson, G. (1973). *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution and Epistemology*. London: Paladin, Granada.

Belay, M. (2012). *Participatory Mapping, Learning and Change in the context of Biocultural Diversity and Resilience*. Unpublished doctoral thesis, Rhodes University, Grahamstown.

Benton, T., & Craib, I. (2001). Critical realism and the social sciences. In *Philosophy of science: The foundations of philosophical thought*, T. Benton & I. Craib, (Eds.), 119-139. Basingstoke: Palgrave.

Bhaskar, R. (1998). Facts and values: Theory and practice. In *Critical Realism Essential Reading*, M. Archer, R. Bhaskar, A. Collier, T. Lawson, & A. Norrie (Eds), 409-417. London & New York: Routledge.

Billett, S. (1994). Situated learning: a workplace experience. *Australian Journal of Adult and Community Education*, 34 (2), pp. 112-130.

Berkes, F., Colding, J., & Folke, C. (2003). *Navigating social-ecological systems: Building resilience for complexity and change*. Cambridge: Cambridge University Press.

Bhaskar, R. (1998). *The possibility of naturalism* (3rd ed.). London: Routledge.

Bhaskar, R. (1978). *A realist theory of science*. Hassocks: Harvester.

Blackmore, C., Chabay, I., Collins, K., Gutscher, H., Lotz-Sisitka, H., McCauley, S., Niles, D., Pfeiffer, E., Ritz, C., Schmidt, F., Schreurs, M., Siebenhuner, B., Tabara, D., & Van Eijndhoven, J. (2011). *Knowledge,*

*learning and societal change: Finding paths to a sustainable future*. Science Plan for a cross-cutting core project of the International Human Dimension Programme on Global Environmental Change (IHDP).

Blackstock, K., Dunglinson, J., Dilley, R., Matthews, K., Futter, M. & Marshall, K. (2009). Climate Proofing Scottish River Basin Planning – a Future Challenge. *Environmental Policy and Governance*. 19, 374–387.

Bourdieu, P. (1990). *The logic of practice*. Stanford: Stanford University Press.

Bourdieu, P. (2004). *Science of science and reflexivity*. Cambridge: Polity.

Bridges D., & Smith, R. (2007). Philosophy, methodology, and educational research: Introduction. In *Philosophy, methodology and educational research*, D. Bridges & R. Smith (Eds.), 1-10. Oxford: Blackwell.

Brown, J.S., & Duguid, P. (1991). Organizational learning and communities-of-practice: toward a unified view of working, learning, and innovation. *Organization Science*, 2(1), 40-57.

Buckley, W. (1967). *Sociology and modern systems theory*. New Jersey: Prentice-Hall.

Cundill, G., Lotz-Sisitka, H., Belay, M., Mukute, M., Kulundu, I. & S. Shackleton (in press). A reflection on the use of case studies as a methodology for social learning research. Paper accepted for publication in *NJAS - Wageningen Journal of Life Sciences*.

Daniels, H. (2001). *Vygotsky and pedagogy*. London: Routledge.

Daniels, H. (Ed.). (2005). *An introduction to Vygotsky* (2<sup>nd</sup> ed.). London: Routledge.

Dean, K. (2009). Agency and dialectics: What critical realism can learn from Althusser's Marxism. In *Realism, philosophy and social science*, K. Dean, J. Joseph, J.M. Roberts, & C. Wight (Eds.). Hampshire: Palgrave and Macmillan.

Daniels, H. (2008). *Vygotsky and research*. London: Routledge Taylor & Francis Group.

Del Rio, P., & Alvarez, A. (2007). Inside and outside the zone of proximal development: An eco-functional reading of Vygotsky. In *The Cambridge companion to Vygotsky*, H. Daniels (Ed.). London: Routledge.

Duguid P. (2005). "The art of knowing": social and tacit dimensions of knowledge and the limits of the community of practice. *The Information Society*, 21, 109-118.

Elder-Vass, D. (2007). For emergence: Refining Archer's account of social structure. *Journal for the Theory of Social Behaviour*, 37, 25-44.

Edwards, A. (2005a). Let us get beyond community and practice: The many meanings of learning by participation. *The Curriculum Journal*, 16 (1), 49-65.

Edwards, A. (2005b). Cultural Historical Activity Theory and Learning: a relational turn. *Paper presented at the TRLP Annual Conference Keynote Address*, University of Warwick, UK.

Edwards, A. (2007). Relational agency in professional practice: A CHAT analysis. *Actio: An International Journal of Human Activity Theory*, 1, 1-17.

Engeström, Y. (1987). *Learning by expanding: An activity theoretical approach to developmental research*. Helsinki: Orienta-Konsultit.

Engeström, Y. (1999a). Innovative learning in work teams: Analyzing cycles of knowledge creation in practice. In *Perspectives on Activity Theory: Learning in Doing: Social, Cognitive, and Computational Perspectives*, Y. Engeström, R. Miettinen & R. Punamaki (Eds.), 377-404. Cambridge: Cambridge University Press.

Engeström, Y. (1999b). Expansive visibilization of work: An activity-theoretical perspective. *Computer Supported Cognitive Work*, 8, 63-93.

Engeström, Y. (2001). Expansive learning at work: Towards an activity theoretical re-conceptualisation. *Journal of Education and Work*, 14(1), 133-156.

Engeström, Y. (2005). Non scolae sed vitae discimus: Towards overcoming the encapsulation of school

learning. In *An Introduction to Vygotsky (2nd ed.)*, H. Daniels (Ed.), 157-176. London: Routledge.

Engeström, Y. (2007). Putting Vygotsky to work: The change laboratory as an application of double stimulation. In *The Cambridge Companion to Vygotsky*, H. Daniels, M. Cole, & J.V. Wertsch, (Eds.), 363-382. Cambridge: Cambridge University Press.

Engeström, Y. (2008). From design experiments to formative interventions. Paper presented at the ISCAR Conference in San Diego, September 2008.

Engeström, Y., Engeström, R., & Kärkkäinen, M. (1995). Polycontextuality and boundary crossing in expert cognition: Learning and problem solving in complex work activities. *Learning and Instruction*, 5, 319-336.

Folke, C., Carpenter, S., Walker, B., Scheffer, M., Chapin, T., & Rockström, J. (2010). Resilience thinking: Integrating resilience, adaptability and transformability. *Ecology and Society*, 15, 20. Retrieved on July 30, 2011 from <http://www.ecologyandsociety.org/vol15/iss4/art20/>

Glasser, H. (2007). Minding the gap: The role of social learning in linking our stated desire for a more sustainable world to our everyday actions and policies. In *Social learning towards a sustainable world*, A.E.J. Wals (Ed.), 35-61. Wageningen: Wageningen Academic Publishers.

Handley, K., Sturdy, A., Fincham, R., & Clark, T. (2006). Within and beyond communities of practice: making sense of learning through participation, identity and practice. *Journal of Management Studies*, 43(3), 641-653.

Hartwig, M (Ed). (2007). *Dictionary of Critical Realism*. London: Routledge.

Hodson, D., & Hodson, J. (1998). From constructivism to social constructivism: a Vygotskian perspective on teaching and learning science. *School Science Review*, 79 (2), 33-41.

Hogan, K. (2002). Pitfalls of community-based learning: How power dynamics limit adolescents' trajectories of growth and participation. *Teachers College Record*, 104(3), 586-624.

- John-Steiner, V. (1995). Cognitive pluralism: A socio-cultural approach. *Mind, Culture and Activity*, 2, 2-10.
- John-Steiner, V., & Mahn, H. (1996). Sociocultural approaches to learning and development: A Vygotskian framework. *Educational Psychologist*, 31(3/4), 191-206.
- King, A. (1999). Against structure: A critique of morphogenetic social theory. *Sociological Review*, 47, 199-227.
- Latour, B. (1987). *Science in action*. Cambridge: Harvard University Press.
- Lave, J. (2008). *Epilogue: Situated learning and changing practice*. Cambridge University.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.
- Leesa, W. (2007). Blending activity theory and critical realism to theorise the relationship between the Individual and Society and the Implications for Pedagogy. *Studies in the Education of Adults*, 39(2), 183-196.
- Lemke, J. (1997). Cognition, context, and learning: A social semiotic perspective. In *Situated cognition: Social, semiotic, and psychological perspectives*, D. Kirshner & J. A. Whitson (Eds.), 37-56. Mahwah: Lawrence Erlbaum Associates.
- Lister, R. (2004). *Poverty*. Cambridge: Polity Press.
- Lockwood, D. (1964). Social Integration and Systems Integration. In G.K. Zollschan & H.W. Hirsch (Eds.), *Explorations in social change*. Boston: Houghton Mifflin.
- Lotz-Sisitka, H. (2012). Notes from a reading group presentation, Rhodes University Environmental Learning Research Centre, Rhodes University.
- Lotz-Sisitka, H., Motsa, E., Mukute, M., and Olvitt, L. (2008). *Theory Matters: Developing a conceptual framework for researching change-oriented workplace learning and sustainability practices to inform standard setting*. Unpublished. Rhodes University, Grahamstown.
- Masara, C. (2010). Social Learning processes and nature-culture relation of commercial beekeeping practices of small and medium enterprise development in Zimbabwe. *Southern African Journal of Environmental Education*, 27, 9-21.
- Mukute, M. (2010). *Exploring and expanding learning in sustainable agriculture practices in Southern Africa*. Unpublished doctoral thesis, Rhodes University, Grahamstown.
- Norrie, A. (2010). *Dialectic and difference*. London: Routledge.
- O'Donoghue, R. (2007). Environment and Sustainability education in a changing South Africa: A critical historical analysis of outline schemes for defining and guiding learning interactions. *Southern African Journal of Environmental Education*, 24, 141- 157.
- Parker, J. (2001). Social movements and science: The question of plural knowledge systems (pp. 251-259). In J. Lopez & G. Potter (Eds.), *After postmodernism: An introduction to critical realism*. London: Athlone Press.
- Peal, D., & Wilson, B. (2001). *Activity Theory and Web-Based Training*. Retrieved July 17, 2008, from [http://www.ceo.cudenver.edu/~brent\\_wilson/acttheory.html](http://www.ceo.cudenver.edu/~brent_wilson/acttheory.html)
- Pesanayi, T.V. (2008). *Investigating learning interactions influencing farmers' choices of cultivated food crops*. Unpublished master's thesis. Rhodes University, Grahamstown.
- Pihlaja, J. (2005). *Learning in and for production: An activity-theoretical study of the historical development of distributed systems of generalising*. Helsinki: University of Helsinki, Education Department.
- Pimbert, M. (2009). *Towards food sovereignty: reclaiming autonomous food systems*. London: International Institute of Environment and Development.
- Pretty, J. (2002). *Agri-culture: Reconnecting people, land and nature*. London: Earthscan.

Price, L. (2008). Critical realism and Education Conference: Notes from Bhaskar's plenary presentation. PhD Week lecture notes, Rhodes University, Department of Education, Grahamstown.

Reed, M.S., Evely, A.C., Cundill, G. I. Fazey, I., Laing, A., Newig, J., Parrish, B., Prell, C., Raymond, C. & L.C. Stringer. (2010). What is Social Learning? *Ecology & Society*, 15 (1).

Reid, A., & Nikel, J. (2008). Differentiating and Evaluating Conceptions and Examples of Participation in Environment-Related Learning. In *Participation and Learning: Perspectives on Education and the Environment, Health and Sustainability*, A. Reid, B. Jensen, J. Nikel, & V. Simovska, (Eds.), 32-60. Bath: Springer.

Roberts, J. (2006). Limits to Communities of Practice. *Journal of Management Studies*, 43(3), 623-39.

Rodela, R., Cundill, G. & Wals, A. (2012). A reflection on research design and methodologies used in the social learning literature. In *(Re) Views on Social Learning Literature: A monograph for social learning researchers in natural resources management and environmental education*, Lotz-Sisitka, H. (Ed). Environmental Learning Research Centre, Rhodes University / EEASA / SADC REEP, Grahamstown, 2012 [this monograph]

Roth, W., & Lee, Y. (2007). Vygotsky's neglected legacy: Cultural historical activity theory. *Review of Educational Research*, 77(2), 186-232.

Salmon, G., & Perkins, D. N. (1998). Individual and social aspects of learning. *American Education Research Association*, 23, 1-24. Retrieved February 10, 2011 from <http://www.jstor.org/stable/1167286>

Sawchuk, P. (2009, June 30). Chairman of the International Advisory Committee of the Research and Workplace Learning Conference. Personal Communication.

Sawchuk, P.H. (2003). *Adult learning and technology in working class life*. Cambridge: Cambridge University Press.

Sayer, A. (2000). *Realism and social science*. London: Sage.

Schusler, M.T., Decker, J.D. & Pfeffer, J.M. (2003). Social Learning for Collaborative Natural Resource Management. *Society & Natural Resources*, 15, 309-326.

Scoones, I., Thompson, J., and Chambers, R. (2008). Farmer First Revisited: Innovation for Agricultural Research and Development, workshop summary. Unpublished. Future Agricultures.

Sen, A. (1999). *Development as Freedom*. Oxford: Oxford University Press.

Scott, W. & Gough, S. (2004). *Key Issues in Sustainable Development and Learning: A Critical Review*. London: RoutledgeFalmer.

Seppänen, L. (2004). Learning challenges in organic vegetable farming: An activity theoretical study of on-farm practices. Helsinki: University of Helsinki, Education Department.

Sfard, A. (1998). On two metaphors for learning and the dangers of choosing just one. *Educational Researcher*, 27(2), 4-13.

Sfard, A. (2006). Telling ideas by the company they keep: A response to the critique by Mary Juzwik, *Educational Researcher*, 35 (9), 22-27.

Sfard, A. & Prusak, A. (2005). Telling identities: In search of an analytic tool for investigating learning as a culturally shaped activity. *American Education Research Association*, 34(4), 14-22. Retrieved on 19 December, 2011 from <http://www.jstor.org/stable/3699942>.

Simovska, V. (2008). Learning in and as participation: A case study from health promoting schools. In *Participation and Learning: Perspectives on Education and the Environment, Health and Sustainability*, A. Reid, B. Jensen, J. Nikel, & V. Simovska (Eds.), 61-80. Bath: Springer.

Sinyama, I. (2011). *Enabling social learning as a response to environmental issues through teaching of localised curriculum in Zambian schools*. Unpublished Master's thesis, Rhodes University, Grahamstown.

- Smith, M. K. (2003). Communities of practice. In *The Encyclopaedia of Informal Education*, Retrieved March 12, 2008 from [www.infed.org/biblio/communities\\_of\\_practice.htm](http://www.infed.org/biblio/communities_of_practice.htm).
- Steffen, W., Sanderson, A., Tyson, P.D., Jäger, J., Matson, P.A., Moore III, B., Oldfield, F., Richardson, K., Schellnhuber, H.J., Turner II, B.L., & R.J. Wasson (2004). *Global Change and the Earth System: A Planet Under Pressure*. Berlin / New York: Springer-Verlag.
- Van Bommel, S., Roiling, N, Aarts, N. & Turnhout, E. (2009). Social Learning for Solving Complex Problems: a Promising Solution or Wishful Thinking? A Case Study of Multi-Actor Negotiation for the Intergrated Management and Sustainable Use of the Drensche Aa Area in the Netherlands, *Environmental Policy and Governance*, 19 (1), 400-412.
- Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge: Harvard University Press.
- Walker, M. (2006). *Higher education pedagogies: a capabilities approach*. Berkshire: Society for Research into Higher Education & Open University Press.
- Wals, E.J. (2007). Learning in a changing world and changing in a learning world: Reflexively fumbling towards sustainability. *Southern African Journal of Environmental Education*, 24, 34-62.
- Wals, A.E.J., Van der Hoeven, N., & Blanken, H. (2009). *The acoustics of social learning: designing learning processes that contribute to a more sustainable world*. Wageningen: Wageningen Academic Publishers.
- Wals, A.E.J., & van der Leij, T. (2007). Introduction. In *Social learning towards a sustainable world*, A.E.J. Wals (Ed.), 17-31. Wageningen: Wageningen Academic Publishers.
- Wang (2003). Vygotsky and his theory. Retrieved August 20, 2011 from [http://coe.ksu.edu/jecdol/Vol\\_3/articles/Wang.htm](http://coe.ksu.edu/jecdol/Vol_3/articles/Wang.htm)
- Warmington, P., Daniels, H., Edwards, A., Brown, S., Leadbetter, J., Martin, D, Middleton, D., Parsons, S., & Popova, A. (2005, September). *Surfacing contradictions: Intervention workshops as change mechanisms in professional learning*. British Educational Research Association Annual Conference, University of Glamorgan.
- Wenger, E. (1998). *Communities of practice: Learning, meaning and identity*. Cambridge: Cambridge University Press.
- Wenger, E., McDermott, R., & Snyder, W.M. (2002). *Cultivating communities of practice: A guide to managing knowledge*. Boston: Harvard Business School Press.



