Chapter 9

Conclusions

9.1 Introduction

This thesis investigated the field of managing complex environmental management issues at local and regional scales. In particular it examined the emergent concept of social learning, noting that alongside its increasing popularity as a way of understanding the social and institutional aspects of environmental problem situations is a need to translate this normative idea into practice. In response, this research explored current advances in participatory developmental evaluation, proposing links between these approaches and promotion of the social-learning-capacity needs of environmental management programmes. Pragmatic aspects of these links were further examined through a series of case stories. In this concluding chapter I consider the implications of the research findings for New Zealand environmental management practice.

9.2 Summary of research findings

One of the first outputs of this thesis has been to trace the likely roots and coincidental evolutions of the social learning concept. Social learning has simultaneously emerged in the planning and policy literature and in the environmental management and sustainable development literature. It also has implications for the arena of post-normal or sustainability science. The multiple venues in which social learning appears have led to some divergence in terminology, which poses challenges for the theoretical and practical development of the concept. While in some instances social learning is regarded as an end state (e.g. improved learning by a collective), commonly in the environmental management and sustainable development literature social learning is regarded as a means to an end, i.e. to enable agencies, stakeholders and communities to address environmental problems. Accordingly, while it may be possible to measure social learning as an outcome, it is arguably more useful to regard social learning as a framework of elements critical to understanding and supporting the social and situational factors that underpin complex environmental problem solving.

From this analysis of the literature I propose a Social Learning Framework that draws attention to four interlinked areas for focusing awareness and developing practice in complex problem solving situations: These are:

1. How to manage group participation and interaction
2. How to work with and improve the social and institutional conditions for complex problem solving
3. How to improve the learning of individuals, groups and organisations
4. How to enable systems thinking and the integration of different information.

It is important to understand social learning not as a model for 'how things should be done' but rather as a set of premises or conditions, the management of which is important to the ability of groups of stakeholders to find their way through complex problems where each share some knowledge, and towards which each need to take some action. The ideas that make up social learning are fundamentally about improving the basis for learning and adaptation. There are no set steps to be followed, nor does it prescribe any particular starting position. Rather these ideas can be applied to improve the situation from 'where you are now'. What social learning is reliant on, then, is the development of a culture and conditions for continuous and rigorous enquiry among the participants in the problem-solving situation. This makes reflection a central driver of practice in all four areas. This reflective practice must examine not only what is known and needs to be known about the problem, but also what exists and needs to change about the social conditions in which the problem situation is located, i.e. learning about both content and process.

From the literature review I also concluded that more had been written about the meaning of social learning, or whether social learning has occurred in any given situation, than about the 'how to' of social learning, suggesting the relationship between practice and theory is incoherent. This praxis gap relates to the different elements of social learning, such as how to facilitate and enable active learning processes, as well as how to introduce and embed social learning in ongoing and institutionalised processes of decision-making.

In search of a mechanism that might be used to drive the enquiry practice at the heart of social learning and locate it within environmental management programmes, I looked to the area of participatory developmental evaluation (P & D evaluation). There are three reasons for this. Firstly, evaluation is a structured and methodical inquiry. As such, evaluation,

particularly P & D forms, formalises practices of reflection and monitoring. Secondly, one of the core factors of social learning is the institutional arrangements and social conventions that circumscribe an environmental problem solving situation. Influencing these is important to preparing the ground for social learning. Intervention programmes designed to address specific environmental issues manifest directly from these institutional practices and social norms, and programme evaluation is a traditional and widely accepted mechanism for supporting learning and development in programmes. Thirdly, capacity building itself is a challenging task, and includes matters such as how to support learning and how to engage and empower people. These are familiar issues at the forefront of debate among the professional and academic community involved in P & D evaluation.

The diverse branches of evaluation that are grouped here as P & D evaluation have commonly emerged in response to a more politicised and learning-oriented agenda for evaluation. As such they offer much to those interested in practical methods to improve a situation or to learn about the *how* and *why* of programmes (Weiss 2004). Moreover, the potential of evaluation is to do something more than simply enquire. Depending on its construct it can change the whole nature of the inquiry paradigm itself. Authors such as Cronbach (1982, in Greene 2004) have advocated and created a recognised remit for evaluation that works to support the resolution of controversial issues, arguing that one of the functions for evaluation can be stimulating the connectivity between groups, and fostering and supporting the conditions of debate and collective meaning-making. This also alters the role of the evaluator from an independent technical expert of mainstream evaluation, to having a vital political role as a medium for deliberative democracy.

Matching the findings from the review of evaluation with the social learning elements derived earlier I proposed four arenas where P & D evaluation approaches and social learning can intersect. These are

1. Scoping the environmental management problem situation
2. Supporting the capacity to enquire and problem solve
3. Supporting the management of programmes or interventions in the problem situation
4. Research and development that facilitates the growth of theoretical and practical knowledge about addressing complex environmental management situations.

This proposed link between P & D evaluation and social learning was examined in four case stories of environmental management initiatives addressing a range of complex environmental issues. Each tells the story of using some form of P & D evaluation aimed at improving the capacity to enquire and problem solve, supporting programme management, adding to the knowledge needed to help address the situation (research and development), or a combination of these. In addition the case story review process itself used the Social Learning Framework as a basis for scoping the problem situation. This involved a SWOT / needs analysis to identify the particular social learning challenges in each of the cases, and it tested the first proposed intersection between social learning and P & D evaluation.

The case story review revealed several common, significant, social learning challenges were shared by the environmental management programmes:

- Environmental management programmes relied on formation of groups to achieve their ends but were commonly underprepared for how to facilitate and manage these groups to enable collaboration and learning.
- The social and institutional contexts of the cases were important to the outcomes of the programmes. However, there was limited awareness of key factors within this. This was despite universal intentions to create change in these social and institutional contexts.
- Programmes lacked a coherent approach to learning, although learning, development and change were intended outcomes of the programme. The Target Zero programme was a notable exception, with its adaptive learning approach for developing technical understanding of the waste and resource-use practices of organisations.
- Finding a workable approach to improve the systems thinking in programmes was problematic for programmes.
- The programmes were commonly atheoretical and had a need for an improved understanding of theoretical and praxis knowledge concerning some aspect of the social learning challenges they faced.

Secondly, the cases were all illustrative of the successful use of P & D evaluation approaches to improve discrete elements of the social learning capacity of the situation:

Scoping the problem situation	The coupling of the Social Learning Framework with a SWOT analysis is useful for isolating particular social learning challenges in a given situation. Its use in the fourth case story (Watershed Talk) illustrated its value as a way of developing environmental management programmes that are adapted to the social context of the environmental problem situation. This relies on an understanding of social learning and some evaluation and reflection capacity.
Capacity to enquire and problem solve	Evaluation approaches can greatly influence the ability of programme participants to enquire and problem solve, supporting both content and process learning. Frameworks to help people see important theoretical ideas or across complex systems lend useful structure to enquiry. However, this capacity cannot be built through one-off evaluation interventions. Rather it relies on embedding evaluation approaches into a programme or problem-solving approach. Receptiveness of the organisation and participants to learning greatly influences what can be achieved.
Managing a programme	Supporting the management of the programme, enabling it to better understand its inherent logic, become well grounded in important theoretical and practice understanding, and track and monitor the effectiveness of its implementation is a traditional role for evaluation. Furthermore, as theory deficit was a common challenge to programmes, theoretical-framework-based evaluation is a succinct way of relating relevant theory to practice. The cases revealed that this calls for specialist skills in both social learning and evaluation, and openness to evaluation approaches that go beyond accountability or outcome assessment.
Research and development	Evaluation to support research and development to enable practices to be more thoughtfully and successfully applied elsewhere relies on close work between the evaluator and the programme proponents and participants. Where research and development is embedded in programmes from the beginning, significant progress can be made on issues that might otherwise limit project outcomes.

In addition the four case stories revealed:

- Simple, outcome evaluation conducted as a discrete event can change the learning potential of the programme when the findings are shared with programme participants and proponents. However, single-event evaluations do not support the ongoing social learning capacity of the situation.

- Framework-based evaluation can be an efficient approach to introduce complex theory and ideas needed by programmes, in a palatable and immediately useful form. Important considerations for choosing the framework are its endogenous or exogenous origins, and its orientation (critical/judgement or appreciative/constructive). The framework also needs to be matched to a participatory reflection approach that meets the proclivities and unique needs of the participants.

- When processes of reflection and structured questioning are built into a programme these can develop both individual self-efficacy and collective or group efficacy. In addition such processes can be used to build both content knowledge about the system and process knowledge about the social dynamics important to the intended outcomes of the programme; and also management knowledge about way the programme is operating.

Overall, three key factors emerged as important to the practice of using P & D evaluation to support capacity for social learning in complex environmental problem solving situations: (i) the evaluator, their skill, values, and role; (ii) the mandate and location of the evaluation; (iii) organisational disposition to learning and change.

The junction between evaluation and social learning requires a set of knowledge about social learning and skills in a range of P & D evaluation approaches that can facilitate learning, not only for programme efficacy, but to support the resolution of the problem itself. This requires a particular role of the evaluator (and a willingness to pursue this) beyond independent technical advisor to engaged facilitator of learning and change. Furthermore, those seeking to use P & D evaluation approaches to support social learning will often find there is a need to negotiate the mandate of the evaluation away from critique, judgement or accountability towards learning, development and change. The ability to influence the nature of the evaluation is a fundamental limiting/promotion factor effecting the contribution it can make to the social learning capacity of the situation. This in turn is

likely to be influenced by the disposition to learning and change of the lead organisation sponsoring the programme.

There are two important aspects to an organisation's proclivity and openness to learning. The first of these is familiarity and use of evaluation. The assessment of the cases and the critical conversations suggest that, unlike in sectors such as health and education, evaluation of any kind is not a core component of programmes across the environmental management sector in New Zealand. To set against the obvious disadvantages of this for relying on evaluation as an inroad to supporting social learning is the potential of establishing a new convention for evaluation that does not have to first and foremost serve the needs of accountability.

The second factor is overall cultural interest in learning and change. The cases explored here and the critical conversations suggest that the regional and territorial agencies involved in environmental management initiatives are underprepared for the innovation required of the agency itself. The successes of the case story projects, and the cases discussed in the critical conversations, appear reliant on pockets of originality and creativity within organisations that may even run counter to organisational norms.

To address these challenges, guidelines for working with P & D evaluation to support social learning are, firstly, to find champions who are interested, willing, and able to make change happen within their organisation; secondly, to understand the social learning challenges of the situation (potentially using the SWOT evaluation based on the social learning framework proposed here); and thirdly, to use this contextual analysis to design an appropriate response that can take forward some aspect of the social learning potential of the situation.

9.2.1 Additional conclusions from the case stories

In addition to the conclusions that can be drawn about the application of P &D evaluation approaches to support social learning the case story review offers some unique insights into three very different environmental management programmes.

In Case Story One, the early experience of establishing the WCMP is illustrative of how the potential for CBM initiatives to foster capacity for social learning among institutional and community stakeholders can be let down by a 'cook book' type methodology that has

insufficient awareness of its own fundamental theories of action. The WCMP began with inadequate understanding of the political sensitivities behind bringing various groups in the catchment together. Furthermore, adherence to the pre-designed approach to the programme (based on the ACAP methodology), coupled with implementation that had no built-in monitoring or evaluation, meant the WCMP was unable to respond to important events that challenged and shifted it from its planned trajectory. While programme participants, and the wider community affected by the programme were able to make use of the evaluation findings to cause a reassessment of the programme's directions, there was no system for learning further down the track. What this highlights for other CBM initiatves is the need for practical mechanisms to promote reflection and responsiveness in three contiguous spaces: (i) understanding the social dynamics of the interacting stakeholders at the heart of the programme, (ii) understanding the programme's goals, and the logic of its actions; and (iii) how the programme fits alongside core concepts that underpin CBM (see Figure 4.4 in chapter 4).

Case Story Two— the Target Zero programme was illustrative of a common criticism of resource use efficiency and cleaner production programmes —their failure to appreciate organisations as social systems and consequently their tendency to take a mechanistic approach to supporting innovation (e.g. concentrating on structural elements of teams, or relying on simplistic recipes for behaviour change). In this case, the Target Zero programme already encouraged thinking about organisations as technical systems. The intervention of the teams' checklist evaluation expanded this to thinking about the organisation as a social system. In particular it encouraged practical self analysis of the groups themselves, their behavioural norms and practices and their relationship to the organisation. However, as in the case of the WCMP, the ultimate failure to integrate evaluation into the programme highlights that limited skills of consultants and programme managers can be a real constraint in embedding reflective, learning-based approaches to environmental management programmes.

Case stores three and four are both based in the ICM programme which is a comparatively unique example of the challenges of undertaking transdisciplinary research in environmental management. To makes progress the ICM programme had to address theory and practice needs in engagement, building knowledge, integration, and the theory of ICM. These cases revealed both active experimentation around creation of platforms for social learning, and

frameworks to help programme participants visualise across complex systems, to be important components of transdisciplinary research. They also illustrated a different role for social researchers. Rather than simply adjuncts to biophysical research creating further data streams on the social components of the problem system they can make important contributions as specialists in the processes of integration, and problem solving.

9.3   Implications for environmental management in New Zealand

The primary purpose of this research has been to contribute to the challenge of building capacity for social learning in complex environmental management situations. Three issues of importance to the practice of environmental management emerge from this thesis. The first concerns the practical value of coupling the social learning framework with a practice of review and reflection to directly interpret the social learning challenges and capacity of a problem situation. The second is an extension of notions of what professional expertise is useful to help address complex environmental problem situations; and the third concerns the possible risks and value of the concept of social learning itself.

9.3.1   The social learning framework as a practical tool

This study has tested and confirmed the validity of a postulated link between P & D evaluation as a means to build capacity for social learning in four different cases. In each instance a specific set of challenges were addressed, such as improving the learning and collaboration capacity of groups, or supporting systems thinking. This is a selective use of the ideas of social learning and represents a progressive rather than holistic approach to building the social learning capacity of a given situation. The task of building capacity for social learning may be broadly interpreted as 'how to translate existing theory on social learning in to practice'. However, where there are limits to time, skill and resources this needs to be rendered down to particular challenges in a given problem context. Some choices need to be made about which areas are priorities to address or are most amenable to progress. For instance in one situation a pressing social learning challenge may be 'How can we facilitate active learning processes that confront existing assumptions amongst multiple stakeholders?' In another situation the question demanding attention may be 'How can we facilitate social learning within the constraints of existing management and planning approaches?'

The SWOT/needs analysis, coupled with the Social Learning Framework, is arguably an immediately practical tool for environmental managers wanting to work with the concept of social learning but uncertain where to begin, and without access to specialist evaluation or social learning support. In Figure 9.1 I propose a set of possible prompt questions, derived from the Social Learning Framework that can be used in a review of the existing capacity for social learning of an environmental management programme. These questions were designed as a starting point for those engaged in addressing complex environmental problems. They are examples, are by no means definitive, and have been structured to suit a generic audience. Other sets of questions more specific to the particular context of the situation or the skills and proclivities of the enquiry group can be constructed using the fundamental characteristics of the core elements of social learning outlined in Table 2.5 (Chapter 2).
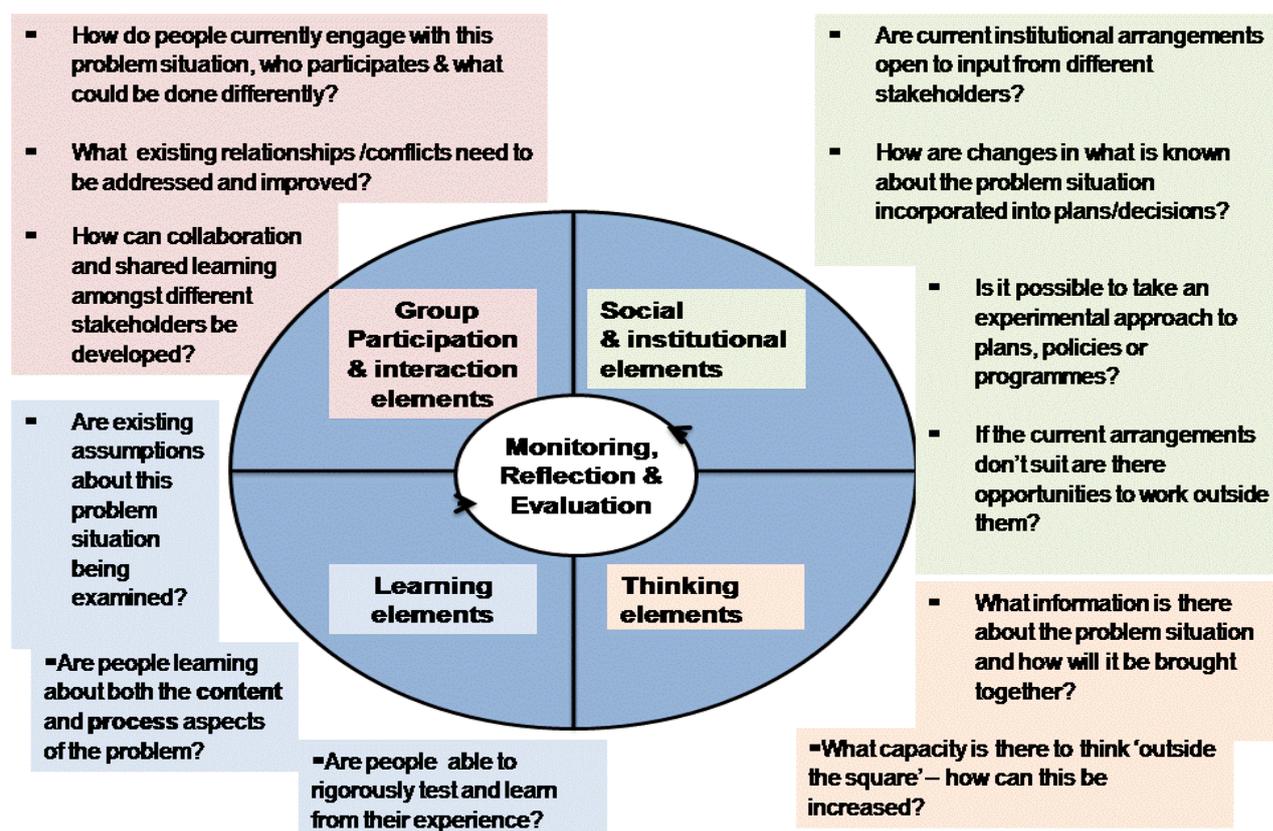

Figure 9.1 Questioning the social learning capacity of a problem system (Kilvington & Allen 2009).

Using a participatory process to undertake this assessment, which involves programme proponents, managers and participants reviewing the strengths, weaknesses and needs of the programme, and jointly assessing priorities – would both increase the value of the review and the overall understanding and efficacy of those involved in the programme

implementation. Picking and choosing aspects of social learning to work with may seem contrary to the holistic nature of the construct. However, using the Social Learning Framework as a basis for assessment means this selection can take place from a position of awareness of the whole. In arguing the merit of using social learning as a basis for understanding complex problem situations I am conscious of the significant shift in thinking around problem solving itself that is required. The attraction of using the Social Learning Framework in the planning phases of environmental problem solving is its potential to build expertise and competency. However, what this hinges on is a diagnostic approach to problem solving that doesn't just focus on the problem but on the solving capacity. Accordingly, having completed an initial scoping of the problem situation using some form of social-learning-based critique, the next question is how well the proposed intervention matches the social learning capacity needs. For instance does the success of the programme rest on platforms for learning and collaboration that simply do not exist? If so, how will this need be met?

Furthermore, since the problem situation will not remain the same over time (indeed the basic assumption of any intervention is that the situation will change), it is a premise of good programme management to keep a watchful eye for what changes are occurring, whether important issues are being progressed, as well as what significant factors are changing in the context around the problem which will further influence the programme's effectiveness. For instance, it may be important to track any shifts in the institutional context that could make decision-making more or less open to participation by multiple parties. It is not practical or even desirable to monitor everything, and programmes need a way of prioritising the pertinent elements within the problem situation. Accordingly, the Social Learning Framework can be used to derive monitoring criteria and provide a basis to ongoing programme management. This also enables a programme to track progress in the overall social conditions for problem solving rather than the more physical elements on which the programme may be focused (e.g. tracking changes in stakeholder capacity for collaboration, not just improved water quality).

A final or perhaps first issue is whether social learning is the right framework in the first instance. Building social learning capacity for addressing environmental issues is a resource, skill, time and expertise-hungry undertaking. Consequently, it is useful to first conduct an assessment of whether the problem would benefit from such an approach. Arguably social

learning becomes a viable, even necessary option where the situation is intractable, where there are many unknowns or unknowables. Hence questioning, trial, assessment and reconsideration need to be built into the management response – and, the means to enable this to happen becomes a fundamental premise of the proposed intervention. Also, social learning becomes important where there are many diverse groups in society who can contribute important information and whose actions are important to the situations; where the problem situation to date has suffered from failures of short-term interventions; and where there is a genuine desire to build more independent problem-solving capacity.

9.3.2   Social learning and environmental management professionalism

Recognising the overall potential for evaluation to support social learning as outlined by Cronbach (1982, in Greene 2004) and others, and the directly pragmatic possibilities as witnessed in the case stories, at the very least what emerges from this research is the possibility of the profession of environmental management to form new partnerships with those skilled in P & D evaluation to support the social learning capacity in environmental programmes. However, this presupposes that there are those motivated, skilled and interested in taking on this challenge.

In New Zealand there are difficulties on both the demand and supply sides of building capacity for social learning. In terms of the demand for social learning it is reasonable to ask – just who is responsible for driving the processes of complex environmental problem solving in New Zealand? Is it the territorial and regional resource management agencies? Is it the central government departments and ministries such as the Department of Conservation or Ministry for the Environment? Or is it the responsibility of non-governmental organisations, sectors and communities with the greatest stake in the outcomes of these issues, to push for progress? The answer is all and yet none of these. Each undoubtedly have a stake, a role and at times may take the lead in driving particular programmes of activity aimed at making inroads into complex problem situations. However, while each may consider the outcome of the particular issue important to them, it is another step to accept responsibility for fostering a more comprehensive capacity to respond to issues that might empower others. The fundamental role of agencies such as local and regional authorities is to make decisions and implement policy. Any form of activity that fostered the independence and self-efficacy of stakeholders might not only be considered a distraction but also act to undermine their ultimate authority.

Furthermore, while it may have been convenient to bring social learning into environmental management programmes through the door of programme evaluation, realistically it requires a clear mandate from the beginning. Without a readiness and willingness to embrace ideas about problem solving, which demand changes in way existing agencies operate, it is hard to conceive of anything but continued isolated experiences – or 'islands of success' for social learning. This makes the role of champions even more apparent.

I argue that to meet both the supply and demand challenges of building capacity for social learning there is a need to establish a new professional space. I do not anticipate that the evaluation profession per se would be the community that would create the impetus for more sophisticated, enquiry-based methods of problem solving in environmental management. As a discipline evaluation is about promoting learning and development in a wide range of problem settings. As a community in New Zealand it has its own challenges, and importantly, linear communication and information provision is still the dominant learning model for evaluators. Thus promoting wider use of evaluation in environmental management may not serve the purposes of building capacity for social learning at all.

Nevertheless, in recent years a common connection has developed between the community of practitioners interested in collaborative and participatory environmental problem solving and P & D evaluation. In late 2009 this saw the formation of the Evaluating Sustainability network. As a special interest sub-group of ANZEA its stated purpose is to *work to ensure that environmental and sustainability issues are addressed in evaluation, and that the best evaluation tools are available to those working in the environmental and sustainability arena* (Christine Harper, pers. comm. January. 2010), formally linking the two fields. These somewhat organic connections are a common pattern among those who could be said to currently make up the community of practitioners and researchers involved in promoting deliberative and adaptive forms of resource and environmental management.

The primary focus of this community varies widely. Their emphasis may be on facilitation of multi-stakeholders initiatives, or working with integrative modelling of complex ideas; and their drivers may be to mobilise and empower communities to respond to local environmental issues, or to widen the knowledge sources and scope of environmental decision making structures. To do this they source the methods, theories, ethics and values of multiple disciplinary and praxis constructs such as participatory rural appraisal,

collaborative learning, co-management, participatory communication, social learning and P & D evaluation. Furthermore, this body of practitioners is located within local, regional and national government agencies, and in non-governmental organisations. They can be found running their own practice consultancies, or, as in the case of CLEM, located within Crown Research Institutes. They are also highly likely in their careers to have spent time in more than one of these spheres. What this seemingly eclectic group share are parallel values about the nature of complex environmental problems, and the importance of diversity and inclusivity in determining solutions. What they lack is a coherent, widely recognised remit in complex environmental problem solving.

The strengths of this network lie with its diverse professional expertise and the capacity that stems in many ways from this – which is to work within multi-skilled and multidisciplinary groupings. Its weakness stems ironically from the same source. By embracing so many apparently differently styled approaches and methodologies, they are not readily recognisable as a professional sector. Furthermore, those interested in securing their services are faced with a bewildering array of options, between which it seems difficult to distinguish without some prior knowledge. This correspondingly makes it less likely they will be called upon to support mainstream environmental problem solving initiatives. Consequently the experience of working in this field is one of constantly negotiating entry points for situations within which they can legitimately operate. The opportunities to work in the programmes that make up the case stories in this research are examples of this.

Providing a more solid platform for this collective expertise is important. One of the means by which this might be possible is through the use of boundary organisations. Forsyth (2003, p. 141) describes these as *social organizations or collectives that sit in two different worlds such as science and policy, and can be accessed equally by members of each world without losing identity*. The distinguishing feature of these organisations is that they provide sites where different epistemological networks may unite. In a sense these organisations often act as intermediaries, but beyond this they create a recognised space for intersection. The role of boundary organisations in environmental management is growing internationally, extending beyond traditional purposes of bringing together the demand and supply sides of knowledge development and acting in arena where problems are more unstructured. Here their role is not only to source and integrate relevant formal and informal knowledge, but to support processes of transdisciplinary research (Roeland 2004). The

attraction of the boundary organisation concept is in its potential to allow for the necessary interaction between actors of all kinds (e.g. NGOs, government agencies, sector representatives) without the loss of agency for any of these.

Ultimately, an important signal emerging from this thesis has been the need for change within the professional environmental management sector as it stands in New Zealand today. The examples offered through this research have been illustrative of the severe constraints that cause process paralysis in current problem-solving approaches to complex resource and environmental management dilemmas. These constraints are both structural and, perhaps even more significantly, are part of a collective organisational psychology governing the expected remit and preferred modes of operation of such organisations. There appears little opportunity for innovation and almost no room for social learning or adaptive management within this highly structured context. This still seems to be the case in the face of a common quest for 'new ways of working' on complex problems. The call for a new profession could equally apply to the current practices of environmental management to be found in New Zealand resource management agencies. A more dynamic and responsive approach to management is required that moderates the addiction to the artefacts of planning, and instead measures its success in terms of transformational impact. What this would mean in practice is a reconsideration of what is currently regarded as core expertise in environmental management, rejecting the primacy of biophysical science and planning disciplines, instead seeking proficiency in integration, facilitation, systems thinking and knowledge brokerage.

9.3.3 Value of the social learning concept

Finally, it is worth considering the value of social learning concept itself to the practice of environmental management. Over the years of working on this PhD I have witnessed a small but growing usage of the term in New Zealand. Not all of it refers to the conceptually rich version expounded here and by theorists such as Keen et al. (2005), Pahl-Wostl (2004) and others. This greater circulation of the idea of social learning has both positive and negative aspects. In the first instance the very existence of an idea offers a chance for those who use it to pause and consider in what way the current circumstances in which they find themselves match with or contradict it; giving new meaning to and opening the door to new interpretations of previously unexamined phenomena. As Gouldner (1970 in Cooperrider &

Srivastva 2001) observes: *every social theory facilitates the pursuit of some, but not all, courses of action and thus encourages us to change or accept the world as it is, to say yea or nay to it.*

Alternatively, when a concept becomes overused, loses its originality and hence ability to challenge, it can be that the usage that is commonly settled on may even run contrary to its provocative potential. As a consequence, people assume that because something has been given the title 'social learning' then this is what is taking place, when it may actually be a renaming of the status quo. An example of this has been the co-opting of terms such as 'dialogue', and 'engagement' to mask otherwise conventional forms of communication (Escobar 2009). During this research there have been times when I thought that the term social learning may be problematic. Its diverse origins leave it open to multiple interpretations and no one can be considered wrong in using the term at its most simplest, i.e. meaning 'people learning'. This 'othering' of the learner in social learning, i.e. assuming that the learner is other than those who are nominally in charge of the situation, is one of the concept's most likely operational pitfalls.

Potentially the greatest value of social learning is its dynamic quality. In every unique situation the meaning of social learning has to be determined for those and by those involved, and furthermore acknowledged to be continuously changing. Many have already outlined the appeal of social learning as both a normative goal and a basis for understanding the complexity of these situations. The danger of social learning becoming, as Röling (2002) terms it, *the new orthodoxy* is an argument for linking social learning with active critical reflection.

9.4   Summary and future research

In this thesis I chose to focus on building capacity for social learning. This in itself is a substantive field, and more could be done to contribute to persistent challenges within it (such as understanding individual and collective learning, and developing applied approaches to systems thinking). Furthermore, the four cases illustrate that developing capacity for social learning is dependent on the institutional arrangements and the learning receptiveness of key agencies that drive many of the initiatives. Understanding the organisational competence for complex problem solving in the environmental management sector of New Zealand is an important but as yet underexplored research area. What may

prove important to this is the role of organisations and groups that operate along the boundaries between traditional disciplines and professions.

This research has contributed to the practical value of social learning. What this is reliant on is a more rigorous approach to working with the ideas which it embodies. If it is to be a conscious framework of use to resolving resource use and environmental management dilemmas there must be greater literacy about the core elements of social learning and their relationship to the problem situation. P& D evaluation offers structure for this disciplined inquiry as well as tools for building capacity along the way. Its wider usage in environmental management initiatives would contribute to increased programme efficacy and learning potential.