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Learning from the Enemy: Identity, Conflict, and Inter-Organizational Learning

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A thesis submitted in partial fulfillment of the requirements for the degree in Doctor of Philosophy

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by

Patricia A. MacDonald

Graduate Program
in
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LEARNING FROM THE ENEMY: IDENTITY, CONFLICT, AND INTER-ORGANIZATIONAL LEARNING

ABSTRACT

Conflict provides an opportunity to learn. However, conflict also activates identity and dysfunctional learning processes that protect identity. Neither the learning nor the identity literatures provide an explanation for how some organizations overcome that challenge and learn; and relatively little research has considered the connection between identity, conflict and organizational learning.

This thesis attempts to fill this gap through a qualitative research study that examines the relationships between identity, conflict, and organizational learning, using a comprehensive practice based model of inter-organizational learning.

The specific research questions guiding this study are: *What is the role of identity in organizational learning between organizations in conflict?* And: *How does an organization learn from another organization with which it is in conflict?*

I use a case study design to examine a single exceptional case in the context of an extreme inter-organizational conflict. Qualitative data were collected through archival research, semi-structured interviews, and on-site observations.

My findings provide a rich basis for analysis and theorizing, and provide evidence in support of my proposed model of inter-organizational learning. This study suggests that inter-organizational conflict is a situation where individual to individual learning can ultimately influence the learning that occurs in their

respective organizations. Conflict stimulates individuals from each organization to interact over an issue. Their interpretations of the issue and their responses to each other are affected by their social and role identities and by their respective organizational identities. It is the actions of individuals and the social processes and practices through which they interact that either facilitates or constrains inter-organizational learning.

This dissertation contributes to academic research by highlighting the importance of the relationships between identity, conflict and learning; by exploring the role played by the practices associated with identity in shaping individual behaviour and organizational learning; and by demonstrating the implications of different sources of conflict on inter-organizational learning. Finally, my process model of inter-organizational learning as practice provides a more socialized theoretical background for understanding and addressing the challenges of learning between "enemies".

Key words: Inter-organizational learning, conflict, identity, practice-based view

DEDICATION

To my husband, Dan, without whom this would not have happened.

ACKNOWLEDGEMENTS

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CHAPTER 1: INTRODUCTION

1.1 Background and Motivation

The growing use of cross-sector partnering, multi-party initiatives and the rise of activism by shareholders and stakeholders have increased the need for firms to consider and integrate diverse perspectives (Hart & Sharma, 2004; Rothman & Friedman, 2001). More than ever it is critical that firms "anticipate and respond to impending threats, conduct experiments, engage in continuing innovation" (Argyris & Schon, 1996, p. xvii). Nevertheless in practice few firms readily embrace the learning opportunities inherent in the conflict that confronts them, and managers appear skeptical about the power of conflict to invigorate problem solving (Eisenhardt, Kahwajy, & Bourgeois, 1997; Tjosvold, 2008). The role of conflict in learning has been given scant attention in research as well, despite Argyris and Schon's (1978) early recognition that conflict provides an opportunity to learn.

Research to date has revealed a seeming paradox in the relationship between conflict and learning. This paradox could be characterized as the reality of conflict versus the promise of conflict. The promise of conflict is that learning can result when individuals explore the reasoning behind their conflicting positions and the meaning these positions have for them (Argyris & Schon, 1978; Bush & Folger, 1994; Rothman & Friedman, 2001). Conflict is also a key part of creating shared understandings and interpretations; a mechanism through which

learning occurs at the collective, group and/or organization level (Crossan, H. Lane, & White, 1999; Senge, 1990).

Conflict's promise for organizational learning is based on the information processing view of individual and group dynamics, as are earlier explanations of organizational learning (e.g. Huber, 1991). In this perspective the generation and implementation of varied or original ideas is the result of negotiations over scarce resources or the reconciliation of differences in knowledge. However, research has shown that no matter what its origin, conflict tends to quickly shift to identity differences, particularly if it persists (Mooney, Holahan, & Amason, 2007). This is the more pessimistic view and one that is supported by much evidence. That is, the conflict created by a diversity of perspectives produces divisions and tensions and negative performance outcomes in general. This view is the social identity perspective and explains the inter-personal and inter-group defensiveness triggered by difference (Mannix & Neale, 2005; Tajfel & Turner, 1979).

Conflict that is rooted in identity has been shown to be dysfunctional with regard to learning (A. Brown & Starkey, 2000). Often individuals' ability to learn is blocked by defensive reasoning (Argyris, 1991; A. Brown & Starkey, 2000). Moreover individuals' multiple identities and the identities that they attribute to their organizations can inhibit learning (Nag, K. G. Corley, & D. A. Gioia, 2007). Research has shown that individuals will support activities that are consistent with their organization's identity, they will stereotype themselves and others, and they will work to maintain coherence between their activities and their identity, as well as their organization's identity (Ashforth & Mael, 1989; Dutton & Dukerich, 1991; Nag et al., 2007). While these theories describe how conflict inhibits

learning they do not explain how individuals and organizations might overcome the constraints imposed by identity, thus enabling them to address differences in knowledge and understanding, even while the identity based conflict persists.

In this dissertation, I explore the conditions that enable organizations and their managers to overcome the multi-level constraints imposed on learning by their social, role, and organization identities. I focus on the impact of identity because research and practice has shown that all conflicts are at least in part rooted in the identities of the individuals, groups, or organizations involved (De Dreu & Gelfand, 2008). While conflict may originate from resource scarcity, knowledge differences, or identity differences, all are usually present in any situation (De Dreu & Gelfand, 2008). Additionally, in situations of pervasive and escalating conflict, issues of identity tend to predominate over other concerns (Fiol, M. Pratt, & O'Connor, 2009; Lederach, 1995; Mooney et al., 2007). I contend that the impact of identity on beliefs and behaviours must be understood before either identity-based conflict or knowledge-based conflict can be effectively addressed. Therefore, I explore the conditions and practices that support a shift in attention away from identity and ideological differences to the potentially more productive knowledge-based and/or resource-based aspects of a conflict.

The key concepts used in this dissertation are:

Inter-organizational learning - the consequence of an organization's direct interaction with other organizations. It is both a process and an outcome and involves cognitive and behavioural change at multiple levels of the organization.

Social identity – is an individual's self-categorization as a member of a group as well as the value and emotional significance that the individual places on that membership (Tajfel & Turner, 1979).

Role identity - refers to the meanings and behaviours that people attach to the multiple roles they typically play, such as occupations and/or professions (Stryker & P. Burke, 2000).

Organizational identity – comprises both institutionalized notions of identity which constrain and shape individuals' interpretations and collective meanings that are formed as individuals reach mutual understanding and shared interpretations (D. Gioia, Shultz, & K. Corley, 2000; Ravasi & Schultz, 2006).

Conflict- entails incompatible activities such that one party's actions interfere, obstruct, or in some way get in the way of another's action (Deutsch, 1949; 1973). In this dissertation "enemies" are organizations with incompatible activities.

1.2 Research Questions

Based on the motivation and background outlined, in this dissertation I consider the following research questions:

> *Research Question 1: What is the role of identity in organizational learning between organizations in conflict?*

I begin to answer this question by first establishing that inter-organizational learning outcomes are possible in the context of conflict. Having established that inter-organizational learning is possible, I then examine the practices through

which this learning was accomplished and the conditions that were present; in particular the individual and organization identities and their attendant behaviours. I draw a link between identities, behaviour (practice), and learning outcomes. Drawing on previous research, I look at actions taken by individuals and groups with regard to a specific conflict to understand identity activation against learning opportunities.

> *Research Question 2: How does an organization learn from another organization with which it is in conflict?*

In order to explore the processes that support inter-organizational learning, I consider different actions at the moments of engagement between the organizations and how that action manifests back across the individual and organizational levels over time. I examine behaviours at the nexus of inter-organizational learning, conflict and identity. I then determine, from the data, the processes through which the identities and inter-organizational learning are connected.

In the next section I introduce the theoretical grounding for this study.

1.3 Theoretical Grounding

Inter-organizational learning in conflict is a case where individual to individual learning can ultimately influence each individual's respective organization. The basic building block of learning is stimulus - response, with the conflict acting as the stimulus. Individuals from different organizations become associated with a conflict and it is the conflict that activates their identities. The

individual and respective organizational identities that are activated strongly influence what the individuals attend to and also their interpretation of it. Their individual interpretation of the conflict, the other individuals involved, and the situation in turn influences their response (i.e. their feedback) to others both outside and within their organizations. As noted above, there has been limited theorizing on the connection between identity and organizational learning and it is equivocal, suggesting that identity's impact on the process of organizational learning can be negative (A. Brown & Starkey, 2000) or positive (K. Corley & D. Gioia, 2003) depending on the context and conditions.

My focus on behavior derives from my intention to understand the range of conditions associated with inter-organizational learning. Empirical studies are dominated by the assumption that inter-organizational learning is positive and that it manifests as changes in knowledge bases (i.e., patent counts) or as mastering a specific competence or technology (e.g. Argote, Ingram, J. Levine, & Moreland, 2000). In this research I consider how individuals and organizations learn from and with each other and about the context within which they are operating and how identity influences inter-organizational learning in that context.

To address Research Question 1, I develop premises which support a model describing the relationships between the concepts of identity, learning, and conflict. I propose that the extent to which individuals experiment with new behaviours is a function of the interaction of their individual social and role identities and their respective organizations' identities. Previous research has shown that under certain conditions individuals will experiment with new behaviours, without changing their beliefs (Inkpen & Crossan, 1995). Building on

this research I suggest that depending on their "repertoire" of identities and the stability of their organizational identity, individuals may be able to tap into the behaviours associated with a common social or role identity. This common identity provides a common language and set of behaviours with which to approach the conflict.

Likewise, the likelihood that individuals will experiment with new behaviours depends on the emphasis of their organization's identity and their level of identification with it. For example, individuals that identify with an organization that defines itself by deutero-learning processes, such as discovery (Schon, 1986), are more likely to experiment, regardless of their individual beliefs.

If these individuals persist in this changed behaviour they may be able to suspend their belief systems and explore new interpretations. This shift in interpretation facilitates dialogue within and between organizations and raises the possibility of the integration of new information (Bohm, 1996; Crossan et al., 1999). Depending on the congruence of this new information with their current identities, as well as on their own and their organization's practices, they may then be prompted to examine their existing beliefs, including their individual or their organization's identity (Rothman & Friedman, 2001). I put forward that inter-organizational learning occurs at the intersection of identity (who we are) and practice (what we do).

Whereas Research Question 1 is developed through theoretical grounding and framed by specific premises, Research Question 2 is opened for exploration within the structure of this dissertation. Given the dearth of research examining the social processes of inter-organizational learning between conflicting

organizations I allowed the data to speak for itself. In the next section I describe the research design that supported this approach.

1.4 Research Design

The research was conducted using a case study methodology to compile and compare themes in a single industry, salmon farming in British Columbia, Canada, which has been plagued by conflict since its inception. The case study method is most appropriate for research that asks "how" and "why" research questions and that is conducted by accessing people who can recall the important events with relative accuracy (Yin, 2009). Also this method is well suited to an in-depth analysis of complex phenomena via multiple sources of data, as described below. Iterative tabulation of evidence for each construct sharpens construct definition, validity, and measurability. Finally, comparison with confirming and contradicting literature helps to build internal validity.

This methodology enabled me to capture both the relationships between identity, conflict and learning (through semi-structured interviews) and the dynamics of those relationships over time (through repeated interviews with the same individuals or organizations, archival documents, newspaper articles, and observations).

I analyzed data from semi-structured interviews with 47 people, 1077 newspaper articles, several hundred pages of archival documents, and numerous hours of direct observation. I further triangulated data by including multiple sources, such as company spokespeople, environmentalists, government officials, industry association representatives, academics, members of First

Nations, and other community members. The data collection process occurred in two phases. The first phase involved updating an existing data base that I had been instrumental in compiling. After an initial analysis of that data, I focused my second phase of data gathering on the negotiation and implementation of a specific learning initiative between the largest company in the industry and a coalition of environment groups.

I analyzed the data using NVivo to identify relevant contextual factors, the major constructs and learning outcomes. Following the trajectory of the learning activities and outcomes, I categorized the relationship between the major constructs and the processes underpinning the repeated interactions of the focal organizations.

My prior experiences and beliefs undoubtedly shaped this research (Willig, 2001). Accordingly, I present a statement of reflexivity to allow readers to "explore the ways in which a researcher's involvement with a particular study influences, acts upon and informs such research" (Nightingale & Cromby, 1999, p. 228). I am a life-long resident of Ontario in central Canada. I come to this research and to the conflict surrounding the salmon farming industry in British Columbia with no prior involvement or affiliations with either the industry or the environmental movement. I began this research without an opinion on the extent of salmon farming's impact and now, after 5 years of studying the situation, I have no clearer alignment on that question than when I started. It is a complex question that concerns me both as a Canadian, as a researcher, and as an advisor to organizations. I am an accredited mediator, with more than 20 years management consulting experience and I have facilitated conflict-laden

interactions within and between a variety of individuals, groups, and organizations. Recently I helped to manage the post-merger integration of two financial services companies, concurrent with completing a Master of Arts in Organizational Conflict at Royal Roads University in British Columbia. This experience ignited my interest in the conditions and processes that underlie mutually positive individual and inter-organizational connections, and especially around contentious issues. It also exposed me, for the first time, to the extent of the conflict around salmon farming, and to the range of views and perspectives present in the context. Finally, as a result of my experience and education, I find it difficult to view conflict resolution and learning as independent processes. Thus in collecting and analyzing the data contained in the study, I am undoubtedly biased toward learning as a positive outcome. I would like readers to be aware of my perspective when assessing my research and findings.

1.5 Thesis Contribution

The main contribution of this study is in highlighting the relationship between conflict, identity and learning. This case showed the importance of identity in shifting behaviour and the role of conflict and learning processes in shifting aspects of identity. Examining these concepts together provides insight into the conditions under which inter-organizational learning is more likely to occur.

This research demonstrates the role played by social, role, and organizational identity in shaping individual actions in response to conflict and in doing so demonstrates the importance of behaviour to learning in such situations. My findings suggest that unless we understand how individual and organizational

identities are connected to behaviour it is hard to understand their impact on learning. In the case of conflicted relationships the behaviours or activities associated with common identities may hold the key to sustained behavioural change which may generate cognitive change and learning.

My process model of inter-organizational learning as practice provides a more socialized theoretical background for understanding the challenges of inter-organizational learning. It highlights the importance of considering all of the components of learning and suggests that it is the nexus of practitioners, practice, and praxis that delivers inter-organizational learning.

Finally, this work contributes to the understanding of the implications of different sources of conflict to inter-organizational interaction. This work revealed that a shift in emphasis from identity based conflict to the socio-cognitive aspects of a conflict, instigated mutual problem solving behaviour, even while the underlying conflict of interest persisted. This research underscores the importance of understanding that at some level all conflicts are identity based, and the need to understand how organizations come to work together despite, and in the presence of, their identity differences.

This dissertation also contributes to management practice by alerting managers and organizational leaders to the possibilities inherent in conflict and in interaction with diverse organizations. If organizations are more attuned to social trends and sensitivities, managers may be alerted to risks and opportunities they might not otherwise have spotted, and organizational capabilities will likely increase. In addition, this work raises managerial awareness of the implications of their organization's characteristics (i.e. its identity) on its ability to learn from

other organizations. This is especially relevant to organizations involved in partnering, joint ventures, or mergers. Finally, this research provides guidelines on ways to consider and integrate disparate perspectives and to staff inter-organizational learning initiatives.

1.6 Thesis Organization

This thesis is organized in seven chapters.

Chapter 1 provides an overview of the phenomenon of interest and the research questions.

In Chapter 2, I review the relevant literatures on learning, identity, and conflict, in order to provide theoretical background for my study.

In Chapter 3, I position my research in the practice based view and develop premises in support of a model that explains the relationship between conflict, individual and organizational identities, and inter-organizational learning.

Chapter 4 explains the methodology used in this study, including the rationale for a case based design, the data collection methods and the analytical procedures.

Chapter 5 presents the analysis and interpretation of my findings and their relationship to the premises and model.

In Chapter 6, I present a discussion of my findings in the context of current research.

Chapter 7 concludes this dissertation by providing academic and practitioner implications of the findings, discussing the limitations of this study, and suggesting directions for future research.

CHAPTER 2: LEARNING, IDENTITY, AND CONFLICT

Inter-organizational learning is strongly influenced by the context within which it occurs yet learning is the process by which individuals and organizations both adapt to and alter their context. Learning and adaptation occurs in spite of the constraints provided by the respective organization's institutionalized learning (i.e. practices, procedures, and routines) and the individuals involved. Conflict is necessary to prompt learning yet conflict frequently inhibits learning by triggering defensive responses at all levels. In this section I review the relevant literature on inter-organizational learning, identity, and conflict. For each of these fields I first provide an overview of the relevant literature, I then summarize how that particular stream of research has addressed the other two phenomena and in the final section I summarize and integrate prior theory (See Figure 2-1: Learning from Enemy: The Theoretical Context).
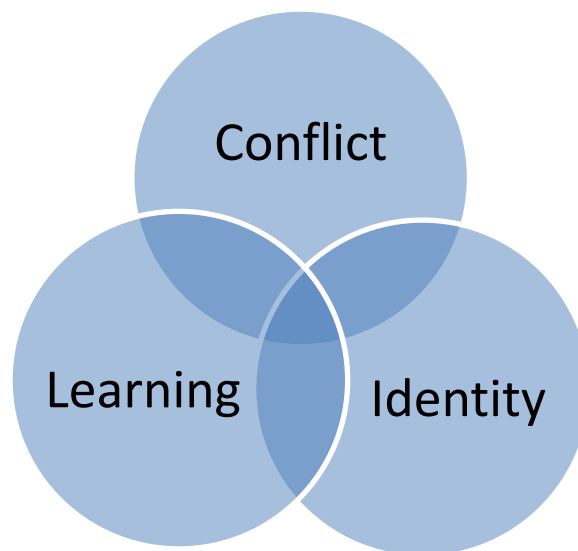
Figure 2-1: Learning from Enemy: The Theoretical Context

2.1 Inter-Organizational Learning

2.1.1 Organizational Learning as the Basis of Inter-Organizational Learning

Current understanding of inter-organizational learning builds on the rich

body of literature on organizational learning. Organizational learning is an

established field of study that has been reviewed at regular intervals over the

past several decades (Bapuji & Crossan, 2004; Crossan, H. Lane, White, &

Djurfeldt, 1995; Easterby-Smith, 1997; Easterby-Smith, Crossan, & Nicolini,

2000; Fiol & M. A. Lyles, 1985; Huber, 1991; Leavitt & March, 1988). Earlier

work, (e.g. Huber, 1991) took an information processing perspective of

organizational learning, depicting the conflict created by a diversity of views as

very important to learning. Later research considered the social processes

involved and raised questions, still relatively unexplored, about the impact of

conflict on learning (Easterby-Smith et al., 2000). While these reviews illustrated

the long standing ambivalence of organizational learning scholarship toward

conflict they also identified some common threads.

Organizational learning, broadly defined as organizational development and

change, is a multi-level phenomenon (Easterby-Smith et al., 2000) containing

four related processes – intuiting, interpreting, integrating and institutionalizing,

which occur at the individual, group and organizational levels (Crossan et al.,

1999). The processes of intuiting and interpreting are augmented by the action-

based processes of information seeking and experimenting at the individual and

group level (Zietsma, Winn, Branzei, & Vertinsky, 2002). Organizational learning

depends on the interaction of both the content and the context (J. Brown &

Duguid, 2002; Lave & Wenger, 1991) and it refers to both the process of learning and the products of the learning process. Generally the learning literature emphasizes learning as a mechanism through which organizations can enhance performance (Argyris & Schon, 1978; Fiol & M. A. Lyles, 1985) despite recognition that learning may be "equally about how to negotiate current relationships" (Easterby-Smith et al., 2000, p. 13).

There is also general agreement that organizations learn through individuals and that individual learning is a fundamental building block of organizational learning (e.g. Cohen & Levinthal, 1990). However an organization's learning may be more or less than the sum of individual learning (Argyris & Schon, 1978; Crossan et al., 1999; Fiol & M. A. Lyles, 1985; Huber, 1991; Starbuck & Whalen, 2008). Individuals and the social processes, through which they interact, both within and outside their own organization, either facilitate or constrain organizational learning (Crossan et al., 1999). This is because the institutionalized learning of their respective organizations, including the established practice, procedures and routines, constrain how individuals and groups interpret and integrate feedback.

2.1.2 Inter-Organizational Learning Defined

As with organizational learning, inter-organizational learning can be thought of as both a process and the products of that process. Inter-organizational learning is typically described as the process through which a group or organization exchanges, receives, and is influenced by the competence and technical knowledge of others (Van Wijk & M. Lyles, 2008). It depends both on

the respective resources and capacities and the inter-organizational dynamics of the organizations involved, as well as the nature of the knowledge being exchanged or created (Easterby-Smith, M. Lyles, & Tsang, 2008). Reciprocal learning is a form of inter-organizational learning and it refers to the blending of knowledge and skills by organizations to jointly develop new knowledge, capabilities and products, i.e. create new knowledge (Lubatkin, Florin, & P. Lane, 2001).

Drawing on Crossan et al. (1999) and Van Wijk and Lyles (2008) this dissertation adopts a comprehensive definition of inter-organizational learning. Inter-organizational learning is the consequence of a focal organization's direct interaction with other organizations. It is both process and result and involves cognitive and behavioural change at multiple levels of the organization. The learning of the focal organization may be the result of transfer, sharing or acquisition of knowledge from other organizations or from the co-creation of new knowledge. This definition is appropriate for this study because it stresses both the cognitive and behavioural aspects of learning, highlights interaction (i.e., practices) between organizations, emphasizes the multi-level nature of inter-organizational learning, and draws attention to the two manifestations of inter-organizational learning (process and product).

Vicarious learning has been excluded from consideration as it refers to learning from second hand experience or mimicking other organizations (Huber, 1991) and I will only consider it to highlight aspects of inter-organizational learning that results from interaction. In addition, I do not draw on studies focusing explicitly on knowledge transfer (e.g. Mowery, Oxley, & Silverman, 1996;

Tsai, 2001) knowledge sharing (e.g. Tsai, 2002), knowledge flows (e.g. Schulz, 2001), or knowledge acquisition (e.g. M. Lyles & Salk, 1996) as those literatures tend to focus on learning a competence or technology and less on the behavioural aspects of inter-organizational learning.

2.1.3 The Relationship Between Cognition and Behaviour in Learning

Fiol and Lyles (1985, p. 806) stated that "it is essential to note the difference between cognition and behaviour, for not only do they represent two different phenomena, but also one is not necessarily an accurate reflection of the other". They distinguish between changes in cognition and changes in behaviour and suggest that they may occur independently at the organizational level. In this dissertation organizational learning is the collective cognitions and behaviours of the individuals in the group or organization and it is represented by such things as an organization's procedures, structure, practices, and strategy.

Cognitive theorists describe individuals as being able to perceive, analyze, plan and choose. These descriptions align with perceptions of individuals as autonomous conscious beings that make choices and influence their environments, i.e., exercise agency. Cognitive theories can explain how people (and organizations) suddenly act in novel ways. Cognitive theorists have focused on processes that are not directly observable such as memory, information storage, attention, interpretation and rehearsal (Mazur, 1990). In this view interpretation is a key process which is strongly influenced by an individual's multiple identities which activate various cognitive structures that facilitate interpretation (Ring & van de Ven, 1994; Stryker & P. Burke, 2000).

Behavioural theories of learning explain as much behaviour as possible without allowing for conscious thought. In the behavioural view learning arises from reactions to performance feedback. Because individuals' environments generate such feedback, behavioural theories say that the environment strongly influences what is learned. Behaviouralist theories describe three main types of learning: classical, operant, and latent. Classical conditioning looks at the relationship between various stimuli and changes to automatic or spontaneous responses (e.g. Pavlov, 2010 /1927). Operant conditioning looks at the relationship between various stimuli and changes in deliberate responses, given various rewards and punishments (e.g. Reynolds, 1975). Latent learning suggests that rather than simply learning automatic responses triggered by environmental stimuli, individuals can learn facts about the world that they can subsequently use in a flexible manner, demonstrating the link between agency and response (e.g. Tolman & Honzik, 1930).

In cognitive theories the effectiveness of learning in pursuit of a goal hinges on individuals' perceptions. As a result, cognitive theories offer little help in explaining how individuals can alter their responses and improve their performance when they encounter differing interpretations of the environment, as is probably the case in a situation of conflict. Behavioural learning theories attempt to explain how effective learning can occur in spite of individuals' perceptual errors and biases (i.e., in response to feedback) (Starbuck & Whalen, 2008). This suggests that an examination of the behavioural aspect of learning may be key to understanding inter-organizational learning around conflict laden issues that may involve misunderstandings by one or all parties.

Inkpen and Crossan (1995) draw on both the cognitive and behavioural theories of learning to describe the various learning states experienced by an individual and draw on Fiol and Lyles (1985) to extend this framework to the organizational level (see Figure 2-2: The Relationship between Cognition and Behaviour). When there is no cognitive or behavioural change there is no learning; and conversely, when both change there is integrated learning. They suggest that behavioural change without cognitive change and visa versa sets up a transitional state because of the tension created when an individual's behaviour or cognition is not supported by corresponding changes in their cognition and behaviour, respectively. This tension results in "cognitive dissonance" and its reduction is a "basic process in humans" (Festinger, 1957, p. 4). Individuals will always work to align their behaviour and their beliefs (Festinger, 1957).
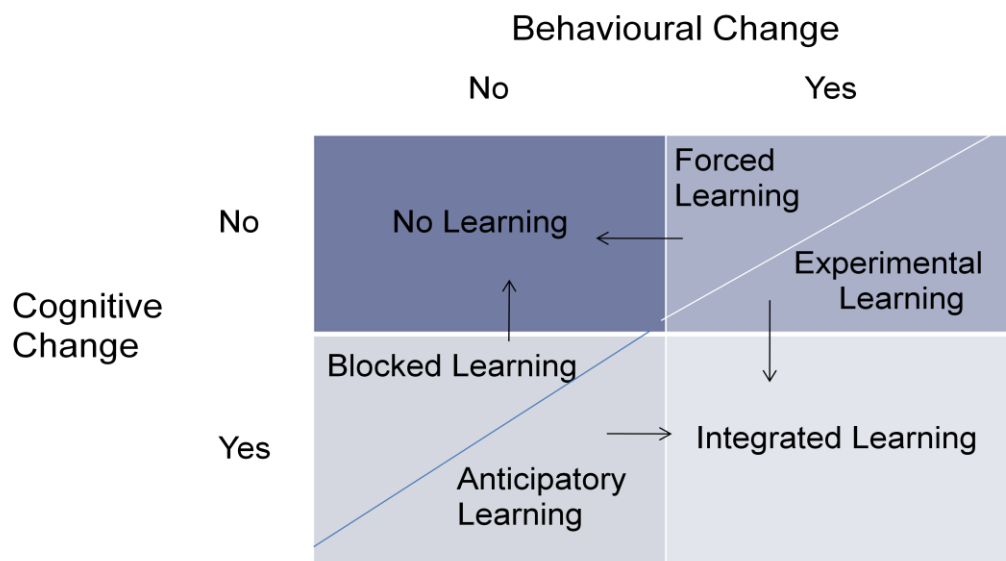
Figure 2-2: The Relationship between Cognition and Behaviour[1]

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[1] Inkpen, A. & Crossan, M. (1995). Believing is seeing: Joint ventures and organizational learning. Journal of Management Studies. 32:5 p. 599

For example, if a behavioural change is forced it will likely resolve itself into no learning as individuals will continue to interpret stimuli through their current beliefs. However, if learning is experimental, individuals may suspend their belief systems to try a new behaviour and as a result be open to new interpretations of the outcomes. This behavioural change framework suggests that behavioural change presents the possibility of integrated learning depending on the conditions and the way outcomes are interpreted.

Despite these early distinctions between the cognitive and behavioural aspects of organizational learning (Crossan et al., 1999; Fiol & M. A. Lyles, 1985; Inkpen & Crossan, 1995), our understanding of the conditions necessary for behavioural change to transition to organizational learning remains relatively under developed (Starbuck & Whalen, 2008). By exploring practices that occur when organizations engage with each other, this dissertation highlights the importance of behaviour change in inter-organizational learning irrespective of cognitive structures such as conflict, that otherwise constrain learning.

2.1.4 The Challenge of Inter-Organizational Learning

Inter-organizational learning offers the potential for much higher and more relevant learning than organizational learning. However research has shown this type of learning is challenging (Bapuji & Crossan, 2004). Conveying knowledge between organizations is more complex because of the multifaceted nature of the boundaries, culture, identities, and processes involved. Additionally, a given firm does not have equal capacity to learn from all other firms. Lane and Lubatkin (1998) found that a firm learned more from its partner when they had similar

knowledge bases, organizational structures and dominant logics. Conversely, the firm may simply not have the knowledge base to identify the learning opportunity, to usefully absorb and apply the others' knowledge, or even recognize its value in their own context (Cohen & Levinthal, 1990). In addition, a firm's learning from a partner depends on its prior experience with that partner as well as its experience with other partners (Zollo, Reuer, & Singh, 2002). In contrast, Inkpen & Crossan (1995) observed that even when firms have all of this as well as explicit learning objectives they may be unable to create the appropriate mechanisms and systems to transfer knowledge from the joint venture to the parent. They found that while individual managers involved in the joint venture were often positive about their learning experiences, integration of the learning experience at the parent firm level was problematic, thus limiting the institutionalized learning. They concluded that the institutionalized learning associated with an unwillingness to cast off past practices can limit the effectiveness of inter-organization learning (Inkpen & Crossan, 1995). This raises the question of how, from a cognitive viewpoint, firms overcome institutionalized learning to change practices; or from the behavoural viewpoint, change practices to alter institutionalized learning.

Most of the empirical research on inter-organizational learning has focused on strategic alliances and joint ventures where partner selection is based on learning prospects and their commercial impact (Bapuji & Crossan, 2004) or on research collaborations where collective action is required to solve a joint problem or repel a common threat (i.e. Corey, 1997). This work has tended to frame cooperation and competition as opposite ends of a continuum and conflict, if considered at all, is typically resource based such as conflicts of interests or

scarcity of resources. Learning is generally found to be contingent on some level of conflict resolution, which may be characterized as developing trust (Dhanaraj, M. Lyles, Steensma, & Tihanyi, 2004; e.g. Inkpen & Currall, 2004) or learning to manage the relationship (e.g. B. Anand & Khanna, 2000). In a unique departure from these prior findings, Steensma, Barden, Dhanaraj, Lyles & Tihanyi, (2008) reveal that learning can occur even while conflict persists. While not the main emphasis in their study, the presence of both high levels of conflict and high levels of learning is an exceptional finding. This dissertation directly addresses questions about the processes by which that might occur.

In addition, there is a broad assumption in the extant research that increased knowledge sharing and inter-organizational learning contribute to an organization's performance or innovativeness. Thus if firms understand the knowledge transfer process and the variables that affect it, the firm's capabilities can be enhanced (Easterby-Smith et al., 2008). More recent conceptualizations of learning do not assume improved organizational performance. My research will explore the full range of behavioural and cognitive learning outcomes, whether they contribute to improved performance or not, as well as the processes by which inter-organizational learning occurs.

2.1.5 Individual and Organizational Learning and Identity

Identity influences individual and organizational learning via the powerful hold it can have on both individual and organizational cognition and behaviour. Theories of individual cognition tell us that people interpret the world through a process of sensemaking that is supported by their individual interpretations and

strongly influenced by their past experience, social and role identities, and organizational context (K. Weick, Sutcliffe, & Obstfeld, 2005). Organizational identity usually endures for some time and it provides a context in the form of systems, structures and procedures and for feedback on events and experiences (Crossan et al., 1999; Fiol & M. A. Lyles, 1985; Nag et al., 2007). This context may facilitate or impair the organization's ability to respond to its environment. The language and the dominant logic that forms the institutionalized learning, and consequently the identity of an organization, may present a significant obstacle to the introduction of new ideas (Crossan et al., 1999; Lawrence, Mauws, Dyck, & Kleysen, 2005). Dutton and Dukerich's (1991) study of the New York Port Authority provides a vivid illustration of the power of identity in the form of institutionalized learning to impact interpretations positively and negatively. Until aspects of the institutionalized logic that underpin an organization's identity can be set aside, even temporarily, new insights or intuitions are unlikely (Crossan et al., 1999).

Theories of identity provide a rationale both for the way that individuals make sense of and respond to the stimuli they encounter. The learning literature has long recognized the importance of the context within which individuals function and from which they extract data to the interpretive process (Cook & Yanow, 1996; Crossan et al., 1999). Yet direct links to identity are relatively recent and tend to support the conclusion that identity influences group learning primarily by protecting the existing identity, thereby inhibiting or distorting learning (Antonacopoulou, 2006; Argote, A. A., 2009; A. Brown & Starkey, 2000; K. Corley

& D. Gioia, 2003; Hong & O, 2009; Kane, Argote, & J. M. Levine, 2005; Nag et al., 2007; Rodrigues & Child, 2003; Schwenk, 2002).

One of the most prominent links between individual and group learning and identity has been through the notions of situated learning and communities of practice (J. Brown & Duguid, 1991; Lave & Wenger, 1991). They describe how individuals learn to function in a community, acquiring the community's point of view and language. Shared understanding is reached through continuing conversation and shared practice. Thus, individual learning relies on the social interactions between different levels of community members and learning and socialization into the group are intertwined. Learning is understood in terms of communities being formed or joined and individual identities being altered. This stream of literature draws attention to behaviours (practice) involved in altering individual identity and creating collective meaning. In contrast, recent research has acknowledged the inter-group dynamics between communities, and has begun to explore the ways that situated learning can negatively impact organizational learning and performance (Hong & O, 2009; e.g. Macpherson & Clark, 2009). In this research I consider the inter-group dynamics between organizations in order to reconcile the equivocal findings around identity, and moreover identify the practices and conditions that might inhibit or promote inter-organizational learning.

2.1.6   Individual and Organizational Learning and Conflict

Research to date has revealed a seeming paradox in the relationship between conflict and learning, perhaps best captured by the notion of the promise

versus the reality of conflict. On one hand, Argyris and Schoen (1978) maintain that conflict is necessary for learning; that it provides an opportunity to learn. They and others have suggested that transformative or double loop learning is a response to conflict in which individuals explore the reasoning behind their positions and the meaning these positions have for them (Argyris & Schon, 1978; Bush & Folger, 1994; Rothman & Friedman, 2001).

Conflict has been identified as a key part of group and organizational learning as well. Conflict contributes to higher level learning and in doing so is particularly relevant to strategic management because it is this level of learning that impacts long term survival (Fiol & M. A. Lyles, 1985). It has been shown to be instrumental in creating shared understandings, a key process through which group and ultimately organizational learning occurs (Crossan et al., 1999; Senge, 1990). Although Crossan and her colleagues (1999) acknowledge that mutual adjustment and negotiated actions are required for coherent collective action to emerge they do not address the potentially dysfunctional aspects of conflict inherent in the process, with the attendant risk of failure. Quite the contrary, they employ the bucolic image of a flock of birds to illustrate the process of groups arriving at shared meaning. In this study, I examine the actual practices of individuals and groups to describe the processes by which mutual adjustment occurs.

Researchers also have argued that conflict works against learning. Often individuals' ability to learn is blocked by dysfunctional learning processes such as defensive reasoning (Argyris, 1991; A. Brown & Starkey, 2000; Lawrence et al., 2005). Dysfunctional learning processes can be triggered by threats to

individuals' social or role identities as well as to the identities that they attribute to

their organizations (Nag et al., 2007). Individuals tend to support activities that

are consistent with their organization's identity, they will stereotype themselves

and others, and they will work to maintain coherence between their activities and

the organization's identity (Antonacopoulou, 2006; Ashforth & Mael, 1989; K.

Corley & D. Gioia, 2003; Dutton & Dukerich, 1991). While these theories describe

how conflict inhibits learning they do not explain how sometimes individuals and

firms overcome those constraints and learn from each other, even while conflict

persists. So while the "promise" of conflict in organizational learning has been

acknowledged by some (although by no means all) organizational learning

scholars the more pessimistic view of conflict has received limited attention. This

dissertation addresses Easterby-Smith et al.'s (2000) assertion that "the time is

ripe to start addressing learning … in light of the inherent conflicts between

…goals, interests … agendas" (p. 13) and explores the conditions that enable

organizations to overcome these multi-level constraints and learn from each

other.

2.2   Identity

"Identity is a self-referential description that provides answers to the

question "who am I?" or "who are we?" (Ashforth, Harrison, & K. Corley, 2008, p.

327). In the previous section I described how identity has been characterized in

the organizational learning literature. In this section I draw on the extant identity

literature, and specifically the literature on social identity and role identity at the

individual level, and at the collective or organizational level, organizational identity.

2.2.1   Identity Defined at the Individual Level

Social identity is understood to be an individual's self-categorization as a member of a group as well as the value and emotional significance that the individual places on that membership (Tajfel, 1978; Tajfel & Turner, 1979). While people may think of themselves as independent individuals and define themselves based on personal characteristics or preferences (i.e. their personal identity) there are many situations where people primarily define themselves and others in terms of their group memberships (Tajfel, 1978). Personal identities are unique to individuals and differentiate between individuals (often within their in-group) whereas social identities are shared by members and differentiate groups from one another. Social identity explains and links individuals' identity, inter-group relations, and group processes in social settings (Stets & P. J. Burke, 2000). Social identity is an important conceptualization of identity for understanding inter-group conflict (Ashforth et al., 2008; De Dreu & Gelfand, 2008) therefore social identity along with role identity, and not personal identity, will be considered in this research.

Social identities reside in collectives such as groups, teams or organizations, and social identity theories provide insight into group processes and inter-group dynamics. Identity theory, which comprises structural identity theory and identity control theory, defines identity as those "parts of a self composed of the meanings that persons attach to the multiple roles they typically

play" (Stryker & P. Burke, 2000, p. 284). In this view role identities reside in socially defined roles such as jobs, functions, responsibilities, professions etc. (Ashforth et al., 2008). Role identity theory seeks to explain the role related behaviour of individuals (Stryker & P. Burke, 2000).

Some identities have more importance and prominence than others and are organized into a hierarchy via an individual's self (Ashforth et al., 2008; Mead, 1934; Stryker, 1968). Mead (1934), whose work serves as the foundation for several recent studies (e.g. Hatch & Schultz, 2002), defined the self as the "whole" person, encompassing an individual's multiple identities and as an integrative structure ordering and binding their various identities together. Stryker (1968) proposed that the self orders these discrete identities into a hierarchy of salience. The more important a particular identity is to an individual, the more likely the person will attempt to affirm that identity through his or her actions (P. Burke, 1980; P. Burke & Reitzes, 1991). Therefore, an individual's behaviour is usually the manifestation of the identities positioned higher in their salience hierarchy. The self integrates existing identities and provides a link between social structures such as roles, expectations, and positions, and individual actions. It is this link between social structures, identities and action that motivates and is explored more fully in this dissertation.

2.2.2 Identity Defined at the Organizational Level

Whereas individual level theories of identity tie an individual's self- concept to a social group or to a role, organizational identity considers how individuals understand and categorize the organization to which they belong (Albert &

Whetten, 1985; Ashforth & Mael, 1989; K. G. Corley, Harquail, M. G. Pratt, Glynn, & Hatch, 2006; Dutton, Dukerich, & Harquail, 1994). Building on psychological theories of identity, Albert and Whetten (1985) observed how organizational identities emerge from comparisons with other entities, and how the perceived similarity or difference supports members' self-categorizations of their organization. They defined organizational identity as those aspects of the organization that members self-referentially claimed as providing its "central character, distinctiveness and temporal continuity" (Albert & Whetten, 1985, p. 265). Recently Whetten (2006, p. 220) has specified the concept as "the central and enduring attributes of an organization that distinguish it from other organizations." These represent a set of stable and enduring self descriptions that change with great difficulty (Ashforth & Mael, 1996; Whetten, 2006; Whetten & Mackey, 2002).

Organizational identity also involves meaning at the collective level, which may be tacit or explicit, taken for granted, or conscious and deliberate (K. Corley & D. Gioia, 2003). Some identity beliefs are central while others are peripheral and many authors have argued that organizations can have multiple identities (Fiol, 1991; Golden-Biddle & Rao, 1997; M. G. Pratt & Kraatz, 2009; M. Pratt & Foreman, 2000).

There have been two main approaches to the construct of organizational identity: a social constructionist and an institutional perspective (Elstak, 2008; Ravasi & Schultz, 2006). Social constructionists argue that organizational members collectively build a shared understanding of their organization through their interaction (e.g. D. Gioia et al., 2000). Institutionalists argue that identity is a

set of stable and enduring self descriptions of an organization that exists irrespective of the individual members and that changes only with great difficulty (Ashforth & Mael, 1996; Ravasi & Schultz, 2006; Whetten, 2006; Whetten & Mackey, 2002). The differences between these perspectives are significant when considering the impact of organizational identity on learning. The social constructionists by definition acknowledge the possibility, even the inevitability of learning, while the institutionalists reject the notion that changes to identity can be accomplished without great effort. I will describe each perspective in turn.

Some scholars (e.g. Whetten, 2006) view organizational identity as an attribute of the organization that can only be determined by the organization's commitments, obligations and actions. In this view organizational identity exists in a set of explicit statements of what the organization is and what it represents, termed institutional claims. These institutional claims provide consistent and legitimate narratives that influence members' perceptions of the organization's central, enduring and distinctive features and allows them to construct a consistent collective sense of self (Whetten & Mackey, 2002). From the social actor or institutional perspective, organizational identity is defined as a set of emotionally laden, stable and enduring self descriptions that change only rarely and with great difficulty (Ashforth & Mael, 1996; Whetten, 2006; Whetten & Mackey, 2002).

Conversely other scholars take a more social constructivist view examining how members' beliefs about what is central and distinctive about their organization may evolve in the face of internal and external stimuli (K. G. Corley et al., 2006; K. Corley & D. Gioia, 2004; Dutton & Dukerich, 1991; Dutton et al.,

1994; D. Gioia & J. Thomas, 1996). In this view attention is focused on the "collective understandings of the features presumed to be central and relatively permanent and that distinguish the organization" (D. Gioia et al., 2000, p. 64). Organizational identity is the product of the tension between collective, shared cognition on one hand and socially constructed individual cognitions on the other (D. Gioia, 1998; Haslam & Ellemers, 2005). This view de-emphasizes endurance and considers how strategic responses to environmental changes may be driven by organizational leaders promoting a new narrative (K. Corley & D. Gioia, 2004).

In this dissertation I consider organizational identity as both providing the institutional constraints that shape members' interpretations and as being shaped by members reaching mutual understanding and shared interpretations (D. Gioia et al., 2000; Ravasi & Schultz, 2006). I contend that the institutionalized notions of organizational identity are also collective, in the same fashion that laws and governments represent collective meaning. These identities do change, albeit at a much slower pace and via different processes than organizational level collective meanings (Elstak, 2008; Rao, Monin, & Durand, 2003; Ravasi & Schultz, 2006). Consequently, in this study I define organizational identity as comprising both institutional claims and collective understandings.

There are a number of concepts that, while closely related to organizational identity, are separate and distinct constructs. Most significantly, as noted above, organizational identity is self-referential. Corporate identity and organizational image, in contrast, involve the projection of identity related notions to external audiences (Dutton & Dukerich, 1991; D. Gioia et al., 2000). Likewise, reputation

is often defined as how external audiences view the organization (Fombrun, 1996; Fombrun & Shanley, 1990).

Organizational identity is closely tied to organizational culture because identity provides a set of skills and a way of using and evaluating those skills that produce characteristic ways of doing things (Cook & Yanow, 1996; Nelson & Winter, 1982). Hatch and Schultz (2002) suggest that identity is the interrelationship between culture and image, where identity expresses cultural understandings at the same time as it mirrors images which outsiders attribute to the organization (K. G. Corley et al., 2006). Similarly organizational identity is different from organizational values, although it can encompass values that are important to the organization when those values are part of what is believed to be central, distinctive and continuous about the organization.

2.2.3 Identity and Learning

Identities are cognitive maps that facilitate making sense of a situation and structuring the unknown (Ring & van de Ven, 1994; Schwenk, 2002; Stryker & P. Burke, 2000; K. E. Weick, 1979). Integrating, according to most prior literature, requires that individuals and groups first overcome the barriers to learning inherent in different identities and find an acceptable overarching goal that integrates efforts and provides direction to the learning process (A. Brown & Starkey, 2000; Hong & O, 2009; Nag et al., 2007; Rodrigues & Child, 2003; M. Sherif & C. Sherif, 1956). By looking at inter-organizational learning between "enemies" this dissertation considers whether integration is possible in the absence of an overarching shared goal.

As discussed above, identity provides the context, be it the industry, profession, or the community, within which learning takes place and is in turn altered by the process of learning. Organizational resources, especially knowledge, skills, and expertise, are likely to be influenced by the basic assumptions that organization members use to define "who we are" as an organization (Kogut & Zander, 1996). For instance, Dutton and Dukerich (1991) found that members' sense of the organization's identity was associated with a set of routines or standard procedures. When activated by conflict over a specific issue, these routines were identified as "typical" of the organization. Corley and Gioia (2004) found that changes in organizational identity corresponded with behavioural changes among the organization's members, especially those in leadership positions.

This connection between identity and behavioural expectations, as well as behaviour change, has been described using the concept of scripts (Abelson, 1981; Barley & Tolbert, 1997; D. Gioia & P. Poole, 1984). Scripts are a subset of knowledge structures or schemas and are primarily concerned with understanding behaviour in routine situations at the individual (Abelson, 1981) and organizational level (D. Gioia & P. Poole, 1984). Whereas a schema is a generalized cognitive framework that serves as a guide to interpret information, actions, and expectations (e.g. Daft & K. Weick, 1984) a script is a schema that describes behaviours appropriate for a particular context or situation (D. Gioia & P. Poole, 1984). Scripts represent shared, agreed cultural and social knowledge. Barley and Tolbert describe scripts as the behavioural regularities which are "observable, recurrent activities and patterns of interaction characteristic of a

particular setting" (1997, p. 98). Individuals perpetuate existing behavioural expectations such as those attached to a role identity through their actions because they have internalized those expectations as guiding principles of action (Barley & Tolbert, 1997; Giddens, 1979; Jarzabkowski, 2008).

An individual's identities are linked to scripts in that a role or affiliation with a group can be considered a special case of a script (D. Gioia & P. Poole, 1984). A role or a social identity can be thought of as a higher level script governing situation specific behaviour. Given that scripts are individual cognitive structures, they may differ in some aspects from typical social and role expectations reflecting that individual's unique interpretation. An individual will activate their salient identity or the identity they believe is required in a given situation and that in turn will activate a script. To paraphrase March & Heath (1994), the appropriate script in one's repertoire would answer the question: "what should a person like me [identity] do in a situation like this [relevant script]". When individuals encounter novel situations they may consciously enact new behaviours. In doing so they develop new scripts or alter existing scripts, i.e. experiment. Conversely, individuals may continue with the practices and behaviours they attach to their salient identity and in so doing block learning or distort the knowledge (Nag et al., 2007).

Organizational identities are also linked to scripts. Barney et al (1998) suggest that once a firm determines "who they are" it is very easy to determine what they "must do" (p. 113). Barney and his colleagues (1998) also suggest that a firm can begin with a clear action or behaviour and develop "who they are" out

of that action. A "theory of we are" or an organizational identity is interdependent with, and requires a corresponding "theory of action" or script.

For example, Koch Industries of Wichita, Kansas, identifies itself as a "discovery company", not as the institutionalized organizational identities of oil and gas company or resource company (Barney et al., 1998); and this identity has "a profound impact on behavior inside Koch" (p. 109). Employees are expected to always be "discovering" new ways to add value to the firm, new businesses to leverage existing skills, and new or improved practices. Similarly, an organization that identifies itself as a "learning" organization will facilitate the enactment of behaviours in support of exploration and experimentation.

At both levels scripted behaviours are often performed unconsciously, although active cognition is involved during the process of script development and when encountering unusual, novel or unconventional situations (D. Gioia & P. Poole, 1984). A generic script may be developed that is appropriate to a category of situations such as strategy retreats or responding to media criticism (D. Gioia & P. Poole, 1984). When an individual or organization encounters a new situation that shares some common elements with previous experience they compare it to their existing scripts. Information that "generally" matches a script signals that active thought and analysis is not necessary and the script can be enacted (D. Gioia, 1992). This often occurs without any adjustment for differences in information about the current situation that may be important, as illustrated by Gioia's description of Ford's reaction to the Pinto fires (1992).

The aggregation of scripts associated with each of an individual's discrete identities represents their behavioural repertoire. An individual will activate their

salient identity or the identity they believe is required in a given situation and that in turn will activate a script. When individuals encounter novel situations they may employ a generic script within that repertoire, or they may consciously enact new behaviours. This suggests that by choosing to enact new behaviours individuals develop new or alter existing cognitive scripts which in turn may shift their interpretation of their identities.

Organizations develop their scripts through a variety of direct experiences and observations including interacting with regulators or through rewards and reinforcement such as market share increases. Indirect means of script development at the organizational level might come for example, from portrayal in the media or from a social movement's description of appropriate organizational behaviour in a given situation. Modeling provides another means of script development for organizations (D. Gioia & Manz, 1985; D. Gioia & P. Poole, 1984). Observing the positive experience of a role model provides an indication of the right behavioural script for certain situations. As is the case with individuals, changes in behavioural scripts may modify cognitive scripts and ultimately organizations' institutionalized learning. Extant research typically depicts organizational identity as existing in the minds of organization members with limited attention given to its behavioural expressions (D. Gioia & Chittipeddi, 1991; Nag et al., 2007). In this research I consider the implications of the behavioural expressions of identity on learning.

2.2.4 Identity and Conflict

Conflict resulting from external pressure increases the likelihood that organization members will explicitly reflect on organizational identity issues (Dutton & Dukerich, 1991; D. Gioia et al., 2000; Ravasi & Schultz, 2006). Research on identity suggests that negative feedback from the environment "destabilizes" organizational members' self-perceptions (e.g. D. Gioia et al., 2000; Hatch & Schultz, 2002) and a serious discrepancy between external expectations and internal beliefs may induce organizational members to reevaluate their understandings (Albert & Whetten, 1985; D. Gioia & P. Poole, 1984; D. Gioia et al., 2000; Whetten & Mackey, 2002). Organizational identity typically becomes an issue when an organization faces difficult decisions such as a change in strategic direction (Albert & Whetten, 1985; Whetten, 2006) or is faced with resolving an unfamiliar or unique challenge (Dutton & Dukerich, 1991; Ravasi & Schultz, 2006). It is at these difficult junctures that organization members often ask "Who are we?", "What kind of business are we in?" or "What do we want to be?" (Albert & Whetten, 1985, p. 265).

Identities are cognitive maps that facilitate making sense of a situation and structuring the unknown (Ring & van de Ven, 1994; Stryker & P. Burke, 2000; K. E. Weick, 1979; 1995). Conflict provokes strong emotions and strong emotions appear to be key to initiating both identity change and cognitive and behavioural change. It is conflict that evokes the strong emotions (K. Weick et al., 2005) necessary to instigate a change in individual cognitive maps but it is the presence

of a range of identities that enable individuals to explore the new information surfaced in the conflict (Rothman & Friedman, 2001).

However, conflict may trigger responses, such as defensive routines and an over reliance on generic scripts, that inhibit individuals' and organizations' ability to engage in the mindful behaviour associated with new script development (Fiol et al., 2009; D. Gioia & P. Poole, 1984). Factors that, in a situation of conflict, would tend to work against a mindful approach and toward the use of generic scripts, include priming, information complexity, and the need to preserve a positive self-concept (D. Gioia & P. Poole, 1984). The opposing perceptions of the conflict laden issue and conflicting views of the purpose of their interaction would prime individuals and organizations for script selection bias. In order to simplify and manage the high level of complexity of the information surrounding conflict laden issues, individuals and organizations will tend to rely on generic scripts that may or may not be appropriate. Finally, an individual's and organization's need to preserve and protect a positive self image (identity) might lead individuals and organizations to take inappropriate action. Given that these factors will direct individuals and organizations towards the relatively automatic use of generic scripts (which will tend to reinforce existing identities and conflicts) another mechanism is required to activate new cognitive and behavioural scripts.

2.3 Conflict

The study of conflict, regardless of whether it is undertaken in psychology, sociology, economics, political science, organizational behaviour, strategic management or communications, focuses on how individuals and groups

manage their interdependence with one another (De Dreu & Gelfand, 2008).

Conflict is ubiquitous within and between organizations, leading some to

conclude that organizations without conflict simply do not exist (e.g. Pondy,

1967). However, in research, conflict has often been considered in isolation

rather than in connection with other organizational phenomena, such as

organizational learning. Conflict is a multi-level phenomenon and although

extensive research has been done at various levels, consideration of the cross

level influences of conflict is relatively recent. In this study I consider how conflict

impacts organizational learning across levels.

2.3.1 Conflict Defined

Traditionally conflict has been defined as opposing interests involving

scarce resources, goal divergence and frustration of goal achievement (e.g.

Pondy, 1967). For example, De Dreu and Gelfand (2008, p. 6), building on

Pondy's (1967) theme of opposing interests, defined conflict as a "process that

begins when an individual or group perceives differences and opposition between

oneself and another individual or group about interests and resources, beliefs,

values or practices that matter to them". Defining conflict as opposing interests'

sets up the assumption that conflict is competitive, ignoring that parties with

compatible goals often have conflict. Also the notion of conflict as opposing

interests is confounded with the construct of competition which is often defined as

incompatible goals. The broader business literature, in particular, has tended to

equate conflict not only with differences but also with incompatible goals

(competition) and as a win-lose circumstance (Tjosvold, 2008).

Deutsch (1949; 1973) defined conflict as incompatible activities; one party's actions, interfere, obstruct, or in some way get in the way of another's action. This view of conflict is similar to Pondy's (1967) description of manifest conflict, as "conflictual behavior, ranging from passive resistance to overt aggression" (298). According to Deutsch, whether parties believe their goals are competitive or cooperative affects their expectations, interactions and outcomes. In turn, how they negotiate their conflicts affects whether they believe their goals are competitive or cooperative (Tjosvold, 2008). In addition to individual's perceptions of the conflict situation, Pondy (1967) identified the antecedents of conflictual behaviour and the affective states of the individuals involved as critical to understanding conflict processes and outcomes. Following Deutsch (1949; 1973) and Pondy (1967) this study will highlight the behavioural aspect of conflict while recognizing the implications of cognition on behaviour of individuals and organizations.

2.3.2 Conflict Over Time

Well-established models of conflict behaviour suggest that conflict has two broad phases; a differentiation phase followed by an integration phase (Deutsch, 1973; Fisher & Ury, 1981; Pruitt & Carnevale, 1993; K. Thomas, 1976; Walton, 1969). During differentiation, the parties raise the conflict issues, clarify their positions with regard to the issues, pursue the reasons behind those positions, and acknowledge the severity of their differences. When further escalation seems unproductive, an integration phase begins. In this phase parties begin to acknowledge common ground, explore possible options, and move towards

solution – sometimes one that meets everyone's needs but sometimes one that they can just all live with (Folger, M. Poole, & Stutman, 2001). The key to avoiding protracted escalation of the conflict is to achieve the benefits of differentiation (highlighting differences, accepting other's position as legitimate, motivation to move forward) and to make a clean transition to integration, setting the conflict on a different course.

One of the most frequently used frameworks in assessing whether a conflict is ready for transition is ripeness theory (I. W. Zartman, 1989; I. William Zartman & Berman, 1982). This theory suggests that the parties to a conflict will not be ready to transition until they mutually reach a point where they are able to recognize 1) a hurting stalemate (i.e. the costs and /or the risks of continuing are too large) and 2) a possibility of a way out through negotiation. While widely used ripeness theory is limited by poorly established generalizability outside international diplomacy, limited consideration of non-rational factors, and low predictability (Pruitt, 2005).

Readiness theory (Pruitt, 2005) is an effort to overcome these limits by considering each condition as a psychological state and not a necessary condition. The hurting stalemate becomes the degree of motivation to end the conflict and the perceived way out becomes the degree of optimism that the conflict can be ended. Motivation can be influenced by the extent of the cost and dysfunctionality of the conflict or by pressure from third parties. Optimism can be influenced by perceptions about the other party's readiness, about the context, or by the presence of a third party. Also the psychological state of each party is considered separately and not as a mutual state. The two parties might both be

"ready" but for different reasons. One party can be highly motivated but not very optimistic while the other may be optimistic but not very motivated. The notions of motivation and optimism add flexibility to ripeness theory, particularly in predicting parties "readiness" to move to the integration phase.

Moving to integration requires the parties to fundamentally change their behaviour, turning from a focus on differences to some level of cooperation. Several conditions have been identified that facilitate this transition. First it is important that differences have been surfaced completely and they are understood by all parties, even if they do not agree. It is important that the parties are balanced in terms of power such that neither can nor will be pushed into an inferior agreement. If each party persistently strives for outcomes that are truly meaningful to them the other party is likely to recognize the need to explore possible options (J. Z. Rubin, Pruitt, & Kim, 1994). The negative consequences of differentiation can also motivate parties to move to integration. In many cases a third party can be a significant help in transitioning from differentiation to integration. Parties may trust the third party and will follow their advice where they would not accept it from each other (Folger et al., 2001).

2.3.3 Conflict Research versus Negotiation Research

Negotiation researchers understand much about individual and group behaviour in formal and informal negotiations however those interactions are fundamentally different from what conflict management researchers have examined. Negotiation researchers for the most part explore the relationship between behaviours and the quality of settlements (Fisher & S. Brown, 1988;

Fisher & Ury, 1981). Conflict researchers examine the relationship between behaviours and intangible outcomes such as individual, relationship, and group transformation (Bush & Folger, 1994; Dukes, 1993; Olekans, Putnam, & Weingart, 2008).

A large segment of negotiation research measures the behaviour of the parties to the conflict directly, often through experiments and simulations (S. Wilson & Putnam, 1990). The interaction of parties is considered in the context of "deal making" and not the emotionally charged context of long term disputes. Indeed, negotiation researchers have tended to focus on the immediate patterns of action-reaction as opposed to how an entire conflict episode unfolds. Whereas most negotiation research has focused on strategy patterns and substantive outcomes, conflict research had considered the intangible consequences of strategy use such as the transformation of individuals, of the relationship between parties, or of groups (e.g. Bush & Folger, 1994). Finally, conflict research looks at the effectiveness of strategies to manage conflicts while negotiation research has focused on the quality of a settlement.

The distinction between conflict management research and negotiation research is important - negotiation is all about getting to the deal (i.e. what behaviors and process got us to the best quality deal that satisfies both parties) as opposed to a transformational perspective (i.e. what happened to the participants cognitions and broader behaviors as a result of the process). Therefore the conflict management literature is more relevant to this research which is examining the processes involved in coming to some kind of mutual understanding.

2.3.4   Conflict Across Levels of Analysis

At the individual level in organizations conflict processes may involve individual motivation, concern for self versus concern for others (Pruitt, 1983), cognition, and emotional states as well as individual differences in conflict management approaches (K. Thomas, 1976). The consequences of conflict can be negative including individual well being and health, absenteeism, and turnover (Spector & Bruk-Lee, 2008) and most relevant to this research they can promote positive individual change. Conflict can enhance individual's development of skills, and moderately intense conflict has been shown to increase employee performance, individual creativity, and cognitive flexibility (Carnevale & Probst, 1998; Nemeth, 1986; Schulz-Hardt, Mojzisch, & Vogelgesang, 2008; Van de Vliert & De Dreu, 1994).

At the group level, conflict processes relate to patterns of interaction in managing conflict, negotiation, and small group communication (Olekans et al., 2008). Conflicts over scarce resources between groups strengthen within group cohesion and individual motivation to contribute to the group's success (Erev, Bornstein, & Galili, 1993). Negative conflict consequences can include aggression and escalation within and between groups (Lederach, 1995; Pruitt, 2008) and more positively group innovation, improved performance, and increased group member satisfaction and commitment (Beersma, Conlon, & Hollenbeck, 2008; Schulz-Hardt et al., 2008). Moderate levels of task related conflict have been shown to contribute to group effectiveness (De Dreu, 2006; Jehn, 1995) by prompting people to re-evaluate their working assumptions, to

correct errors, and to approach decision making from multiple perspectives (Schulz-Hardt, Jochims, & Frey, 2002; Schulz-Hardt et al., 2008). Conflict has also been shown to promote group change by improving decision making (Amason, 1996; Jehn, 1995; 1997) and to lead to redefined social identities through the disappearance of certain group characteristics (Terry & Amiot, 2008).

At the organizational level, conflict has been studied in the context of resource scarcity, union-management relations, and mergers and acquisitions. Resource conflicts, such as budget deficiency or decreased slack, have been shown to stimulate organizations to experiment and innovate in order to cope with overload or change beyond their immediate control (N. Anderson, De Dreu, & Nijstad, 2004; Zaltman, Duncan, & Holbek, 1973). Active confrontation through negotiation (union-management) promotes inter-group communication, increases mutual understanding and results in greater acceptance of agreements and decisions than more tacit forms of coordination (Putnam, 1993). In other studies however active confrontation has been shown to have both negative (strikes, lock outs) and positive (improved organizational performance) outcomes (Walton, Cutcher-Gershenfeld, & McKersie, 1994). De Dreu and Gelfand (2008) suggest that the relationship between engagement and outcomes is moderated by the context within which it occurs. They propose that whether conflicts benefit or hurt organizations depends on where, how and how intensely conflicts impact individual, group and organization level functions. Only recently has conflict research begun to explore the implications of context for conflict in organizations.

2.3.5   Sources of Conflict

The source or root cause of conflict has been the focus of much prior research, which has shown that the source of conflict has implications for its dynamics, impact, and outcomes. This work tends to cluster around three theoretical perspectives on sources of conflict that are apparent at all levels (e.g. De Dreu & Gelfand, 2008; De Dreu, Harinck, & Van Vianen, 1999; K. Thomas, 1992). Resource conflicts are a result of scarce resources or mixed motive inter-dependencies, and have also been referred to as real conflict (e.g. M. Sherif & C. Sherif, 1953), conflicts of interest (Deutsch, 1949; e.g. 1973), conflict over outcomes (e.g. Pruitt, 1981), games or co-opetition (e.g. Brandenburger & Nalebuff, 1996). Value or identity conflicts are the result of the need to develop and maintain a positive view of one's self and one's group (Tajfel, 1978) and are sometimes referred to as relationship (e.g. Jehn, 1995; e.g. 1997) or affective conflicts (e.g. Amason, 1996). In contrast to controlled experiments where resource conflicts can be separated from identity based conflicts, "such clear distinctions cannot be made in the context of organizations where participants are outcome inter-dependent by definition" (De Dreu & Gelfand, 2008, p. 18).

Socio-cognitive conflicts arise when there are incompatible or divergent interpretations of information. Socio-cognitive conflict is a result of a desire to develop and maintain cognitive consistency (Festinger, 1957) and to hold a socially validated and shared understanding of the world and the tasks that need to be done. They are sometimes referred to as cognitive (e.g. Amason, 1996)

task (e.g. Jehn, 1995; 1997) or process (e.g. Jehn, Northcroft, & Neale, 1999) related conflicts.

Individual, group, and organizational conflicts typically involve aspects of all three major sources. However, regardless of the root cause of conflict between individuals, groups, or organizations, when that conflict escalates identity conflict tends to dominate (e.g. Jehn & Mannix, 2001; Mooney et al., 2007). This is consistent with the research on organizational identity discussed above; no matter what the source of conflict, if it is considered serious it will activate identity. Therefore to understand inter-organizational learning with its inherent conflict it is necessary to understand the implications of identity conflict on behaviour and cognition. Given this, I first examine the implications of identity on behaviour at the individual level. I then consider the implications of identity for learning at the collective (group, organizational) and inter-organizational levels.

2.3.6 Conflict and Identity

Prior research on the impact of differences in individual characteristics within and between groups splits into two perspectives: information processing and social identity (Mannix & Neale, 2005). As discussed previously, the information processing perspective suggests that differences will lead to an increase in opportunities for learning. The social identity perspective suggests that differences create divisions and tensions and negative performance outcomes (Mannix & Neale, 2005; Tajfel & Turner, 1979). Conflicts rooted in identity appear at the individual, collective, and the inter-group level. Social identity theory shows how social categorization can lead individuals to identify at

the individual, group, or organization level and that identification then drives

behaviour in both identity and resource based conflicts (De Dreu & Gelfand,

2008). Social identity theory also allows us to understand conflicts at any level.

While it was developed at the individual and intergroup level, and not the

organizational level, it brings to light the social psychological processes that are

inherent in individual and group interaction and the probable impact of identify on

the interaction between individuals from separate conflicting organizations.

Therefore the theoretical predictions of social identity theory can be equally

applied to conflicts between entire organizations (De Dreu & Gelfand, 2008).

Conflict between groups and organizations has been shown to shape and

redefine their relative status positions, reshape social boundaries, and alter

identity through the disappearance of certain characteristics and subcultures and

their expressions, such as language (Terry & Amiot, 2008). In addition, conflict

has been shown to shape identity by explicitly or implicitly stimulating some

members of an organization to leave, usually fostering turnover in peripheral

group members more than in those seen as core (Schneider, 1987).

2.3.7 Conflict and Learning

Much work has been done at the individual and group level to understand

how people manage socio-cognitive conflicts as well as their impact on learning

and especially creative decision making. Building on developmental psychology

(e.g. J. M. Levine, Resnick, & Higgins, 1993) and social psychology (e.g.

Festinger, 1954), socio-cognitive conflict theory addresses incompatible

understanding and interpretation of facts and figures and considers the way

people manage these conflicts, as well as their impact on learning and creative decision making (e.g. Amason, 1996; Brehmer, 1976; Schwenk, 2002). Socio-cognitive conflict theory rests on three assumptions; first, people are motivated to hold accurate perceptions about themselves and their world. Second, people are boundedly rational and lack information and information processing capabilities, and as a result different people develop different beliefs, insights and understandings of identical objects of perception. Finally, people seek cognitive consistency and social validation of their beliefs, insights and understandings and divergence vis a vis others creates tension that people are compelled to resolve. These conflicts can be resolved by persuading the other party, by changing one's mind, by integrating seemingly opposing views, or by dissolving the relationship (De Dreu & Gelfand, 2008).

Socio-cognitive conflicts can be over problems which have correct solutions according to commonly accepted standards or they can be judgmental problems that have no correct solution. A key source of socio-cognitive conflict within and between organizations entails opinion, insights, and beliefs that are not consensually shared (Brehmer, 1976; Schulz-Hardt et al., 2008). These emerge out of preference or belief diversity in groups. Work on minority dissent and devil's advocacy has shown that when a minority faction opposes the majority view, group members are more likely to question their assumptions, search for new information, and consider multiple perspectives (Amason, 1996; Jehn, Northcraft, & Neale, 1999; Mannix & Neale, 2005; Schwenk, 2002).

Much less work has been undertaken, from a conflict theory perspective, on socio-cognitive conflicts at the inter-group and organizational level of analysis,

despite its relevance at those levels (De Dreu & Gelfand, 2008). For example mergers should trigger debate among beliefs, opinions and ideas, in addition to social identity conflicts; however this aspect of inter-group conflict has not yet been explored. This dissertation addresses the inter-organizational level of analysis and links it to the individual level.

2.4 Integrating Learning, Identity and Conflict

Conflict provides an opportunity to learn by provoking strong emotions. Strong emotions are key to initiating both the cognitive and behavioural change (Schwenk, 2002; K. Weick et al., 2005) necessary to instigate learning but it is the presence of multiple identities that enable individuals to explore the new information surfaced in the conflict (Rothman & Friedman, 2001; Schwenk, 2002).

Individual learning processes, including intuiting, experimenting, and interpreting take place in relation to an environment. Weick (1979) argues that people are more likely to "see something when they believe it" rather than "believe it when they see it". This suggests that even high quality information may hold multiple and/or conflicting meanings for different individuals (Huber & Daft, 1987; Rodrigues & Child, 2003) depending on their identities (K. Weick et al., 2005). These discrepant interpretations lay the foundation for conflict between individuals and groups. However, other belief systems within the same individuals or group may hold the key to bridging across that conflict. Conflict also activates identity and with it the behavioural scripts that tend to protect identity.

And so we are left with the paradox between the relatively straightforward predictions that "conflict stops learning" and "learning stops conflict". These

notions underlie the positive bias toward learning that predominates the existing

literature and the relatively negative predisposition toward conflict. However,

existing literatures do not provide an explanation for how some organizations are

able to learn from each other even while conflict persists. In the next section, I

draw on the conclusions of prior research to develop a model explaining how that

might happen.

CHAPTER 3: THEORETICAL FRAMEWORK, MODEL AND PREMISE DEVELOPMENT

3.1 Rationale for Research

The paradoxical phenomenon of "learning from the enemy" cannot be explained by any one or even two of the literatures reviewed in the previous section. While the organizational learning literature has shown that conflict promotes learning by calling assumptions and behaviour into question at the individual and collective level, it has not adequately addressed how organizations deal with the identify or value based aspects of conflict that activate defensive routines and inhibit learning. Recently, organizational learning scholars have begun to recognize the significance of differences in identity to organizational learning (e.g. Nag et al., 2007), but not its implications in an inter-organizational situation.

Identity scholars have made the link between learning and identity but have not attempted to address the impact of identity differences on organizational learning. Research into communities of practice has shown that identity promotes learning within a particular community and that identity formation processes are intimately linked to learning processes. But, as communities of practice become insular and rigid, their common identity blocks individual and collective learning (Hong & O, 2009; Macpherson & Clark, 2009). Research into identity, that takes a conflict perspective, has shown that while identity reduces conflict by providing a common basis for interaction within groups, it also promotes conflict through

inter-personal and inter-group rivalry. Indeed it is well established that the very act of identification with a group, ensures some level of inter-group conflict (M. Sherif & C. Sherif, 1956). Inter-group conflict is often studied from a conflict management or conflict resolution perspective which does not typically address the mutual learning that must underpin any change in the relationship between individuals, groups or organizations.

Conflict scholars have determined the types of responses that each source of conflict provokes and have identified resource and socio-cognitive conflict as the most potentially constructive. However they have only recently begun to acknowledge that, in practice, without high levels of interpersonal and inter-group integration, all conflict "feels" like identity conflict (e.g. Mooney et al., 2007), the least constructive and least amenable to conciliation. Research on conflict has not yet addressed how organizations shift emphasis away from identity conflict and towards aspects of the conflict more likely to promote learning.

In summary, previous research has acknowledged the importance of conflict to learning and the centrality of identity to conflict and to a lesser extent identity's influence on learning; however the relationship between these three key concepts has not been articulated. That is what I do in this dissertation. In this section I describe the ontological approach that I have taken to study this phenomenon, and the premises that form the foundation of my model linking identity, conflict and inter-organizational learning.

3.2 The Practice Based View

Research on organizational learning, including inter-organizational learning, has predominantly considered knowledge as the codification of experience in some form of cognitive structure or behaviour pattern, and of learning as the process through which such structures change (i.e. Easterby-Smith, 1997; Fiol & M. A. Lyles, 1985). Organizations are thought of as information processing units that acquire knowledge through reflecting on experience. This understanding of learning draws directly from individual psychology and is extended to firms through the delineation of levels while still regarding knowing as primarily cognitive (Nicolini, Gherardi, & Yanow, 2003). Research on organizational identity has followed a similar ontological tradition, and until recently it has been depicted as existing in the minds of organization members with less attention given to its behavioural aspects (Nag et al., 2007) even though basic assumptions about "who we are" as an organization inevitably influence "what we do" and "how we do things around here" (Kogut & Zander, 1996). In contrast, research on conflict has to a great extent been driven from a practice perspective, but the link back to theory, especially, as it relates to socio-cognitive conflict has been limited.

The practice based view draws on recent work in philosophy and social science to move beyond the "prevailing notions that depict it (learning) as the static result of thinking by disinterested and autonomous individuals" (Nicolini et al., 2003, p. 7). In the practice based view, learning in organizations is "social, processual, materially and historically mediated, emergent, situated, and always open-ended and temporary in character" (Nicolini et al., 2003). It is understood

through individual performances (Feldman & Pentland, 2003) or episodes (Hendry & Seidl, 2003) of "situation-specific enactments by individuals working in specific places, at specific times" (Branzei & Fredette, 2008, p. 395). Recent research on identity suggests that organizational identity manifests in collective practices (Nag et al., 2007). To meet my goal of multi-level theorizing, I have employed the practice-based view.

The practice-based view seeks to overcome the split between "individualism" which favours individual action while ignoring macro-forces, and "societism", a concept that focuses on the widespread societal forces while discounting individual action (Whittington, 2006). Recently Johnson, Melin, and Whittington (2003) proposed a relatively narrow view of practice focusing on the activities that organizational actors conduct (micro-level), their consequences for organizational outcomes (macro level) and the feedback loop from context and the organization back to the actors. They argue that this approach does not replace traditional management theories such as the resource based view or institutional theory, but rather provides an explanation of the mechanisms that underpin each.

There is a fundamental difference between the "content", "process", and "practice" approaches in terms of the research questions asked, the theories used and the phenomena explained (G. Johnson et al., 2003). Content theories such as the resource based view, provide conceptual explanations of organizational outcomes and focus mainly on firm performance. They attempt to determine "what". Content theories prioritize nouns over verbs (Garud & van de Ven, 2006) and employ broad, static, and convenient constructs, resulting in

repeated inconclusive studies (G. Johnson et al., 2003). Researchers that take the practice based view suggest the lack of consistent findings is because the macro processes studied do not capture the micro processes in the actual activities (Nayyar, 1992; Zona, 2009).

Process theories address questions of "how" by examining how inputs are transformed into outputs, such as learning or identity, in an organization as a whole (G. Johnson et al., 2003). They also seek to explain firm level outcomes. A typical process theory holds that similar inputs subjected to similar processes will lead to similar outcomes; and that there are certain conditions necessary for the outcome to be reached. Typical patterns of events, such as variation and selective retention, are core theoretical constructs (Van de Ven & M. Poole, 1995). Conversely, the practice based view looks inside the process (J. Brown & Duguid, 2002).

The distinctive characteristic of the practice based view, proposed by Johnson and colleagues (2003) is the use of verbs and an inherent process based orientation. This is because practice-based approaches focus on what people actually do. Attention is directed toward understanding how and under what conditions action actually occurs. The object of inquiry, the unit of analysis, is the practice or the action; the capacity of humans to perform actions, the temporal organization of such actions, and the resources required (Gherardi, 2009; Nicolini et al., 2003). Another feature is that in this view organizational learning, identity maintenance, and conflict responses are conceived of as social processes sustained by processes of participation in, socialization into, and membership in social groups like communities. This is different than the more

traditional individual-centred social cognition perspectives (Feldman & Pentland, 2003; Nicolini et al., 2003).

Most practice based approaches refer to the situated nature of practice (i.e. Feldman & Pentland, 2003). This implies that learning, for example, and "its subjects and objects must be understood as being produced together within a temporally, geographically, or relationally situated practice" (Nicolini et al., 2003, p. 23). Finally and perhaps most relevantly for this study, practice-based approaches recognize uncertainty, conflict, incoherence, paradox, tension, and inconsistency as fundamental to elements of practice.

The latest developments in practice based view research in strategy (Jarzabkowski, Balogun, & Seidl, 2007) propose to conceptualize any phenomenon as a situated, socially accomplished activity, which comprises actions, interactions, and negotiations of multiple actors and the situated practices that they draw upon in accomplishing this activity (Jarzabkowski, 2005). Therefore, following this stream of practice research, I have conceptualized inter-organizational learning as a situated activity. The practice based view studies episodes of organizational activities (Hendry & Seidl, 2003) in order to uncover the mechanisms underlying the inter-organizational learning practice. It asks questions such as "how is the conduct of a joint project consequential in terms of how identity issues arise and contribute to learning?"

Whittington (2006) proposes that three elements are key to understanding practice: praxis, practices, and practitioners each of which involves a different analytic choice and provides a somewhat different entry into the study of inter-organizational learning as practice. Praxis refers to the actual activities that make

up the substance of, in this case, learning and may be operationalized at different

levels and through interactions between levels (Jarzabkowski et al., 2007).

Practice represents the shared routines of behaviour, norms, procedures and

artefacts such as white boards, and meeting minutes that guide collective activity

(Feldman & Pentland, 2003; Gherardi, 2009). Practice might be considered

institutionalized learning (Crossan et al., 1999). While practices are diverse and

variable and can be altered according to the activity in which they are used

(Seidl, 2007) they are carried out within a framework of procedures and

expectations. However the particular actions taken (praxis) are to some extent

novel (Feldman & Pentland, 2003). Practitioners are the individuals who draw

upon practices to act, i.e. perform praxis. They derive agency through their use of

practice and such agency is embodied in who they are, how they are able to act

and is always connected to the situation and context in which it is derived, i.e.

their individual and organizational identities. These three elements are the

integrated parts of a whole called inter-organizational learning.

I use Jarzabkowski et al.'s (2007) framework of a theory of practice in the

context of inter-organizational learning (See Figure 3-1: A Framework for

Analyzing Inter-Organizational Learning as Practice). As depicted in Figure 3-1

learning practitioners are organizational leaders, executive and middle managers

who contribute to organizational learning in two ways: by establishing learning

practice and receiving feedback from it (A) and by conducting learning praxis by

engaging with other organizations and making sense of the interaction (C).

Practice interacts with praxis (B) in that the practice conditions the praxis which in

turn influences practice. The interaction between the three components of the

framework is always bi-directional and learning is accomplished by their combination.
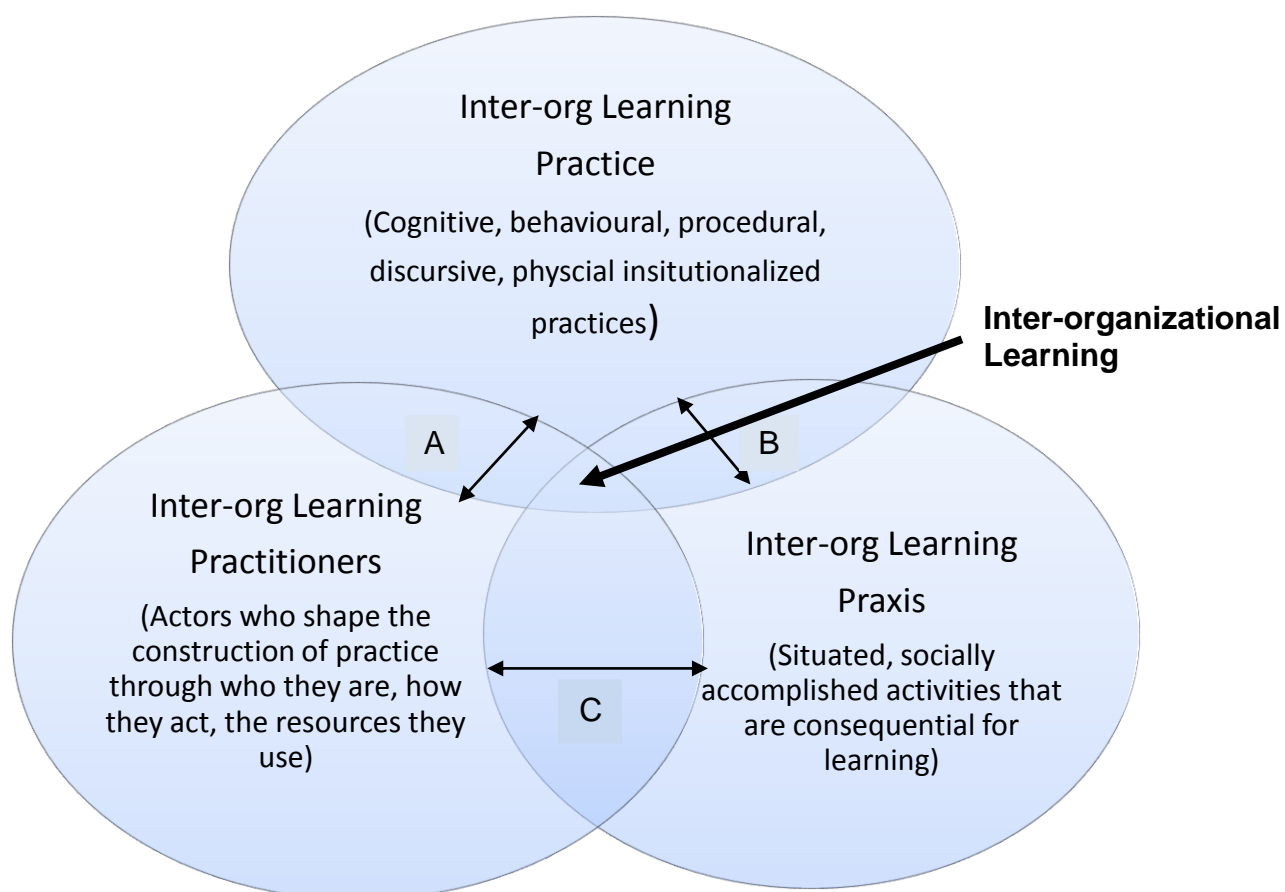
Figure 3-1: A Framework for Analyzing Inter-Organizational Learning as Practice[2]

Following the recommendation of Johnson, Langley, Melin and Whittington (2007), in this study I put the interaction between practitioners and praxis in the foreground and focus on the activities that individuals perform and how and why they make sense of them. I do not ignore practice, which in this case is the

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[2] Modeled on Jarzabkowski, Balogun, & Seidl (2007). Strategizing: The challenges of a practice perspective. Human Relations. 60(1)

institutionalized learning of the organizations (procedures, policies, etc.),
however, gaps between it and praxis yield important, albeit secondary, insights.
The practitioners are the point of access and the unit of analysis is the actions of
engagement between organizations whose activities are incompatible or
"enemies". My data collection and data analysis encompass the individual,
activity, group, and organization levels. This focus on practice extends our
understanding of the processes of inter-organizational learning by giving full
consideration to the richness and depth of the phenomena by allowing us to look
inside the processes.

3.3 Model of Identity, Conflict, and Inter-organizational Learning

In this section I develop an inter-organizational learning model to address
the phenomenon of inter-organizational learning in the context of a conflict. Like a
framework, my model defines the territory and takes us a step closer to a theory
(Crossan et al., 1999). A model has several requirements, the first being to
identify the phenomenon of interest, in this case "learning between enemies".
Next the key premises or assumptions underlying the framework need to be
explained (Sutton & Staw, 1995; K. E. Weick, 1995). Finally the relationships
between the elements in the model need to be described (Sutton & Staw, 1995;
K. E. Weick, 1995). While the individual elements have been established in prior
literature, what is unique to my model is that I am showing the interrelationships
and embeddedness across the levels. My model makes high level connections. It
is underpinned by 5 key premises or assumptions:

1. Inter-related and Embedded: Conflict, learning, and identity are inter-related in that one influences the formation of the others and they are embedded in activities (praxis) of individuals and in practices (institutionalized behaviours and beliefs) at the collective level.

2. Multi-level Impacts: Conflict, learning, and identity are inter-related across the individual and collective levels via feedback and feed forward mechanisms.

3. Individual Engagement: Praxis-Practitioners-Practice: Change in conflict, learning, and identity resulting from inter-organizational engagement takes place through the activities (praxis) of individuals (practitioners) and practices of organizations or groups.

4. Repeated Engagement between Equals: Conflict, learning, and identity continue to evolve with repeated engagement. Their movement is determined by the nature of the engagement between individuals.

5. Conditions: Research has identified a range of conditions that favour inter-organizational learning. There are conditions around the conflict itself, conditions related to the organizations, and to the individuals involved.

I now will describe each premise in more detail.

3.3.1 Inter-Related and Embedded

Conflict, learning, and identity are related in that one influences the formation of the others and they are embedded in the praxis (activities) of individuals and in practices (institutionalized behaviours) at the collective level (See Figure 3-2: Embeddedness). The relationships between conflict and both individual and organizational learning (Argyris & Schon, 1978), conflict and identity (e.g. Mannix & Neale, 2005), and to a somewhat lesser extent identity and organizational learning (e.g. Cook & Yanow, 1996) have been established in

prior research. My model highlights the extent to which they are related to each other through praxis and practice (activities and behaviour).

Conflict, as defined in this dissertation, entails incompatible activities such that one individual's or organization's actions interfere with or obstruct another's action (Deutsch, 1949; 1973). It acts as the stimulus for action. In the context of the practice based view then the actions taken (praxis) by individuals (practitioners) in response to conflict, based on their organization's routines, procedures, and behavioural practices, instigates learning (with or without an accompanying shift in beliefs) (Inkpen & Crossan, 1995). In a similar vein, individuals' identity is expressed through their actions (praxis) which are a reflection of the practices of those individuals' social and role identities and their organizations' identities.

Organizational identity manifests in collective practices (Nag et al., 2007). Even within cooperative groups these practices can create conflict (Deutsch, 1949; 1973; Tajfel & Turner, 1986). The practices related to any particular identity impact what can be learned in that they represent a collective and institutionalized learning or knowledge base that shapes the behaviour and beliefs of individuals (practitioners) and their organization (J. Brown & Duguid, 1991; Nag et al., 2007). Conflict may interfere with or obstruct actions at the organizational level as well as at the individual level. I proceed on the premise that conflict, identity, and learning are inter-related and embedded in actions and practices.
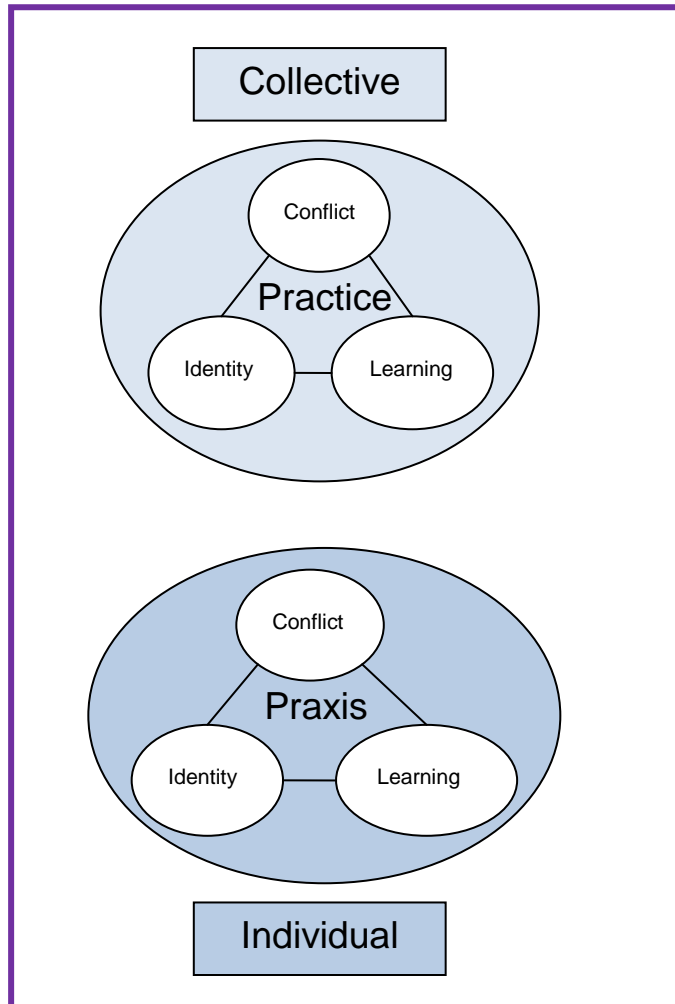
Figure 3-2: Embeddedness

3.3.2 Multi-Level Impacts

Conflict, learning, and identity are inter-related across the individual and collective levels via feedback and feed forward mechanisms. While conflict, identity, and learning are inter-related within levels, the overall process is inherently multi-level. Individual beliefs and behaviours regarding the practices related to identities and conflict both influence and aggregate to higher level practices and understandings. These higher level understandings in turn provide

the basis for feedback to the sub-groups, and individuals in the organization (Chreim, Williams, & Hinings, 2007; K. Corley & D. Gioia, 2003; Crossan et al., 1999; De Dreu & Gelfand, 2008; Dutton & Dukerich, 1991). Individuals' praxis (activities) in response to feedback are shaped by and in turn modify their understanding of the conflict, their identities and their learning. Organizational practices in response to feedback are shaped by and in turn modify organizational identity and learning and collective understanding of the conflict.

The context of this study is situations of conflict between organizations. My model centers on engagement that occurs practitioner to practitioner, described more fully in the next section. Each organization, through the practices created by its institutionalized learning and inherent in its identity uniquely influences the individuals' identity, and hence their potential for learning, as well as their potential for conflict. The identities of work, professional and social group memberships as well as their prior knowledge also exert an influence on individuals (See Figure 3-3: Multilevel). I proceed on the premise that conflict, identity and learning are inter-related across levels.

It is important to note that in my model the organization level refers to the collective consensus of individual behaviours and beliefs. It is the collective level as compared to the individual level. Also, this structure follows from the basic assumption that individuals, not organizations, have insights and take action (Crossan et al., 1999; Simons, 1991).
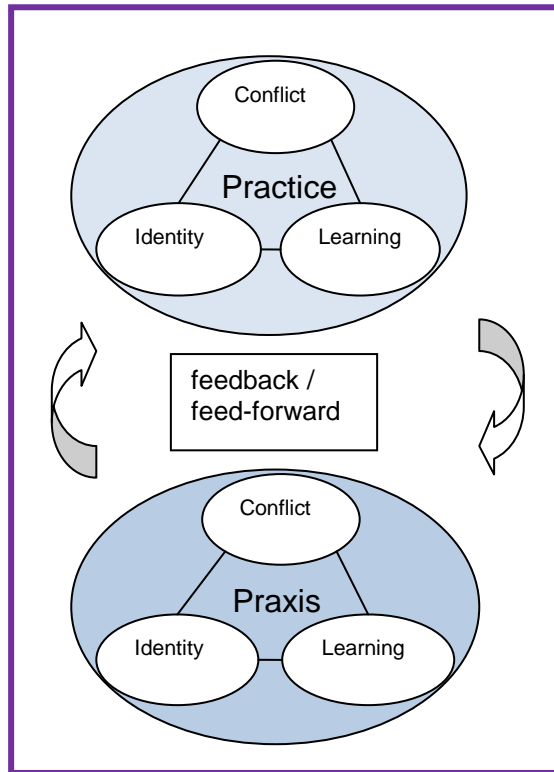
Figure 3-3: Multilevel

3.3.3 Individual Engagement: Practitioners-Praxis-Practice

In the context of inter-organizational conflict, change in conflict, learning, and identity results from practitioner engagement between organizations. Change is anchored in feedback and feed forward cycles, through the praxis (activities) of practitioners (individuals) and practices of organizations or groups (see Figure 3-4: Practice-Practitioner-Praxis).
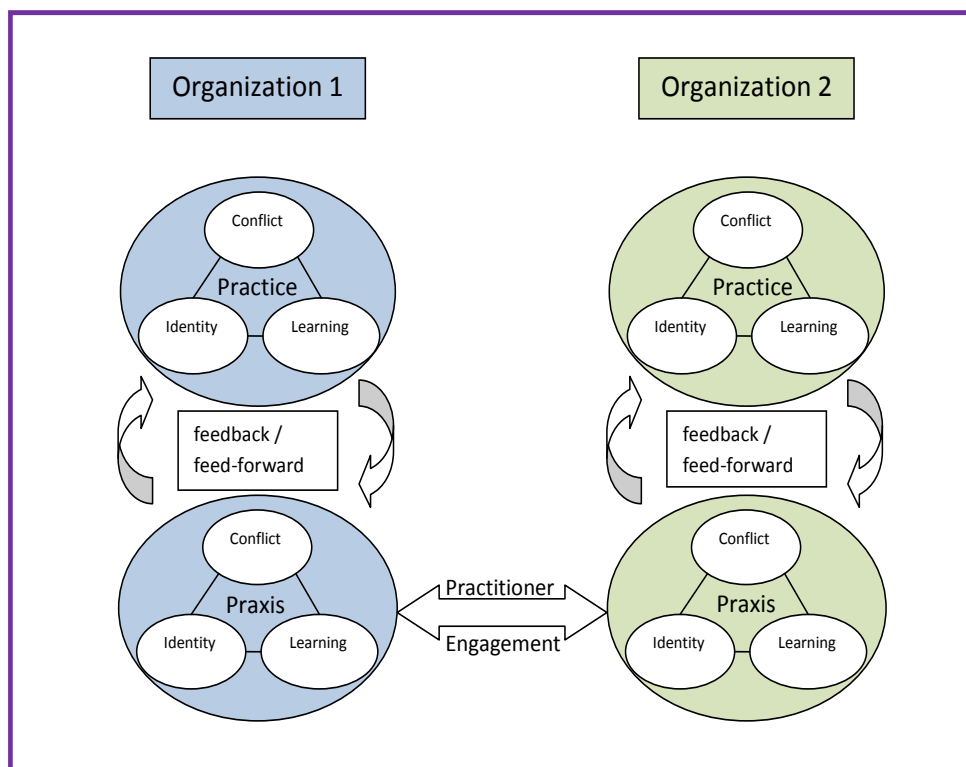
Figure 3-4: Practitioner-Praxis-Practice

However, engagement between individuals from organizations in conflict may trigger actions, such as defensive routines and an over reliance on past experiences, that inhibit their ability to learn (Fiol et al., 2009; D. Gioia & P. Poole, 1984). Information complexity and/or the need to preserve a positive self-concept also tend to work against experimentation and hence learning (D. Gioia & P. Poole, 1984). A relatively automatic enactment of existing practices by individuals will tend to reinforce existing identities and conflict. Consequently certain conditions may be required to allow for experimentation to occur.

Organizational learning between organizations in conflict may then depend on individuals' ability to tap into a range of less salient identities and particularly into identities based on communities of practice or roles. While an individual's

behaviour is usually an expression of their more salient identities (P. Burke, 1980; P. Burke & Reitzes, 1991), when opportunities to express that identity are unavailable individuals will often reorder the importance of existing identities (Serpe, 1987). Field studies have shown that contextual factors can render some identities much more meaningful than others (R. Brown, 2000). Experiments in psychology have demonstrated that common group membership (cross categorization) reduces in-group bias (e.g. Deschamps & Doise, 1978). This is important in the case of engagement between "enemies" as engagement forms a common group and raises the possibility of new activities that result from activation of a different identity.

Communities of practice, such as the community of scientists, provide individuals with common vocabulary and practice with which to engage and address each other (J. Brown & Duguid, 1991). Whereas within an organization it is often role and social identities that differentiate individuals, in engagement between "enemies" an otherwise less salient social or role identity may provide an opportunity for them to connect. Also, in a relatively new inter-organizational relationship behaviours are not entrenched, permitting more individual leeway. Employing the practices associated with their common identity allows practitioners to explore new activities in response to the conflict. While engagement between individuals from organizations in conflict is likely to evoke the strong emotions (K. Weick et al., 2005) necessary to instigate experimentation (i.e. new activities), I propose that it is the presence of multiple social and role identities that enable individuals to constructively engage, so that feedback from experimentation leads to new interpretations and integration.

While the existence of common social or role identities is necessary, given the influence of organizational identity, it may not be sufficient to ensure enactment of new behaviour in response to feedback. For such enactment to occur something must loosen the hold that this collective identity places on individual actions. Researchers have suggested that feedback from the external environment "destabilizes" individuals' perception of their organization's identity (e.g. D. Gioia et al., 2000; Hatch & Schultz, 2002). Although minor inconsistencies between external perceptions and internal beliefs regarding their organization's identity are likely to trigger defensiveness, a serious discrepancy may induce organizational members to reevaluate their understandings and alter their actions (D. Gioia et al., 2000; Whetten & Mackey, 2002). Consequently, in order for the individuals to experiment with new actions that run contrary to the dominant logic, their respective organizational identities must be in some state of flux.

When members' collective understanding of organizational identity is in a state of flux, perhaps as a result of a crisis in the industry or a merger, the characteristics of the organization that are central, enduring and unique become less clear. This leads to ambiguity regarding the organization's practices. As a result the constraints that the organizational identity formerly placed on individuals' activities may relax and their individual, social and role identities become relatively more important. In this situation the presence of common social or role identities can facilitate new activities based on those common identities. In addition to supporting new activities this has the potential to shift the relative focus of individuals away from identity differences between themselves

and their organizations. With this shift the more socio-cognitive aspects of the conflict may become the focus.

In addition, the extent to which an individual identifies with their organization's identity influences whether they will change their behaviour in response to feedback that is inconsistent with that identity. For behavioural change to occur individuals must identify strongly with their organization's distinctive characteristics. When individuals do so, enacting behaviour related to the organizational identity is more likely to take relative priority over their other identities. This is especially the case if the individual is over-identified with their organization (McGregor & Little, 1998; Schwenk, 2002). The extent to which an organization's identity aligns with institutionalized norms in its industry, also impacts the likelihood that individuals will be bound by institutionalized norms and logics. Hence, the level of an individual identification with their organization's identity, along with the alignment of that identity with the norms in its category, determine the potential for individuals to alter their behaviour and to shift emphasis to aspects of the conflict other than identity differences. The interaction of identification and organizational identity can relax the constraints on individual praxis in the same way that they are relaxed when an organization's identity is in flux.

To summarize, conflict, identity, and learning serve as filters through which the individuals make sense of feedback. Feedback that is consistent with their understanding will not prompt any change in praxis. Feedback that is inconsistent with their understandings may prompt a different interpretation of the situation, resulting in experimentation with new activities or the activation of a new identity.

As stated above the extent to which individuals will consciously experiment with new actions in response to conflict is a function of the interaction between their social or role identities and their respective organizations' identities. I proceed on the premise that individuals' subsequent praxis in response to feedback is related not only to their understanding of the conflict but also to their identities, their learning, and to the learning and identities of the groups and organizations with which they identify. These are conditions for engagement between individuals.

3.3.4   Repeated Engagement

Conflict, learning, and identity evolve with repeated engagement. The trajectory of their movement is determined by the nature of the engagement, which occurs between individuals from the organizations in conflict.

As described above, in interactions between individuals from organizations in conflict, the process of learning may be thought of as the capacity to activate different, probably less salient, identities and the accompanying behaviours in response to feedback. Once enacted, the new behaviours alter the context and create a novel situation that requires conscious interpretation first by the individuals themselves. Individuals must be "willing to suspend their belief systems to try a new behaviour, and in doing so are open to new and different interpretations of the results of the behaviour" (Inkpen & Crossan, 1995, p. 600). This interpretation of their own new behaviour may lead to altered beliefs about the source of the conflict (identity versus socio-cognitive or interests) and in turn activate new beliefs and behaviours. The extent of the shared understanding of individuals from each of the organizations forms the foundation for integration

and collective learning between them and for the integration and potentially the inter-organizational learning in their respective organizations (See Figure 3-5: Repeated Engagement).

To move from individual to collective learning shared understandings must be developed. This is accomplished through various forms of interaction; first between individuals within the inter-organizational group, and subsequently between these individuals and groups within their organization (Crossan et al., 1999; Isaacs, 1993). The nature of the interaction between the individuals and groups, and particularly the practices such as structures and mechanisms which connect them, strongly influence inter-organizational learning (Argote, McEvily, & Reagans, 2003; Easterby-Smith et al., 2008).

While not explicitly addressed in prior research, many of the practices of inter-organizational learning studied to date act primarily to reduce inter-group and inter-organizational hostility (i.e. manage the inherent identity conflict). These practices have tended to create, to varying degrees, the conditions outlined in the contact hypothesis (Allport, 1954; R. Brown, 2000). These include prolonged engagement involving some cooperative activity (e.g. Inkpen & Currall, 2004); official and institutional support for the engagement (e.g. Mason & Leek, 2008) and engagement between relatively power balanced practitioners and organizations (e.g. Kale & J. Anand, 2006). While originally aimed at the reduction of inter-racial hostility these practices support the kind of inter-group and inter-organizational exchange necessary for dialogue to occur. For example, Mason and Leek (2008) discuss the creation of 'soft' mechanisms, such as individuals working together to develop a document with the expectation that they

would learn from each other. It is through ongoing discussion and shared actions (i.e. praxis) that shared understanding develops and mutual adjustment take place (Crossan et al., 1999).

Dialogue as Bohm (1996) defines the term goes beyond typical notions of conversation and information exchange, to explore deeply held assumptions about expectations, meaning, and identity (Bohm, 1996, p. vii). Dialogue depends on the attention of the individuals involved and it must be sustained over time in order to surface the assumptions that are present in the group. Through recognizing these assumptions, individuals may gain new understanding of their thought processes and break out of the identity constraints that inhibit them. For example, as discussed above, organizational identity can be thought of in terms of the organization's position within an established set of categories that define an industry, for example "we are an oil and gas company". Identity change would occur in the context of dialogue that challenges the dominant expectations, meanings and scripts attached to identity, such as "oil companies and environmentalists are enemies". The questions prompted by dialogue drive change by creating identity discrepant cues and novel interactions like, "oil companies and environmentalists can collaborate" and generate a sense of identity amongst dialogue participants, as in "oil companies and environmentalists care about the natural environment" (i.e. Rao et al., 2003).

Practitioners can begin to understand the extent to which they are behaving automatically based on their existing interpretations. With such understanding Bohm (1996) suggests that defensive posturing can diminish and deep collective learning is then possible, although not assured. It is through interaction with

others that individuals are able to break out of beliefs and behaviours and Bohm (1996) suggests that perhaps the only way to fundamentally change meanings and expectations, such as those related to identity and conflict, is through dialogue.

I proceed on the premise that repeated engagement between practitioners around some cooperative activity that has institutional support forms the basis for dialogue that will lead to inter-organizational learning.
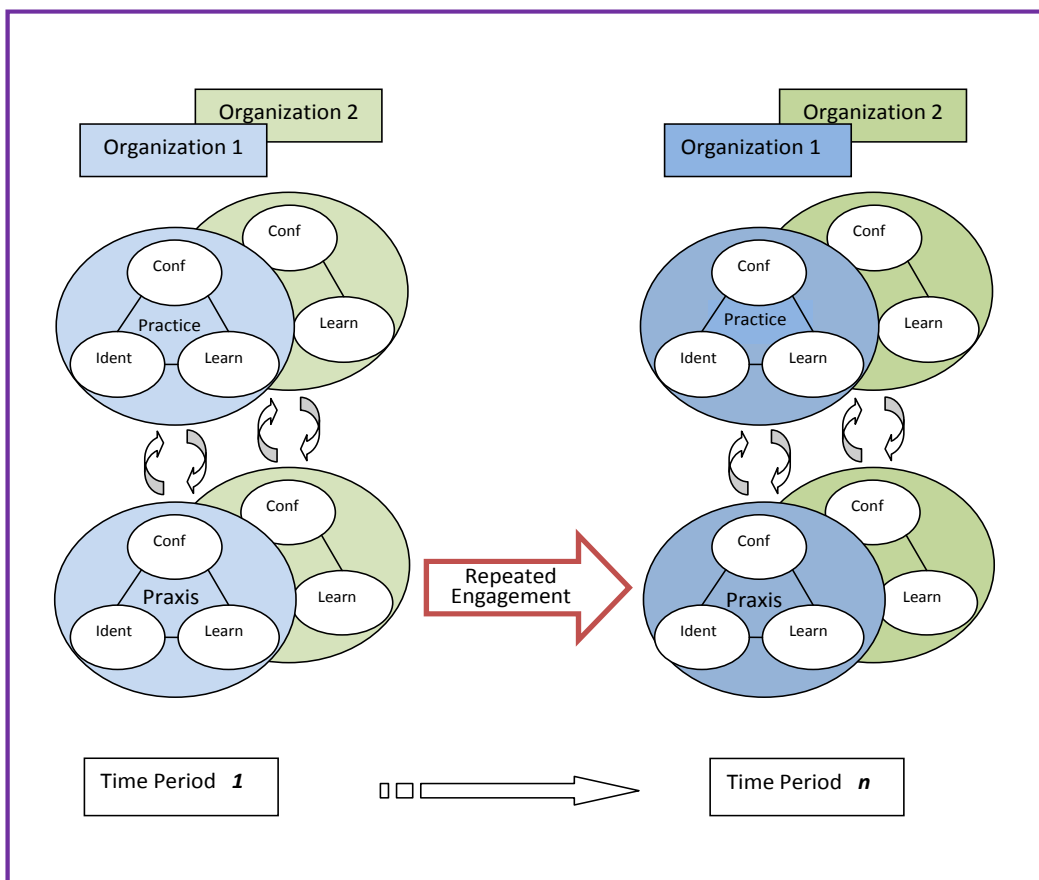
Figure 3-5: Repeated Engagement

3.3.5   Conditions

Prior research has identified a range of conditions that favour inter-organizational learning, problem solving processes, and moving from a stalemate. These may also apply to an organization's ability to learn in situations of conflict. There are conditions around the conflict source, conditions related to the organizations and conditions related to the individuals involved (see Figure 3-6: Model of Identity, Conflict, & Inter-Organizational Learning).

3.3.5.1   Conditions Related to the Conflict

According to De Dreu and Gelfand (2008) and others conflict can arise from three major sources: mixed motive interdependencies or conflicts of interest; the need to develop and maintain a positive identity; and the need to hold socially validated and shared understandings. Hence conflicts arise from differences in individuals', groups', and organizations' interests, identity, or learning.

A common assumption is that conflict is based on identity and is dysfunctional to inter-organizational learning because of the threat that it represents to the ego of others (e.g. A. Brown & Starkey, 2000). However, a more nuanced understanding of the combination of sources of conflict may have implications for inter-organizational learning (De Dreu & Gelfand, 2008). Research has shown that socio-cognitive conflict is beneficial and increases the quality of decisions (i.e. Amason, 1996). However, that may be the case only when identity conflicts have been addressed or at least reduced in some way. In a similar vein it is well established that when parties believe their goals are competitive (Deutsch, 1949) as in conflicts of interest, they do not engage

constructively and socio-cognitive conflict hinders team performance (Tjosvold, 1998). I proceed on the premise that redirecting emphasis towards socio-cognitive conflict and away from identity conflict or conflicts of interest is necessary for learning.

3.3.5.2 Conditions Related to the Organizations

In addition to the interactions discussed above, the capabilities of each of the organizations, as embodied in their practices, will impact their ability to learn from engagement. An organization's learning practices in general, including its learning routines, dominant logics, knowledge bases, and structure (Cohen & Levinthal, 1990; P. Lane & Lubatkin, 1998), and especially its prior experience with inter-organizational learning, will all influence its capacity to "learn from the enemy". Prior experience with a particular learning partner has an influence as well (Zollo et al., 2002). I proceed on the premise that an organization must have well developed and effective inter-organizational learning practices to learn from an organization with which it is in conflict.

3.3.5.3 Conditions Related to the Individuals

The capabilities of the individual practitioners involved are critical. Relationships between individual managers will determine much of what occurs in terms of inter-organizational interactions (Inkpen & Tsang, 2007) and in situations of conflict those relationships are likely to be cautious and tense. Therefore in addition to enjoying the support of an organization that is capable of learning, individuals must have confidence that the risks of working with hitherto

unfamiliar, and possibly hostile, individuals and groups outweigh the costs. In other words they must be motivated and optimistic that engaging with individuals from the other organizations will be constructive (Pruitt, 2005). I proceed on the premise that learning practitioners must be confident, motivated, and optimistic regarding the potential for inter-organizational learning.
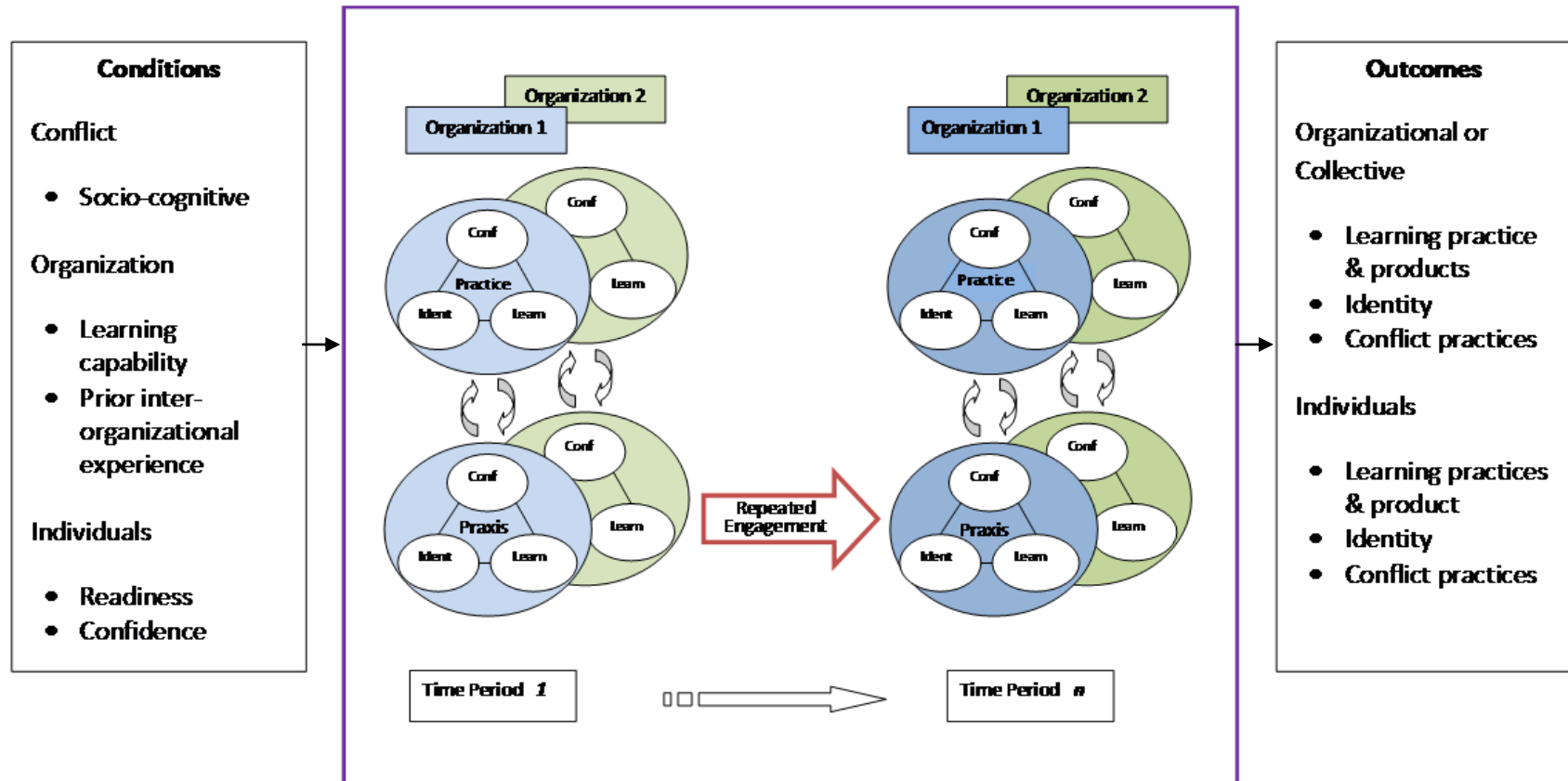
Figure 3-6: Model of Conflict, Identity, & Inter-Organizational Learning

3.3.6 Summary

My model suggests that individual actions in response to conflict are based on individual and collective identities and individual and collective learning and it is these actions that form the basis for inter-organizational learning in the presence of conflict. Depending on their "repertoire" of identities and the stability of their organization's identity, individuals, and their counterparts in other organizations, may be able to tap into behaviours associated with a common social or role identity. This common identity provides common language and practices to guide their interaction, possibly highlighting the interest or socio-cognitive aspects of the conflict. The likelihood that individuals will experiment and persist with new behaviours also depends on their organization's identity and their level of identification with it. If the individuals do persist with the new activities, they may be able to suspend their belief systems and explore new interpretations. This shift in interpretation surfaces assumptions and facilitates dialogue, and possibly the integration of new information, first by the individuals and then by the group (Bohm, 1996; Crossan et al., 1999). The integration of new information by the group makes inter-organizational learning possible, depending on the practices (i.e. receptiveness) of the organizations involved. Therefore, inter-organizational learning is an unusual case where individual to individual learning can ultimately influence the learning that occurs in each individual's respective organizations. It is the individuals and the social activities and practices, such as dialogue, through which they develop shared understandings that facilitate inter-organizational learning.

In this dissertation, I examine whether all of the premises and conditions described must hold for inter-organizational learning to occur. Moreover, I will look for patterns in the data to provide a more nuanced explanation of the activities (praxis) through which the paradoxical phenomena of "learning from the enemy" occurs.

CHAPTER 4: METHODOLOGY

4.1 Research Strategy

To explore the phenomena of "learning from the enemy" I followed Yin's (2009) methodology in selecting my research strategy and research design. Yin (2009) suggests that the choice of a research strategy hinges on three conditions: the type of research question, the extent of the researchers control over the behavioural events, and whether the events are contemporary or in the past (i.e. timing).

Investigations of inter-organizational learning are usually concerned with contemporary events (condition three) in a setting where the researcher has no control of the behavioural events (condition two). In my study therefore the first condition, the type of research question, is the most important in determining the research strategy. According to Yin (2009) there are three broad categories of research questions: those that ask "how much or how many", those that ask "what" (exploratory), and those that ask "why or how" (explanatory).

The first type of question has been explored using surveys and archival research asking, for example, how much has been learned (e. g. Cockburn & Henderson, 1998) or how much impact learning has had on financial performance (e.g. Zollo et al., 2002). Large scale multi-organizational surveys rely on proxy objective measures of inter-organizational learning (i.e. patent counts), often outside of the context where it has occurred; thus they provide only a broad indicator of successful inter-organizational learning outcomes and

processes. This study takes place in a high-conflict context. And while survey and archival research have suggested that inter-organizational learning can occur in the presence of high levels of conflict (Steensma et al., 2008), it has for the most part failed to adequately address the complete nature of the learning or the processes through which it has occurred. Indeed, one of the primary motivations for this dissertation is the gap in our understanding of the social and behavioural (the "what" and "how") aspects of inter-organizational learning, caused by the prior reliance on survey and archival studies.

Case studies are highly suitable for exploratory or explanatory purposes (i.e., "what", "how" and "why" questions) when the phenomenon is current and situated in the organizational world, and the researcher has little control over events, as in the case of inter-organizational learning (Yin, 2009). Additionally, in research that explores the underlying dynamics of phenomena that play out over time, such as inter-organizational learning, case studies provide the ability to get closer to constructs and to illustrate relationships more directly (Siggelkow, 2007). This is in contrast to large sample work where the distance between conceptual constructs and measurable variables is often large and the true nature of the relationship (if one exists) unclear (Siggelkow, 2007). An equally compelling argument for case studies is that they are well suited to understanding dynamic, complex individual and organizational phenomena involving intense human interaction, such as the practices related to inter-organizational learning in a conflict laden situation (G. Johnson et al., 2007).

Case studies are conducted within a context by accessing people who are able to recollect events pertinent to the phenomena under study relatively

accurately, in addition to archival documents, and the researcher's observations. Therefore case studies allow the retention of the meaningful characteristics of real life events, such as individual life cycles, and organizational and managerial processes. Flexible iterative data collection and tabulation allow one to take advantage of emergent themes, sharpening construct definition, validity and measurability (Eisenhardt, 1989). Comparing data to theory from the literature, both confirming and contradictory, helps to build internal validity and raise the theoretical level. Unlike grounded theory or ethnography, case studies demand a prior grasp of relevant theoretical relationships to guide and delimit data collection efforts (Miles & Huberman, 1994; Yin, 2009).

In summary, while the case study method is comparable to other types of research strategies in its process of problem definition, design, data collection, data analysis, data composition, and reporting, it is uniquely appropriate for exploratory and explanatory studies such as this. The case study method explains links that are too complex for surveys, describes the rich context in which the phenomena occurred, illustrates the phenomena, and explores situations where the phenomena do not have clear outcomes (Yin, 2009). Hence, a case study research strategy was selected for this dissertation. In the next section I describe the rationale for my research design.

4.2 Research Design

The research design "is the logical sequence that connects the empirical data to a study's initial research questions and, ultimately, its conclusions" (Yin, 2009, p. 26). The selection of a specific research design using case study rests

on the choice between single and multiple cases and depends on the number of units of analysis. I discuss each in turn.

4.2.1 Single Cases

According to Yin (2009) single cases are appropriate when theory is well formulated. While much is known about inter-organizational learning, a single case that meets most of the conditions necessary for inter-organizational learning has the potential to challenge or extend existing theory. Another rationale for a single case study is the case to be studied is extreme or revelatory. Inter-organizational learning "between enemies" is a sufficiently infrequent and uncommon phenomenon that I believe a pertinent single case is worth documenting and analyzing (Yin, 2009). While multiple case studies provide a foundation for testing a theory, extreme single cases are particularly valuable in enabling researchers to focus in on the conceptual relationships proposed within an exceptional empirical setting (Eisenhardt, 1989; Siggelkow, 2007; Yin, 2009). In addition, exceptional or unique cases hold the promise of special insights, especially regarding behaviours or practices (G. Johnson, et.al., 2007; Yin, 2009). A final rationale for a single case study is the longitudinal case; studying the same single case at two or more intervals. My model suggests that certain conditions change over time therefore a longitudinal case study is necessary to reflect the anticipated changes (Yin, 2009). I believe that a multiple case design would be unlikely to generate additional insights sufficient to justify the added cost in time and resources required to find and investigate comparable cases,

when weighed against one well-chosen, unique and extreme case. Therefore I chose a single case design for this dissertation.

4.2.2 Multiple Units of Analysis

The unit of analysis defines what a "case" is about. Case studies have been conducted to investigate inter-organizational learning, identity, and conflict; and focusing on individuals, work groups, organizations, nations and others. In each study the definition of the unit of analysis and therefore the case is directly related to the initial research questions (Yin, 2009). The research questions posed in this dissertation focus on the behaviours associated with inter-organizational learning between organizations in conflict – namely the behaviours exhibited in the dyadic relationships between individuals and further, between collectives (groups or organizations). While these behavioural interactions are the main units of analysis, they necessarily incorporate subunits of analysis in an embedded design. Subunits of analysis here include the organizations, relevant sub-groups, and individuals. These subunits add opportunities for analysis across levels and particularly at the organizational level where practice becomes evident, enhancing the insights from this single case. The similarity to constructs investigated in previous research on learning and identity will allow me to build on prior literature (Yin, 2009).

4.2.3 Plan for an Embedded Single Case Design

Yin (1989) recommends the following steps for a single case design.

1. Define and design:
   a. Develop theory: Chapters 2 and 3

      b. Select case: Section 4.3

      c. Design data collection: Section 4.4

2. Prepare, collect, and analyze:

      a. Conduct case study: Section 4.5

      b. Develop case narrative: Section 4.5.2

3. Analyze and conclude:

      a. Draw conclusions: Chapter 5

      b. Relate conclusions to existing theory: Chapter 6

      c. Relate conclusions to new theory: Chapter 6

      d. Develop managerial implications: Chapter 7

This dissertation follows these steps. Chapters 2 and 3 presented the theoretical grounding and development of my theoretical framework and what I expected to see in the data. The remainder of the current Chapter discusses steps 1.b. (case selection), 1.c. (data collection design), and step 2 (prepare, collect, and analyze) of the plan.

4.3 Research Context and Case Selection

I chose to study inter-organizational learning between "enemies" in the salmon farming industry in British Columbia. The waterways of British Columbia are highly politicized natural resources because of their impact on a host of social and economic phenomena, including the habitat of the culturally iconic wild salmon and the rights of First Nations. Almost from its inception, the salmon farming industry in British Columbia has been widely criticized for its salmon

growing practices. Salmon farming[3] began in British Columbia in the 1970's and by the mid 1980s it grew rapidly. The commercial fishing industry, later joined by environmentalists, sports fishermen and First Nations, criticized the industry and the provincial government[4] for what they viewed as the negative impact that salmon farming in open net cages[5] had on the marine habitat. In particular, they were concerned about the possible spread of disease or parasites from farmed to wild fish, the possible genetic pollution of wild fish due to escapes of farmed fish, the effects of effluent from farms on the marine environment, and the effects on marine life of pharmaceuticals used on farmed fish.

Opposition to the industry gained profile and momentum during the 1990's and its reputation deteriorated rapidly, as demonstrated by two government moratoriums and industry reviews, the passage of strict regulations, increasingly negative media coverage, the growing enmity of several First Nations, and increasingly sophisticated targeting by environmental groups (see Appendix A: Detailed Chronology of Events in the BC Salmon Farming Industry 1970 – 2009 for summary).

As a result of consolidation, in 2009 the industry is dominated by two Norwegian owned firms: Marine Harvest and Mainstream (Cermaq). For almost a decade these firms (and their precursors) have been directly challenged in the

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[3] Salmon farming, as practiced in BC, consisted of placing juvenile salmon (smolts) into large net cages in the ocean, feeding them fish meal for 18 to 24 months until they reached market weight, then harvesting and processing them.

[4] The provincial government granted the fish farming licenses and the ocean tenures to companies. The provincial and the federal government shared regulatory responsibility for the coastal area.

[5] From the earliest days of the debate environmentalists supported growing salmon in closed containment systems. The industry claims that technology is not economically or environmentally viable.

media and the marketplace by the Coastal Alliance for Aquaculture Reform (CAAR), originally a coalition of local environmental non-government organizations (NGOs) and First Nations[6]. While there have been instances of joint initiatives over the years, the stance of the firms, either directly or through the BC Salmon Farmers Association, was typically to deny, dismiss or in some way discredit CAAR's claims.

Recently, however, there has been a change in the nature of the interaction between Marine Harvest and CAAR. They successfully negotiated the Framework for Dialogue (the Framework), an agreement to undertake five joint research projects. The two organizations have been interacting under its terms since early 2006. The first two projects undertaken under The Framework address the two most prominent issues: the impact of sea lice on the marine habitat and viability of closed containment systems. By way of contrast, Mainstream has made a distinct choice not to undertake joint initiatives with CAAR or any other NGOS, although globally the company does joint research with various educational and research organizations. This continued divergence in strategies, between Marine Harvest and Mainstream, seems to indicate that the Framework is not part of the evolution in the industry.

I chose this particular context and the organizations involved precisely because it represents an extreme and unique case of organizations confronting conflict over time. This research context is further enriched by contrasting strategies adopted by different protagonists. It is very special in the sense of allowing me to gain insights that I do not expect other situations and

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[6] As of 2009 the First Nations had left CAAR.

organizations would be able to provide (G. Johnson et al., 2007; Yin, 2009).

Additionally, by selecting this context of salmon farming in BC I was able to trace

the inter-organizational dynamics and learning outcomes over time by comparing

the data that I gathered with a prior data set, which I describe in the section 4.4.2

Issues in Salmon Farming Data Set.

Beginning in 2005, I participated in a study investigating issues in the global

salmon farming industry. My exposure to the situation in BC raised a number of

questions for me that were unrelated to the original premise of that study. Since

2005 I have actively followed developments in the industry, in particular via the

headlines in the daily Intrafish American Newsletter (Norges Handels- og

Sjofartstidende, n.d.), a division of a Norwegian publishing company. Following

Siggelkow (2007). I used my knowledge of the situation to motivate my own

research questions. Then, drawing on the existing literature I developed

theoretical relationships to describe the conditions and practices of inter-

organizational learning in situations of conflict. I have brought my deep

understanding of this industry to bear at every stage of the design and

development of my approach to this research. For example, my real time

observations over an extended period give me an appreciation for the situation

that enables me to focus on particular sequences of events rather than on the full

narrative. The Framework is considered distinctive by all parties. This kind of

voluntary shift in inter-organizational interaction and apparent learning is rare in

protracted conflicts, and so I expected it would be an instructive case study of

inter-organizational learning. According to Yin (2009) the quality of analysis is

enhanced if a researcher knows the subject matter from previous investigations and uses their "own prior expert knowledge" (2009, p. 161).

In addition, the ability to compare panel data from the first year of the Framework to data gathered almost five years later provided an excellent opportunity to observe the dynamic evolution of the concepts under study, further develop my ideas, adding to the attractiveness of this case as a research context. The extended duration and depth of my involvement means my research can respond effectively to the repeated calls from senior scholars for more longitudinal studies.

All of these reasons suggested the salmon farming industry in BC, and especially the negotiation and implementation of The Framework, as a good context for case study research on inter-organizational learning between "enemies" (Eisenhardt, 1989; Yin, 2009).

4.4 Data Characteristics and Data Collection

4.4.1 Data Characteristics

The data collected in this research were qualitative. Qualitative data offer several strengths, ideally suited to my research questions. The focus is on a phenomenon that is naturally occurring, current and situated in the real world, and featuring "local groundedness … the data were collected in close proximity to a specific situation" (Miles & Huberman, 1994, p. 10). The qualitative data enable thick descriptions and provide richness and offer potential to reveal complex processes. Also qualitative data are usually, and in this case actually were

collected over a sustained period, offering the opportunity to understand processes and probable causality (Miles & Huberman, 1994).

The internal validity of qualitative data is enhanced through triangulation, using multiple sources and types of data (Jick, 1979; Yin, 2009). This research benefited from all of these factors (See Table 4-1: Data Collection Sources). Data included newspaper articles, interview transcripts, company documents, websites, government and third party reports, and notes on observations. Equally important, the validity of the data benefited from my prolonged exposure to this industry, as I was able to triangulate against my own deep understanding of the research context developed over five years of observing it from a social science researcher's perspective. Because the salmon farming industry was and continues to be such a controversial topic in British Columbia, and because the issues were very intense and public, a significant amount and variety of public data is available. Moreover, members and observers of the industry showed a genuine interest in participating in this research, until a federal judicial inquiry was initiated in the fall of 2009.

Table 4-1: Data Collection Sources

Archival Data	Interviews	Direct Observation
Newspaper articles Websites Company documents (i.e. annual reports) Government and third party reports	Individuals from the industry and the environmentalist community Multiple levels within each key organization Other stakeholders impacted by the conflict laden issues Semi-structured interviews	Facility and farm tours Interaction between parties and suppliers, local community or other stakeholders Visits to retail sites and hatcheries and salmon rivers

4.4.2 Issues in Salmon Farming Data Set

As mentioned previously, from 2005 to 2007 I actively participated in a study of social and strategic issues in the context of the global salmon farming industry. The data gathered for that study included a wide range of information on the perspectives of all of the key firms and relevant stakeholder groups as they relate to issues facing the industry. The data have not yet been analyzed for that ongoing research project, the scope of which has recently been expanded to include all major salmon farming jurisdictions. Given that, I have, with the permission of the lead researcher on that study, used the portion of that data set relating to the salmon farming industry in BC as the starting point for my analysis and data gathering.

The data set includes 24 interviews, averaging 90 minutes in length, with a total of 28 people, comprising: executives of salmon farming companies; managers and members of environmental organizations and First Nations;

government officials; industry associations; and scientists/academics. I

conducted 16 interviews, alone or with the lead researcher, speaking to 20

people. In addition, I visited the Head Offices of both major global salmon farming

companies and an international salmon farming association, and viewed salmon

farms in Norway. We conducted the interviews, which were taped and transcribed

by an independent transcription service, between December 2005 and

September 2007 (see Table 4-2: Interviewees for the final roster and additional

details of the interviewees). In all cases, we asked respondents open ended

questions that allowed them to relate their stories of how particular situations and

issues had evolved. Although we had created an interview protocol to steer the

conversation (see Appendix B: Interview Protocol 2005, 2006, 2007), often we

did not strictly follow the guide to permit us to pursue respondents' tangential

avenues of interest, as recommended by Rubin and Rubin (2005). The open-

ended nature of the interviews makes them amenable to analysis from a range of

perspectives and therefore appropriate for inclusion in this dissertation.

This prior data set also included a database of company, government, and

stakeholder documents, and 821 newspaper articles that deal with aquaculture

and salmon farming issues in BC, published between 1985 and 2007 in the

Globe and Mail, the *Vancouver Sun* or the *Victoria Times Colonist*.

4.4.3 Data Collection

Following Yin's (2009) recommendation, my research strategy involved

collecting and analyzing information from multiple sources, in my case interview

transcripts, notes on observations, and archival data, aimed at corroborating the

same phenomenon. The data were collected in two phases. In the first phase, I

collected recent media reports, government reports and archival material to

update and expand the prior data set. These materials were then summarized,

and an initial analysis was done, prior to going to the field. During the second

phase I conducted semi-structured interviews with industry participants and

observers. I spoke with key personnel within the organizations in the BC salmon

farming industry, particularly those involved with the Framework, and visited their

sites. These activities occurred from July to December 2009 following receipt of

approval by the University of Western Ontario's Ethics Committee (Appendix C:

Ethics Approval of Research Design). I will now describe each phase in more

detail.

Phase 1: I collected and analyzed archival data, including company

documents, annual reports, newspaper articles, government reports and scientific

research reports. I did this in order to understand the events surrounding the

industry, the organizations' interaction with each other, and to observe industry

participants' interpretations of the conflict, their learning, their identities and their

and others' behaviour.

I drew newspaper articles from the entire set of articles between January

2007 and November 2009 in the *Vancouver Sun*, the *Victoria Times Colonist*, and

the *Globe and Mail*, in order to update the existing data set. Subject search terms

included "salmon farming", "fish farming" and "aquaculture". There were 265

articles. Each article was thoroughly examined for information and the

perceptions of any parties relevant to my analysis[7] (salmon farming industry members, environmentalists, First Nations, government, scientists etc.). Each article that was deemed to contain relevant content was summarized, arranged chronologically, and entered into the appropriate "bin" in NVivo 8 along with the more than 800 relevant articles published by the same newspapers prior to January 2007.

In 2007 more than 3 years work by two separate government-appointed groups culminated in their much anticipated final reports and recommendations. From the Province of British Columbia website I was able to obtain a copy of the *Report of the Special Committee on Sustainable Aquaculture* (2007), the output of the most recent review conducted by the Legislative assembly of British Columbia. I obtained the *British Columbia Salmon Forum Final Report and Recommendations* ("BC Salmon Forum: Final Report and Recommendations to the Government of British Columbia," 2009) , an independent body appointed by the Premier of British Columbia, from its website. These were combined with the government and third party reports in the existing data set and stored in the project files. Annual reports and company documents were accessed via company websites.

In this research, where only a limited number of individuals were directly involved with the phenomena, the archival data was important because it helped to augment and verify interviewees' retrospective memories. In addition, reporting on one's own behaviour can be a difficult cognitive task, as one has to

[7] Parties were considered relevant to the extent that they were a normal part of the organizational field, that is they interacted regularly with other field members regarding the issue domain (Hoffman, 1999).

understand the question, then recall relevant behaviour, and construct an answer, all the while editing it for social desirability, either consciously, or unconsciously (Schwarz & Oyserman, 2001). Additionally, particularly in situations of conflict, interviewees' answers can be profoundly influenced by questions, wording, format, and context, making triangulation from a variety of sources even more critical. My layered understanding and deep appreciation of the issues in the industry was especially crucial in this regard.

In addition to the pre-interview archival data collection and updating of the existing data set from organizations' and government websites, data were also gathered on an opportunistic basis during the interviewing and site visit phase.

Phase 2: In the second phase of data collection I combined interviewing with observation techniques in order to understand the behaviour, activities, and practices related to conflict, identity, and learning. I began by identifying key people to be interviewed. I compiled an initial list of potential interviewees using the Briefings Witness List from the *Report of the Special Committee on Sustainable Aquaculture* (2007, p. 51). I then cross referenced this with the list of interviewees from the existing data set. I focused on individuals that had acted as witnesses on behalf of Marine Harvest, CAAR, Mainstream and other issue-related groups in the BC salmon farming industry, namely First Nations communities, other environmental groups, government, local suppliers to the industry, industry associations, and academics. A number of individuals at the key organizations such as Marine Harvest, CAAR, and the industry association were the same individuals that were interviewed in 2006 and 2007.

I first approached all potential interviewees via an e-mail which contained a short description of my research objectives, my methods, the potential benefits for the organization and individual, and the extent of their involvement should they agree to participate (see Appendix D: Note sent to Potential Participants). To cover all aspects of the proposed study I carefully maintained a balance of levels and organizational affiliations. Previous research on inter-organizational relationships has been criticized for over reliance on single respondents (Kumar, Stern, & J. Anderson, 1993). Hence, I held interviews with a range of people directly involved with the conflict and also with interested observers. I asked interviewees to provide additional references to expand the list in a network fashion. I strove for saturation by gathering data from as wide a variety of respondents as possible and as completely as possible to ensure that I fully understood the behaviours related to the relevant issues (G. Johnson et al., 2007). I followed up with a phone call to provide more information and to set up a time to meet. In several cases the recipient of the e -mail forwarded it to a more appropriate person in their organization or recommended another individual during the follow-up phone call. See Table 4-2: Interviewees, below, for the final roster and additional details of interviewees.

Informed consent was obtained from all interviewees at the beginning of every interview or workplace observation, using a consent form according to the University of Western Ontario's (2002) ethical guidelines (See Appendix E: Letter of Introduction & Informed Consent Form). Also at the beginning of each interview, I orally confirmed the expected time commitment and information

requirements, that respondents could choose not to answer any specific question, and that they could decline to participate further at any point.

While individual retrospective interviews can be influenced by memory failure and attribution biases, they have been long established as an acceptable case study research tool (Yin, 2009). In this study retrospective narratives and self reports were important for determining how individuals identify themselves and their organizations, to understand how their behaviours were affected by their individual and organizational identities, and how identities were affected by inter-organizational interaction, and for finding out where and how new behaviours developed.

To mitigate memory distortions I encouraged interviewees to provide a descriptive account focusing on the "what, when, and who" of actions to emphasize praxis (i.e. what they did). I de-emphasized my own or possible prior theories of "why" as I intended to extract that from the stories they told. To check for attribution bias, I compared statements to information in the media reports and reports from other respondents, and against my own knowledge of the situation.

The semi-structured interviews were designed to follow from my research questions "How does an organization learn from another organization with which it is in conflict?" and "What is the role of identity in this learning?" In order to access information about elements in my model I grouped my questions around the major constructs; individual identity, organizational identity, learning, conflict, and activities related to inter-organizational interaction (see Appendix F: Interview Protocol 2009). In order to access both the praxis and the practices related to learning, identity and conflict, I used ethnographic interviewing

techniques and employed a mixture of what Spradley (1979) describes as grand

tour and mini-tour questions, asking for more detail about how particular events

raised by the respondent unfolded. Also following Spradley's recommendation, I

asked for examples and paid particular attention to verifying the meanings

attached to words and experiences. In particular I asked for stories that illustrated

a point made by the interviewee. In all situations I was mindful to ask my

questions in a way that the person could tell me the story, without telling me what

I wanted to hear (C. Gersick, personal communication, 2010).

Table 4-2: Interviewees

Organization	Level of Interviewee	Interviews 2005-2007	Interviews 2009 *same individual as in 05-07
Marine Harvest (includes predecessor companies Stolt, Nutreco, PanFish)	Corporate Executive	2	
	Corporate manager	1	
	Executive team (Canada)	1	1*
	Sr. Manager	2	1*, 1
	Manager - site		1
CAAR	Organization Leader	3	1*, 1
	Member/Campaigner	3	
Other environmentalists	Regional Manager		1
	Area Manager		1
First Nation	Manager	1	1*, 1
Government	Provincial	1	1*
	Federal	2	1*
Industry Associations	Executive Director	2	1*
Academic/Scientist	Marine Biologists	2	1*
Suppliers	Service Providers	1	2

Organization	Level of Interviewee	Interviews 2005-2007	Interviews 2009 *same individual as in 05-07
	Equipment Suppliers	1	1
Industry Observers	Community Members	1	1
Mainstream	Corporate Executive	1	
	Corporate Manager	1	
	Sr. Mgr (Canada)	1	1
Total Interviewees		28	19

With the permission of the interviewees, I recorded all the interviews, with one exception and they were all transcribed by a third party. Two interviews were conducted and recorded by telephone, and all others in person. Transcripts were shared with a number of interviewees for verification. My individual interviews lasted between 50 and 150 minutes. Direct observation took place by way of accompanying Marine Harvest personnel and external stakeholders on a 5 hour farm tour; touring a pilot closed containment site; visiting the local BC offices of all key organizations; visiting retail locations; and visiting two salmon hatcheries and several salmon rivers during the fall 2009 Pink salmon and Chinook salmon runs. I created a case data base organizing the archival data, observations and transcripts into "bins" as recommended by Miles and Huberman (1994) (See Table 4-3: High Level Data Structure).

Table 4-3: High Level Data Structure

Time Period	Prior to 2005	Late 2005-early 2007	2007-2008	2009-2010
Data sources		Interviews		Interviews
		Observations		Observations
	Documents & Newspaper Articles			

All data and information has been kept strictly confidential. I have preserved confidentiality by using codes for identities in the database and interview transcripts, and by using pseudonyms in this dissertation as recommended by Pettigrew (1990). I have respected all interviewee requests to keep background information confidential and I have given due consideration to all of the respondent commentary that I received on my interpretation of the data. This has been particularly relevant as most of the respondents are located in the same geographic area, are aware of each other, and were understandably curious about each others' responses. This "external" control motivated me to maintain the highest standard of research ethics at all times. At the end of the study the results will be presented to the key respondents.

4.5 Data Analysis

4.5.1 Overview of Analytic Strategy

Data analysis consisted of examining, categorizing, tabulating, or otherwise recombining the evidence to address the initial premises of this research (Yin,

2009). In order to produce compelling analytical conclusions and rule out alternative interpretations I relied on accepted techniques for qualitative research (Corbin & A. L. Strauss, 2008; Locke & Golden-Biddle, 1997; Miles & Huberman, 1994; Yin, 2009). As Yin (2009) suggests, I used my research questions and premises to guide my analysis. The questions and premises shaped the data collection process and thus gave direction to the relevant analytical strategies. Given the explanatory nature of this research, the analytical techniques that I used are pattern matching, explanation building, and time series analysis (Miles & Huberman, 1994; Yin, 2009).

Pattern- matching logic compares an empirically based pattern with a theoretically predicted one. If the pattern coincides, the results help to strengthen the validity of the case study (Yin, 2009). In a single case study it is important to use the same data to rule out possible alternative explanations (i.e. threats to internal validity). Pattern matching is not a precise science and therefore I looked for "gross matches and mismatches" as per Yin's suggestion (2009, p. 141).

Explanation building is another technique that I used in this study. As explained at the outset of Chapter 3, the practice based view attempts to provide the micro-level explanation for the macro-level assertions made by, in this case, organization learning theory, and organizational identity theory. An explanation is a stipulation of causal links between concepts. These stipulations were offered in Chapter 3 in the form of premises in support of a model. Therefore the key activity in this research is providing the data based evidence to support or reject these premises (causal links). According to Yin (2009) the explanation building in

a case study proceeds as a set of ideas that are revised and augmented and the
final explanation is a result of a series of iterations:

- An initial theoretical statement, in this case my model, is made about the
  social behaviour under study;
- The findings of the case are compared against the model;
- The model is revised;
- The details of the case are compared against the revision; and
- The theoretical statement or model is revised again; and compared to
  other cases, in this circumstance, in future research.

In this sense the final explanation may not be fully stipulated at the outset of
the study, but rather case study evidence is examined, theoretical positions are
refined and the evidence is examined again from the new perspective. Thus
explanation building is a "special" iterative case of pattern matching (Yin, 2009, p.
141).

Finally, I conducted a time series analysis in order to follow the many
patterns of behaviour suggested by my model. According to Yin, the more
intricate the pattern, the more that the time series analysis will lay a "firm
foundation for the conclusion of the study" (1989, p. 115). This analysis allowed
me to examine "how" and "why" questions about the relationships of my key
constructs as described by my premises. In this dissertation I suggest that inter-
organizational learning begins when practices associated with individual identities
bridge across identity conflict allowing a shift in emphasis to the more functional
socio-cognitive aspects of a conflict, without resolving the underlying conflict of
interest. My time series analysis begins with the events leading to the first direct
(in-person) engagement between salmon farmers and environmentalists in

February 2003 and traces the patterns in identity, learning outcomes, and conflict to November 2009 when a federal judicial inquiry into the Fraser River salmon run was announced.

4.5.2 Preliminary Analysis

As suggested by Langley (1999) and Yin (2009) and outlined below, my research analysis proceeded in multiple iterations as my data gathering progressed. Consistent with Langley's (1999) recommendations for process research, I took multiple approaches to the analysis. In the first stage, prior to conducting my interviews, I constructed chronological lists of key events, activities and interpretations of them, composed of ordered raw data (quotes from interviews, newspaper articles, documents and field notes) (See Appendix A: Detailed Chronology of Events in the BC Salmon Farming Industry, for a summary). I further sorted these data by organization and other meaningful categories such as industry and environmentalists. From this I composed a 37 page narrative as the first level of abstraction from the data. This narrative highlighted the importance of relatively recent events to my research questions, in particular the ascent and dominance of two issues, sea lice and closed containment farming, and the subsequent negotiation and implementation of the Framework.

My model stipulates that individual and organizational identities are associated with learning so I went to the existing data to verify this. Focusing on the two largest salmon farming companies, Marine Harvest and Mainstream, and the environmental group, CAAR, I used self referential statements to categorize

identity at both the individual and organizational levels. This analysis yielded

descriptions of the organizational identities as well as individual identities (see

Appendix G: Preliminary Analysis of Individual and Organizational Identities in the

Industry). I then developed a narrative describing the development and

implementation of the Framework up to 2007.

I then identified organizational learning activities and outcomes that had

occurred from the late 1990s to 2007, drawing primarily on the interview

transcripts in the existing data set. Again focusing on Marine Harvest,

Mainstream, and CAAR, I used two indicators to identify learning outcomes: (1)

evidence of changes to participant's existing knowledge about the situation or

about the other parties; and (2) evidence of changes to participants' patterns of

relating to each other and to other industry participants. Using the learning

literature as a guide, learning practices were identified as activities that supported

changes to either knowledge or behaviour (See Appendix H: Preliminary Analysis

of Learning Activities and Outcomes).This analysis formed the foundation for my

second stage of data gathering and analysis.

As suggested by Glaser & Strauss (1967), I overlapped data analysis and

data collection, making the data collection itself more flexible and rigorous. I kept

field notes and a learning journal and I recorded my ongoing impressions in my

learning journal as they occurred to me (Eisenhardt, 1989). I continually asked

myself "what is happening here?' and "how does this differ from other

responses?". This helped me to speculate about emerging patterns and

relationships and to identify significant topics, patterns, themes, logical

inconsistencies and areas that need further exploration with respondents (Stiles,

1993). In particular I was looking for evidence that identity had been activated, with comments such as "we were looking for a new approach to the problem". I was also looking for evidence of links between my main constructs; such as "when I put my science hat on I ..." which links an identity to an action. Because I took a flexible approach to collecting data I was able to add data sources and interview questions to probe emerging themes while following an overall theoretical framework proposed in this thesis.

4.5.3 Data Coding

At the conclusion of my data gathering all data was analyzed using an initial list of codes reflecting the constructs of the theoretical model I proposed in Chapter 3. All data coding was done using NVivo 8, including the initial categorization of the existing data set discussed in the preceding section. Organizations and respondents were coded into "cases", components of the theoretical model were coded into "nodes", the predicted relationships between the components, described by my premises, were coded into "relationships" and secondary data were coded into separate "free nodes". The complete list of cases, nodes, and relationships is in Appendix I: Complete list of Final Nodes, Cases, and Relationships.

"Nodes" represent the meta-constructs: conflict, learning, and identity. Each meta-construct includes the sub-constructs: individual and organizational or collective level. In addition, the conflict, learning, and identity meta-constructs include corresponding sub-constructs drawn from the prior literature and developed in Chapter 3 of this dissertation.

I began coding by reading and re-reading the interview transcripts and listening to the recordings and comparing them with the constructs and premises presented in Chapters 2 and 3. I was looking for patterns and recurrent themes, as per the pattern matching technique described above. As I worked through the transcripts I was capturing my thoughts and ideas in notes and memos in NVivo.

I coded the data into preliminary sub-categories (Corbin & A. L. Strauss, 2008) retaining all sub-categories proposed by my model. As themes emerged that had not been specified in my theoretical model I added nodes. These emergent nodes formed the basis for refinement and augmentation of my model, as discussed above. After coding was complete I proceeded with data mapping and analysis.

4.5.4 Data Mapping

I analyzed the data within "cases" and across "cases" to obtain a common pattern seen through multiple lenses (Eisenhardt, 1989). I did the data mapping and analysis in three stages. First, I identified and mapped the codified data for all organizations onto the conceptual model described in Chapter 3. In particular I looked for themes relating the major constructs of organizational identity, individual identities, conflict sources, individual learning, organizational learning, and inter-organizational learning. I also sought to further refine the set of contextual factors (i.e. conditions) that were found to be important and that had changed. I focused first on the constructs (i.e. the nouns) and then examined the processes and activities (i.e. the verbs) identified in my premises (C. Gersick, personal communication, 2010).

Second, I conducted an analysis of the organizations involved with the Framework by developing a set of narratives based on the learning constructs that provided the background about the organizations' learning activities and learning outcomes over time (See Appendix J: Learning Activities and Outcomes over Time). The purpose was to become intimately familiar with each organization to allow the unique patterns of each organization to emerge before analyzing the interactions. Two overarching learning trajectories emerged from this analysis: learning that impacted internal operations and learning that impacted inter-organizational relationships. These learning trajectories were further analyzed and sorted into time periods according to key strategic responses (i.e. extent of engagement) or a discernible shift in manager behaviour (Jarzabkowski, 2008). These narratives served as context for a higher order analysis related to my second research question regarding "how" organizations in conflict learn from one another.

In the third stage, I focused on answering the research questions and refining my model by identifying conditions and activities that enabled organizations to bridge across conflict and tracing the relationship to inter-organizational learning. Subsequent to identifying the time periods, I examined patterns in the relationships between the different constructs (Trochim, 1989). This analysis confirmed that under certain conditions common practices can help individuals interact despite conflict and that repeated engagement mediates the relationship between conflict and inter-organizational learning. To access practices and praxis and conduct this analysis required the use of analytical tools

amenable to the theoretical lens of the practice based view. I will describe them and my analytic process in the following two sections.

4.5.5 *Mapping of Statements into Practice and Praxis*

As described above, practice represents shared routines of behaviour, norms, procedures and artifacts, and can be considered as the product of learning (Crossan et al., 1999; Feldman & Pentland, 2003; Gherardi, 2009). Practices are carried out within a framework of procedures and expectations; however the particular actions taken (praxis) are to some extent novel (Feldman & Pentland, 2003). Praxis refers to the actual activities that make up, in this case, the process of learning and may be operationalized at different levels and through interactions between levels (Jarzabkowski et al., 2007).

It is inter-organizational learning practices that are often obtained in quantitative surveys, usually divorced from their context. This research attempted to uncover the actual activities or praxis supporting inter-organizational learning in a particular context (i.e. conflict) using qualitative methods. Ideally, actual inter-organizational learning activities would be accessed through ethnographic methods, such as meeting observations (Yin, 2009) and methods specific to the practice based view (Balogun, A. S. Huff, & P. Johnson, 2003). Since the limited scope and duration of the doctoral dissertation process and the contentious nature of the topic prevented me from collecting large amounts of observational data, I employed additional analytic techniques to distil practice from the respondents' statements during interviews.

As discussed, I did, to the fullest extent possible, encourage my respondents to support their statements with "stories" as recommended in ethnographic interviewing (Spradley, 1979). Prior research has identified several aspects of a narrative or "story" which would serve as evidence that events did in fact take place (Auerbach, Trask, & Said, 1953). Details such as dates and quantities, and references to specific external events are the main signs. In addition Auberbach et al. (1953) distinguished between a "legend" and a "historical account". "A historical event … runs much more variously, contradictorily, and confusedly", while the "legend arranges its material in a simple straightforward way" (Auerbach et al., 1953, pp. 19-20). In this context an organization's learning regarding the practices of engagement with the enemy would be recounted as "legend" whereas actual activities will sound more like "historical accounts" with details, dates, characters, and disrupted flows. Therefore to separate interview statements into practice (the product of learning) and praxis (actual behavior, i.e. the activities that make up the process of learning) I employed the following linguistic distinction (Zona, 2009).

The practice constructs were assessed based primarily on the answers to general, normative, or open questions such as "How would you describe your organization's actions in response to conflict?" or "Describe how your organizations work together?" The praxis constructs were assessed based primarily in the evidential statements in response to questions such as "Can you give me an example that illustrates what you mean by that?" or "Where does it take place?" In addition, artifacts, including newspaper articles, government reviews, and annual reports, were examined for evidence of both practices

(institutionalized behaviour) and praxis (actual events). While my field work fell short of full length ethnography, these analysis techniques combined with the ethnographic interview techniques enabled me to distil a proxy of praxis in support of inter-organizational learning from the interview data.

4.5.6   Role and Assessment of Activities

According to the practice based view (Whittington, 2006) organizational learning (practice) becomes enacted (praxis) as a result of the activities that practitioners perform. These activities in turn have an impact on practice and on the practitioner (See Figure 3-1: A Framework for Analyzing Inter-Organizational Learning as Practice). I argue that understanding the activities that individuals enact when engaged, despite their conflict, can help us ascertain those activities that support inter-organizational learning more generally.

To assess activities through which participants enact learning practices they were asked specifics about "How they worked together?" and "What they did in response to conflict?" for example. Although the assessments represent individual perceptions and not precise measures of such activities their relative frequency may serve as an approximation of their use and its shifts over repeated interaction.

Following my data analysis relative to my proposed model, I coded patterns of manager and organizational behaviour related to identity or to conflict during each of the relevant time periods (determined in stage two) using a data reduction process (Corbin & A. L. Strauss, 2008). This process is often used by qualitative researchers (e.g. Maitlis, 2005) to move from descriptive codes to

more conceptually abstract codes. I generated codes describing what managers and the organizations did during the various time periods such as defending their position, attacking the other organization, sharing information, assessing risk, articulating needs, gathering information, negotiating process and so on. I then reduced these descriptive codes to interpretive clusters (Miles & Huberman, 1994) according to whether they were similar or different in nature and intention. To do this I followed Jarzabkowski (2008) and asked myself two questions. "Is this code similar to that code?" helped in developing internally consistent clusters. "Are theses codes different from those codes?" helped in ensuring the clusters were distinct. The clusters were general in that each one appeared in multiple time periods and therefore indicated behaviour that could occur in any time period.

I developed three main clusters which seemed to emerge sequentially. The first one involved a detachment or separation from aspects of the conflict or of their identities that were both problematic and fixed, such as shifting focus away from the conflict in values between salmon farming companies and environmentalists and toward their common knowledge gap (i.e. the impact of sea lice). I labeled this behaviour distancing to describe what both individual managers and organizations were doing prior and during engagement with each other. The second cluster, involved a matching of individuals and groups based on those aspects of their respective identities that were compatible particularly from a work practice or skill perspective. In this case, scientists were assigned to design and manage research projects and conflict professionals such as consultants and negotiators were tasked with managing the day to day

relationship as well as any non-science conflicts that emerged in the projects. I labeled this behaviour pairing to describe how individual practitioners engage. The third cluster dealt with setting the rules for a specific engagement, such as a research project, and involved negotiating both the procedures and the nature of the interaction using the language and protocols according to the compatible identities that had been paired for the engagement. I labeled this cluster rule setting.

Finally, I compared the patterns in the nature of the interactions and the conflict over the same time periods. In the period under study I identified three cycles of distancing, pairing, and rule setting culminating in an experiment, overall reduction in targeting in the media, and an increase in the extent of experimentation. These patterns were not anticipated by my model but rather emerged from the data.

4.6 Validity and Reliability

To ensure quality, empirical research needs to demonstrate the requisite standards of validity and reliability for the methodology used. In qualitative research, the quality or threshold of acceptability is ensured by maintaining adequate standards for the research process itself. In particular, establishing reliability and validity in case studies requires careful attention to the stages of design, data collection and analysis (Yin, 2009). In this case study, I have relied on Yin's perspective on standards for validity and reliability (2009, p. 41). Yin's standards are widely used in academic research involving case studies and are well respected. Reliability is established by providing a data trail through a well-

organized case database. All relevant archival material has been scanned, and with transcripts and notes, imported into an NVivo database. The intent is to produce a dataset that would permit another researcher to duplicate the analysis.

Internal validity is established by the pattern-matching and explanation-building steps of the data analysis, supported by a reflective learning journal and memos detailing the insights and relationships as they emerge from the data. Part of this effort is identifying and eliminating alternative explanations that might disconfirm emerging theoretical insights. As discussed previously, construct validity of the findings is established by using multiple sources of data wherever possible to triangulate; and by referring back to the chain of evidence in the database. In addition, key participants from the organizations were asked to review and comment on whether the findings are consistent with their view of their behaviours. In addition, I reviewed my findings with an uninvolved experienced researcher familiar with the industry and methods used. Finally, the analytic generalizability of the findings to inter-organizational learning, conflict, and identity theories is articulated (Yin, 2009, p. 43).

The reflective learning journal and notes are a key element of the data trail. I made notes and impressions to augment transcripts immediately following every meeting or discussion, and I reviewed recordings and notes together at the end of the day. My learning journal was kept in One Note and imported into NVivo.

As described in this section, I used multiple data-gathering approaches to support and triangulate the findings. Interviews were the primary source of data, while newspaper articles and government and third party documents were important for understanding the context, issues and background of the

interviewees, and gaining alternative perspectives. As I analyzed the interviews, I consulted my field notes and the documents for additional confirmation of my findings. I was able to build the reliability and integrity of my data analysis by combining and triangulating these sources (Jick, 1979; Miles & Huberman, 1994). Table 4-4: Study Validity and Reliability summarizes the steps that I have taken to ensure this dissertation's accuracy, replicability, and generalizability.

Table 4-4: Study Validity and Reliability

Standard	Measures to be used in Case Method	This Dissertation
Construct validity	Use multiple sources of evidence to achieve triangulation	Used media reports, interviews, observations, archival data and third party reports.
	Establish chain of evidence	This chapter outlines the path taken from the initial research questions to the case study conclusions. Sources of evidence cited in Table 4.1.
	Have key informants review draft case study report	Preliminary findings were discussed with some respondents and conclusions were shared with key contacts.
Internal Validity	Do pattern matching	Patterns were identified and matched over subsequent time periods. From this explanations were developed and compared to rival explanations as described in Chapter 5.
	Do explanation building	
	Address rival explanation	
	Do time series analysis	
External validity	Analytic generalization in single case studies	Findings are generalized to broader inter-organizational learning theory in Chapter 6
Reliability	Develop case study database	The database was developed and is comprised of interview transcripts, media reports, third party reports, and other case study documents, summary reports.
	Establish chain of evidence	See above

CHAPTER 5: FINDINGS

My model suggests that under certain conditions the identities and learning of the individuals engaged over a conflict and the identity and learning of their respective organizations will interact, impacting their behaviour and their inter-organizational learning. Previous research has independently identified relationships between identity and conflict, conflict and learning, and learning and identity as well as several contextual factors that promote inter-organizational learning. In this research I examine these relationships within a context of an ongoing conflict to determine the role that identity plays in inter-organizational learning, across the individual and collective levels. In addition, I analyze the dynamics of these relationships over time to explain the social processes through which inter-organizational learning occurs and the conditions that favour its occurrence. This chapter provides an overview of the findings of my research. The data are presented to refine, confirm, and challenge the five premises on which my model is based, and to illustrate its constructs and relationships with concrete empirical examples (Lawrence, 1999). I begin with an overview of the case study.

5.1 The Case Study

I studied the relationship between identity, conflict, and learning by examining an extreme case of learning between "enemies" in the salmon farming industry in British Columbia, Canada (BC). The industry was plagued with

conflict, reflected in government industry reviews, passage of strict regulations, increasingly negative media coverage, growing enmity of several First Nations, and increasingly sophisticated attacks by environmentalists, especially the Coastal Alliance for Aquaculture Reform (CAAR). The typical response of the salmon farming companies, i.e., the industry norm, was to deny, dismiss or in some way discredit their critics and in particular CAAR's claims and to position themselves as economic saviours of coastal communities.

By 2000 the industry was dominated by larger foreign owned firms, Stolt Sea Farms (Stolt), PanFish, Mainstream, and Marine Harvest. Marine Harvest, in contrast to the low profile adopted by Cermaq ASA and the other major firms, referred to itself as a socially responsible company and had publicized the extent of its investment in BC. This was consistent with the collaborative and environmentally responsible identity of its Dutch parent company, Nutreco. As Heikki a Nutreco corporate manager said "Dialogue is important to build trust ... you can only find a solution when you put different people with different backgrounds and different views of the world together... not the different disciplines within one company, but the NGOs and the government representatives and the scientists".

Stolt, a Norwegian firm and the largest salmon farming company globally, was described by managers as an accountable, ethical, private company engaged in "cooperative research and development on ecosystem principles" and in its 2003 annual report committed "to follow our own conscience and set our own high standards". As one manager observed "Stolt was quieter … had a very

high level of accountability, very good ethics and very profitable … but no so out there and not so much into the social issues".

Members of CAAR describe the organization as a cooperative, logical, strategic organization, typified by this comment by Donna a CAAR leader, "We got together into a group and said, ... we have to make the sum greater than the individual parts... by having everybody pool all their information and work collaboratively we're able to take it (sea lice) ... to being one of the most prominent environmental issues in BC". In describing how CAAR develops a position, Harry (a senior CAAR member) said "it has to be based on science and it has to be rational and you can use a million different tactics to deliver that message, some people use irrational tactics but the message can still be rational."

These key organizations in the BC salmon farming industry all identified with deutero-learning processes (Schon, 1986) such as scientific research and development, and collaboration; this was evident in their public and private statements as well as in their behaviour. All organizations, including CAAR, participated in joint research initiatives with university and independent research institutes. All shared the common goal of identifying ways to make salmon farming more sustainable: the companies from a fish health and profitability perspective and CAAR from the perspective of minimizing damage to the marine environment.

Over time, primarily as a result of actions by CAAR members, conflict over one issue came to dominate interactions between the salmon farming companies and their critics – the extent to which salmon farms amplified the affects of sea

lice on wild salmon. Each side of the debate supported their position with "science" and all claimed to be acting in the interest of marine habitat protection (Young & Matthews, 2010). In June 2004, under the threat of reactive and probably punitive regulation, two senior Stolt managers in Canada, both marine biologists by training, took action and hired a consultant to contact CAAR to negotiate an information sharing agreement. The Stolt managers were motivated to ensure forthcoming regulation was fair and supported by good research. This was a significant departure from industry and company norms, for while Stolt actively participated in collaborative research projects with universities and research institutes, it had not worked directly with environmental groups before anywhere in the world. Colin, one of the Stolt managers, described the intent of the initial contact as, "let's learn together, let's share information, let's be as transparent as we can be within the context of business and let's let the science complete its work so that we're basing any policy decision on good solid science."

Stolt's offer of greater transparency gave CAAR access to information hitherto unavailable to environmentalists. While CAAR members acknowledged Stolt's self interest in approaching them, they also recognized an opportunity to gain access to proprietary knowledge of salmon farming that might be used to advance their agenda. Harry, the head of CAAR's science committee, and an ecologist by training, describes CAAR's motivation to "hopefully pinpoint some common understandings around lack of information and embark on some increased level of analysis and some pure science work that would inform the debate."

Stolt and CAAR agreed to share the cost of a professional mediator to facilitate their interactions, thus demonstrating their commitment to the process. With discussions proceeding in private, Stolt began posting sea-lice and water quality data on its web-site as "an educational opportunity for both researchers and the general public", providing further evidence of their commitment to new behaviour. When Marine Harvest purchased Stolt in 2005, the private talks continued, culminating in the "Framework for Dialogue" agreement in January 2006. (See Appendix K: Summary of the Framework for Dialogue)

The individuals involved in developing The Framework possessed a range of common social and role identities, biologists predominantly, but also coastal community residents and environmental issue consultants. Each possessed a "repertoire of selves" but most importantly they were able to coalesce around the identity of "scientist" interested in protecting the marine habitat for salmon in BC. While this identity had hitherto differentiated them, the identity discrepant feedback from escalating environmentalist attacks, threats of punitive regulation, along with the acquisition by an organization identified with collaboration, created the organizational identity instability necessary for the Marine Harvest/Stolt representatives to activate different aspects of their scientist identity and consciously enact new behaviours. Also the presence of issue consultants allowed the "scientists" to delegate day to day administrative issues and to focus on the science based projects. By emphasizing the scientist identity in their interactions individuals could experiment with new cooperative behaviour without changing their beliefs. The identity of "scientist" also appeared to offer enough ambiguity to allow the individuals and organizations to agree on actions and

enough specificity to provide some guidance to the conduct of those actions i.e. experimental protocols.

Critically, the individuals involved in the development of the agreement identified with the learning aspects of their organizational identity. For example Donna, described CAAR as "the best coalition I've ever worked with in my life. It's phenomenal. We've met every two months for going on seven years, and always consensus... I always say it's an honour to work with that group." In addition, the private development of the Framework agreement gave the individuals the safety, the support and the time to experiment with new behaviours, as opposed to merely complying with forced behavioural change.

Once the Framework had been developed, the individuals and organizations held each other accountable to behave according to its stipulations, which were built around five scientific investigations. They had thus begun the process of moving away from using the end products of science as a weapon against each other to using the scientific process as the mechanism through which they could cooperatively pursue their own research agendas. "Science" continued to provide a neutral identity with which all parties (individuals and organizations) could identify and it facilitated the articulation of each organization's concerns and goals. By focusing on the projects, individuals directed their attention, with the help of a mediator, towards process and interaction and away from their opposing interests and value differences. The emphasis on scientific research also provided sufficient ambiguity to allow the group to agree on action while retaining whatever individual beliefs that were needed to reach consensus.

The Framework process between Marine Harvest and CAAR was enthusiastically supported by local institutions, in particular the local and provincial governments.

PanFish acquired Marine Harvest in February 2006, becoming the world's largest salmon farming company. After several months of uncertainty with regard to its future direction, the company publicly declared its continued support of the Dialogue and subsequently consolidated all of its aquaculture operations under the name Marine Harvest promising to continue the practice of "leading the way with innovation and responsibility".

In just over a year, the level of trust and the nature of the interaction between the individuals involved and the organizations had changed as a result of the Framework. Moreover, knowledge about the sea lice issue appeared to have advanced due to the willingness of CAAR and Marine Harvest to work together and a peer reviewed article on sea lice incorporating Marine Harvest data was published in 2007.

Over time, the Marine Harvest and CAAR personnel that negotiated the Framework became less directly involved in its implementation, and day to day project activities were assumed by scientists and issue consultants/managers from both organizations. In preparation for hiring contract researchers, scientists from both organizations worked together on an ad hoc basis to agree on project scope, terms of reference, timelines, selection criteria, proposal assessments and most critically a common list of preferred researchers. Simultaneously, an issue consultant working on behalf of Marine Harvest and a senior manager hired by CAAR, managed day to day aspects of the relationship such as budgets,

schedules, fee payments, miscommunications and breaches in communications protocols.

Early in 2008, Marine Harvest representatives in the Framework, in conjunction with other functional areas within the company such as production and sales, developed a coordinated area management plan (CAMP) for the Broughton Archipelago. The proposed plan would provide data to compare sea lice infestation between a farm free corridor and a corridor with salmon farms. This plan directly addressed a hope that Harry, the head of CAAR's science committee had expressed in 2007.

While Harry and the members of the CAAR negotiating committee were enthusiastic, several other members of CAAR were opposed to any plan that sanctioned salmon farming anywhere in the Broughton Archipelago. Their identities, as well as the identities of their organizations, were closely tied to the elimination of salmon farming in open net pens in the area. Condoning it, even for the purpose of gathering experimental data was just too inconsistent with what they deemed to be one of the central, distinctive and enduring aspects of their organizations. The CAAR organization fragmented and four member organizations withdrew, including the Raincoast Conservation Society and the First Nations.

Marine Harvest and CAAR implemented CAMP together. In July 2009, the organizations made a joint press release, crediting their jointly managed and monitored program with reduced sea lice levels in the Broughton Archipelago (Lavoie, 2009). The program was characterized as a "rare" collaboration and

Colin of Marine Harvest called the announcement historic "in that it marks the first time that former adversaries have come forward in agreement."

In summary, Stolt viewed itself as a collaborative research organization particularly within the aquaculture research and development community. However, Stolt was private and focused in their approach to consultation. They consulted directly and privately with organizations with recognized expertise, until the sea lice issue. The extent of the feedback around the sea lice issue prompted Stolt to behave differently and contact CAAR. Marine Harvest also viewed itself as a collaborative research organization. However, they consistently enacted their identity as a facilitator of dialogue, especially when confronted with a new situation or a problem. They interacted widely and publically in the industry, with government and with stakeholder groups. CAAR, in a similar vein, refers to itself as a collaborative organization that is able to navigate/negotiate difficult relationships and coordinate research. The alignment between key behavioural aspects of the organizational identities of Stolt and later Marine Harvest and CAAR supported and sustained experimental learning. Over time the organizations appear to have integrated some of their learning, at least with regard to this method of knowledge creation (peer reviewed articles, new joint venture pursuing further research). What started out as experimental behaviour change that was undertaken without cognitive change (Inkpen & Crossan, 1995), appears to have prompted some cognitive change and a shift in identities.

5.2 Premise 1: Inter-Related

The evidence from the salmon farming industry in BC shows that conflict, learning, and identity are related, in that one influences the formation of the others primarily through the activities of individuals (praxis) and through the routines of organizations (practice). While conflict is inter-related to identity and learning, it did not appear to be embedded in praxis and practice in the same way. Conflict appears to act as a stimulus and to influence identity and learning through praxis and practice. In other words the data showed that identity and learning are embedded in actions and that conflict influences their formation through the actions taken in response to conflict (see Figure 5-1: Conflict Influences Identity & Learning through Praxis & Practice). In the following sections I illustrate these relationships by describing an example of each in detail.
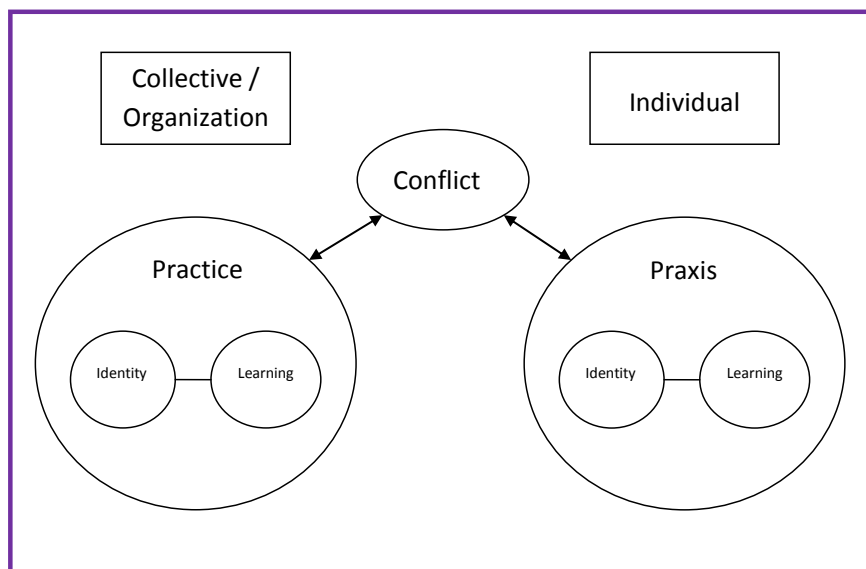
Figure 5-1: Conflict Influences Identity & Learning through Praxis & Practice

5.2.1 *Praxis*

Every interviewee directly involved in the BC salmon farming industry as a company employee, an environmentalist, or as a government regulator, provided some evidence demonstrating how their learning and identity are reflected in their actions in response to conflict or how their actions in turn influence the conflict as well as their identity and learning. Their actions, when stimulated by conflict, expressed their identities or their learning or both and their actions in turn influenced their understanding of themselves and/or the situation.

The account of a former biologist, researcher, First Nations liaison, and communications manager at Marine Harvest provides an example of these relationships. Lana has experienced the catalytic character of the conflict created by the environmental groups and First Nations on her learning (Argyris & Schon, 1978): "They make my job easier. Like if I want to do things better … it doesn't hurt to have that pressure." She recognizes that the tension created by the conflict provides impetus for her learning.

In turn, Lana's learning, from her previous roles as a fish health biologist, and in research and production development, and environmental management within Marine Harvest, influences her actions with regard to conflict laden issues. In particular her role identity, as a technical staff member, compels her to categorize the aspects of the conflict that are based on misconceptions versus the issues that have been corroborated. In doing so she is able to separate the more identity based aspects of the conflict from the more socio-cognitive aspects:

> *"… coming from that scientific biology background … it has helped a lot for me. I've been able to really kind of navigate my way through a lot of the*

myths and the misconceptions … as the industry becomes more and more sophisticated, it's more difficult, I need to have backup but I can speak to most topics with some degree of certainty"

Lana's identity as a biologist, albeit a former biologist, is embedded in her efforts to separate "the myths and misconceptions" from the substantiated data related to the issues as well as her recognition that she may need back-up as science has advanced. In this way her learning is associated with her identity.

Additionally, what Lana does not consider part of her identity influences her learning, in particular the "filter and mold" through which she views successful relationships, as evidenced by this comment:

"And also too – and I've said this in different First Nations communities and I've said it internally, I'm not really wedded to the white European man's idea of a business model. I don't really have a lot of loyalty to that."

Lana's broad range of work experience, and the attendant learning, supports her identity as a boundary spanner. As she notes, "I build bridges". Additionally, her social identity as a community member influences how and with whom she reaches out to. For example:

"… my son goes to school with the son of the councilor who had opposed fish farming but when we see each other on the soccer field we can actually talk about it because we're there on the soccer field together."

Lana's identities as a community member and "soccer mom" are embedded in her civil behaviour toward the local councilor. In this way the conflict that might be associated with her other identities does not influence this interaction. However, her courteous response to local opponents of salmon farming stands in sharp contrast to her response to people outside of her community that are opposed to salmon farming:

"… sports (fishermen), commercial (fishermen), First Nations … listening to those people or working with those people I can spend all day … But then I tell you, where I lose patience is for the flown in environmentalists, you know. The 20-year-old that's never lived outside Kitslano, coming up here and ranting, you know. And those are the people that set the steam going off on top of my head. But for most people it's complicated."

This situation demonstrates how Lana's identity and learning inter-relate and are embedded in her actions (praxis) in response to conflict. As a member of a coastal community on Vancouver Island, she is mindful of the issues of her neighbours and "with those people I can spend all day". She is respectful of their "passion" and open to addressing any issues that she can. However, as a coastal community member she loses patience with the "flown in environmentalists" which she stereotypes and dismisses as "the 20 year old that's never lived outside of Kitslano" (a fashionable area of metro Vancouver). Her identity and learning as a coastal community resident are expressed through her willingness to meet with other local residents and work through the complexity of the issues regardless of the conflict. Her identity and learning are also expressed through her unwillingness to spend time with or to acknowledge the position of outsiders to her community. In this way the actions through which she expresses her identity and learning, in turn influence the extent and what she is able to learn from others.

Lana' experience demonstrates that identity and learning are embedded in praxis, and in turn influence praxis. Specifically, the actions taken in response to conflict by an individual practitioner that express her identity and learning, such as a community member's civility towards a neighbor, a biologist's need for

substantiated information on an issue, or a salmon farming employee's enmity toward environmentalists, influence her behaviour related to conflict.

For representative quotes from a selection of interviewees, see: Table 5-1: Evidence of Identity and Learning Embedded in Praxis.

Table 5-1: Evidence of Identity and Learning Embedded in Praxis

Individual Identity	Identity & Learning Embedded in Praxis	Praxis in Response to Conflict
Biologist, salmon farmer, Former regulator	"I visited relatives that in the 1970s were growing salmon in fiords in Norway and I realized how similar it was to British Columbia and at that time I had an interest in wild salmon, wild salmon management, wild salmon biology and so I gravitated when I got back to British Columbia and I continued to work with wild salmon, both habitat and salmon biology. I found myself gravitating towards production, artificial production both for federal government hatcheries and later on into this industry." "… my focus is on both doing and helping to manage the programs that are put in place to ensure that we are compliant with whatever regulations are currently in place but it's much larger than that because regulations are never enough …"	"I'm in my fifties. If we were all starting in our twenties today, we wouldn't think twice about working with these people. We would start working with them, with these groups at the outset rather than waiting until the animosity builds to a point." "… that's human nature that you don't want to adopt and work with the other person who has a competing hypothesis; it's almost tantamount to saying oh, well, I don't even believe my hypothesis anymore."

Individual Identity	Identity & Learning Embedded in Praxis	Praxis in Response to Conflict
Biologist, communications manager, salmon farmer	"… worked in research and production, salt water and fresh water, and then I kind of specialized into production support, being environmental management and working with … and it fell out that I had an affinity to work with people and also the communications part so I just kind of naturally started to gravitate towards that." "… but the getting there, the dialogue getting there was – I thought – refreshing. It's why I like the job because it's more real. You're not … you're actually having real interactions with people rather than kind of putting on … you sit down and put this mask on, you put that mask on, you go through this, this and this step. And politically correct. You know it's really awkward."	"It was so funny, you know, my daughter in kindergarten, her teacher asked her what her mom did for a living, she said my mom is a biologist. Oh so what does she do? She goes, "Well she builds bridges." Because at the dinner table I was talking to my husband saying, "We've got to find a way to build a bridge between the wild and the farmed …" Isn't that funny? She thought that's what I did for a living. I build bridges." "It's tough but actually most of the time I find that if you just don't take it personally and actually listen, if you actually sit there and listen to people it's not that bad… people are upset and they're angry but they're not upset and angry at me as a person. There's very little personal insults that … that doesn't really happen.... It's quite respectful generally."

Individual Identity	Identity & Learning Embedded in Praxis	Praxis in Response to Conflict
Ecologist, Environmentalist	"I'm an ecologist … There's piece after piece after piece that builds your case, and your case has to be solid and it has to be based on science and it has to be rational and you can use a million different tactics to deliver that message..." "We rely on the Internet a heck of a lot to get the information out. We do regular updates to people. When we go to give talks we get sign up sheets from people and we add them to an update list. When I published this paper I sent the media release out to about 1,000 people on my list. Then those people will send it out. So it's kind of a viral approach in getting information out. And then there's some critical mass of information when people just say, you know there's no question anymore that there's problems here and we need to deal with these things… But we're trying to do it in a way that's information-based and accurate, and not just shrill."	"It's certainly the best coalition I've ever been in. I mean in some of these coalitions there tends to be a bit of infighting in terms of publicity and funds. But it's like a sparrow at a pile of feed. When you put all the feed in one small pile, there tends to be lots of fighting; when you spread it out and make sure there's enough food for everybody, there tends to be less fighting." "They know that sometimes their support is a bit tenuous from government and they know that the science isn't on their side for a lot of these things too … they're focused on the bottom line, and when you say you've got to spend more money to protect the environment it's a tough sell. I think genuinely a lot of these people believe on the level … the managers in Campbell River, for instance, believe these changes have to be made but they have to answer to their parent offices." (empathy for salmon farmers)

Individual Identity	Identity & Learning Embedded in Praxis	Praxis in Response to Conflict
Environmentalist, Strategist, Lawyer	"… so, that's one of my jobs in this with the negotiating committee is to step back and say, ok, yes, that's a really important issue guys. Work it out because then we need to come back up to here and we need to talk about the closed containment funding or we need to talk about fallow routes for 2010. So, let's stay focused on the big picture." " I don't really do the monitoring. I'm not a scientist, right, so that's where Harry from our negotiating team would meet with Stephanie a lot because Stephanie's the lead on that and, so, they actually kind of go up and do it and then we just get reports back."	"We've had times where I've definitely had to lash out when things aren't working… our meetings are sometimes small and sometimes it's all of us. Like, today, I was meeting with Colin by phone." " My expertise would be more the... I have a good relationship with Colin... I tend to just take a different approach with him. So, he and I just have a good working relationship. You know, one of the ways we play off is there's one person on the negotiating team who tends to just look at the downside of everything. So, she can just nit-pick everything that could go wrong, where I'm like, well, here's all the opportunity. So, it balances well. So, I just have a role because when I meet with him I don't say everything that can go wrong. I just say oh, ok..."

5.2.2 Practice

All of the salmon farming and environmental organizations that I interviewed provided evidence demonstrating how their organizations' learning and identities are reflected in their practices: the frameworks of institutionalized procedures and expectations. Additionally, they provided evidence of how those practices guided the actions of individuals when they were stimulated by conflict. The data show that these actions subsequently influenced the conflict as well as the organization's identity and learning.

The experiences of Mainstream and its parent company Cermaq ASA, a self described sustainable aquaculture company provides an example of these relationships. Cermaq, including Mainstream, is characterized by its focus on financial stability and its sense of responsibility to its shareholders and direct stakeholders (employees, customers, suppliers, communities of operation). An industrial and until recently private company, Cermaq prides itself on being a leader in aquaculture operations and an innovator through the research done in its feed division, EWOS.

Cermaq experienced the momentum that conflict can provide for learning when in 2003 it went in breach of the terms and conditions of its bank loans. This situation created conflict between Cermaq and its banks in that the bank's actions obstructed Cermaq from acting. This situation impelled Cermaq to focus attention on the very basics of operations and all geographic regions of the company successfully implemented new husbandry practices and monitoring practices. As Angus, a senior manager in BC describes:

"We made a decision that we would completely revamp our practices, starting with the very, very basics of husbandry and the way that we were going to grow our product…"

"… we know it down to the penny and we could take it even further than that … I could tell you to the half cent what it's costing us. And even less. So we've become very refined at our financial management. We've become very good at monitoring our costs, growing an exceptional good product…"

When confronted with a financial crisis, Cermaq took action to improve and control its internal operations. These actions resulted in the institutionalization of procedures and processes that support ongoing learning and renewal. This demonstrates how Cermaq's learning in this situation was associated with its identity as a sustainable company and is embedded in its actions. Cermaq recognized that the urgency created by their financial crisis prompted them to change their behaviour and subsequently their beliefs in order to "regain their financial freedom". The conflict provided both the stimulus and the momentum for the organization's learning and for a concrete understanding of sustainability.

Cermaq's vision of sustainability is rooted in its longstanding emphasis on financial and operational solidity (Cermaq, 2001). As Erling, the former Deputy CEO of Cermaq, states "of course, the prominent stakeholder is the shareholders. And if you don't make money you're not sustainable, because then they'll go somewhere else". This notion is echoed in the comments of Angus and Karin, both senior managers in Mainstream, BC:

"We take the long-term view and act responsibly ... sustainability also means running a profitable business, where we balance risks and opportunities based on our recognized strengths"

"our focus, again is on the three pillars ... the environmental, the social and the economic – because they all have to work together … but we can't

forget about the economic because without that we don't have the other two. So, we try and balance it … if you don't have the economics ... you're not going to be able to support the social or the environmental."

This central and enduring feature of the organization compels it to emphasize financial stability and to give most attention to those that impact its financial position. In this way Cermaq's identity influences its practice (actions) with regard to conflict situations. In particular, its identity as a financially sustainable organization means it does not expend effort on trying to persuade critics that do not impact its financial performance directly. Having satisfied its shareholders and direct stakeholders, such as employees, customers, suppliers, and the communities where it operates, that it is sustainable, Cermaq does not feel obligated to directly engage with secondary stakeholders. As Erling describes:

"what we're doing… we live by what we learn, and we communicate on what we do... Then the NGOs … must judge themselves, where they think we are sustainable … because we (believe) from inside that our business is sustainable."

This approach is echoed by Angus, when discussing Mainstream Canada's ISO environmental certification:

"I haven't put it in a press release, I haven't put it on any of our letterheads, boxes … I got asked that today at a management meeting and I said … "It's for us. It's for you to know and be able to feel proud of the fact that you know that you have a certification at that level … We haven't flaunted it or haven't put it all over our boxes or anything like that." … we're one step closer to our ultimate goal and that's to be … 100% sustainable."

Mainstream in BC approaches the conflict created by criticism from environmentalists in much the same way. Angus describes:

"… we keep a very low key, Mainstream. We don't put our head in the press and we don't get ourselves out there and make a lot of statements. You don't hear commercials in the local TV about us. That's not our job. Our job is to grow fish…"

Cermaq's identity is embedded in its reluctance at both the corporate and the operating division level to take action via the media to persuade NGOs and other secondary stakeholders that they are sustainable and responsible. It is enough that its members and its direct stakeholders know that to be the case. In this way Cermaq's identity, and those it identifies as it legitimate stakeholders, influences its practice (actions) in response to conflict.

Moreover, Cermaq's identity as a sustainable aquaculture company, as it defines the term, is supported by its learning in the form of processes, procedures, and expectations. Erling, the former Deputy CEO, explains the learning activities that Cermaq undertook to further develop its practices beyond financial sustainability:

"… all the managers in our company, meeting about 50 people worldwide, to, together, establish the foundation for our agriculture business… which ended up in something that we call our Passport for Sustainable Aquaculture, which established our values and how we look at our operations, as to the values for people and also for stakeholders, and how to manage by this … This passport was … given to every employee in the company. And you will always find this posted in every operation that we have ... So this is what we live by."

This situation demonstrates how Cermaq's identity and learning inter-relate and are embedded in its practice (actions). As an innovative company it is knowledgeable in planning processes and in change management techniques, as evidenced by the way it has disseminated the Passport for Sustainable Aquaculture through the organization. Cermaq's learning and identity as a

company that is responsive to its direct stakeholders (i.e. employees) is expressed through its practice of engaging with managers from all parts of the organization to determine its "values" and how to manage by those values. In the "Passport for Sustainability" Cermaq explicitly acknowledges the importance of employees, suppliers, customers, and communities to the sustainability of its business. Also the company specifies processes and expectations related to these relationships. The actions through which Cermaq elaborated its identity influenced both what it learned and the groups from which it was able to learn (i.e. direct stakeholders).

The experience of Cermaq, including Mainstream, demonstrates that identity and learning are embedded in practice and in turn influence practice, when the organization responds to conflict. The actions taken by an organization, via the behaviour of it members, that express its organizational identity and learning, such as a financially sustainable organization's meticulous cost control, a responsive organization's attention to shareholders, or an innovative organizations engagement of diverse managers, in turn influence its behaviour related to conflict.

For representative quotes from a selection of interviewees see: Table 5-2: Evidence of Identity and Learning Embedded in Practice.

Table 5-2: Evidence of Identity and Learning Embedded in Practice

Organiz-ation	Identity & Learning Embedded in Practices	Practices in Response to Conflict
Marine Harvest	"I think it was just a maturation process … We just didn't get it. And then when it hit us in the face then we reacted. First we reacted by pushing back really hard and being outraged and indignant … and attacking the NGOs and attacking their credibility. And then we saw ourselves as small community-based businesses and farmers and biologists, we didn't see ourselves as big international corporations… We thought you know people would just listen to us, they would just see. Like I said, we're good people. And we were naïve about that too." Lana "Stolt Sea Farm … in the past was involved in the research and development that went into understanding the underpinnings of the ecosystem principles that were put under stress through the various kinds of impacts. In order to determine where the thresholds of change would be that would help lead to the necessary controls in order to safeguard the environment" Colin "… everyone's got their different perspective, not just companies, but people within those companies that have influence on their communication plans or their stakeholder engagement. Everybody's got a different tactic." Rob	"And we have to get our act together and make sure that we innovate in the right way to ensure we have a sustainable business. And we're still not there, but we are on the right track. And whether we share that and acknowledge our willingness to do a better job and innovate from year to year to year, it is time to look for ways to cooperate with others. Heikki "On the basis of the dialogue, we moved into cooperation with others, the more consultative NGOs. This is also a very important, already in 2002 … We took this opportunity in 2002 to share with stakeholders … we need to cooperate and work together to innovate, for the food security of this planet. And the fact that fisheries has reached also its boundaries, we have to develop an aquaculture industry. And we have to do it in a responsible way, and it has to be managed sustainably. We need it. So let's now work together, and that was a message that was finally appreciated by our stakeholders. Not digging in deeper on the issues or bringing up other issues, or saying what are you talking about, but just acknowledging that there are some issues and we have to work together, we haven't solved anything yet, but this is a

Organiz-ation	Identity & Learning Embedded in Practices	Practices in Response to Conflict
		dynamic industry, with lots of innovation, and every year we get better." Heikki
CAAR	"So we invited the organizations that were interested in this issue, and we sat around for a year and worked out our plan to put in a major proposal to the Foundations to fund this coalition and these activities. And it's become far more sophisticated since we sat down, I believe it was 2000 that we sat down for the first time. And there's been a lot of changeover in terms of the membership – the people, not the organization. But we initially had a one-year facilitated group of meetings to come up with a plan and our protocols and how we would operate and work together and what teams we'd put together and all that stuff." Harry

"And CAAR is an incredible coalition. I mean there's nine groups. We work by consensus. We do our strategic planning as a unit together and we have a very strong commitment to the goals that we set out. So when we then go and interact with the larger groups we stay very focused on those goals and on how the interaction with the larger international campaigns can either better fit or undermine those goals." Donna

"… we have, essentially a committee structure in CAAR …so we had initially a negotiating committee which was brokering the original framework agreement with Marine Harvest. And now that | ""So CAAR as a coalition uses a range of means. Some groups are more involved than others, but clearly we've also used direct advertising that has a very hard-hitting value. Ads in the New York Times and Los Angeles Times, things like that. And of course we also have a broad list of supporters of the David Suzuki Foundation who we contact regularly through email lists and our website, and ask to take various actions, either with their local retailers or with their elected officials." Gord

"And so the relationships are collegial, most of the time. There are occasionally conflicts. But maintaining the open communication, bringing in outside facilitation when it's needed, and just sticking to the most important issues is really I suppose what you might call our approach. Our strategy is to use the best information and the most effective groups to bolster each other rather than trip each other up." Gord

"Working and living in a fishing community, we have unbelievable support … from this whole community. I don't think you'd see anyone in this community want to buy farmed salmon." Donna |

Organiz-ation	Identity & Learning Embedded in Practices	Practices in Response to Conflict
	committee … continues to monitor the fulfillment of the agreement. And then there's a science committee working specifically on the sea lice issue, and then there's a closed containment committee working on the closed containment issue." Gord	
Main-stream/ Cermaq	"People tend to link us with resource industries. That's not the case. We're farmers. We're agriculture. We have more in common with agriculture in terms of farming cattle or the whole husbandry issue ... I don't know where that came from, but we keep getting linked and compared." Karin	"I think there's two things we do (to influence stakeholders), we live by what we learn, and we communicate on what we do... Then the NGOs or the stakeholders must judge themselves, where they think we are sustainable ... This is how we want to do it, and we will by communication, demonstrate that we are keeping to what we say." Erling
	"We've also identified what we call 'local community acceptance' and that's very important – and different from the NGOs – that's the local impact. To make an example in BC, with the First Nations… Very different perspectives. Because when we look into local communities, it's very much about "how does this impact the local community?"" Erling	"… gave us media exposure to the extent that we didn't have, didn't experience before, and that was a good change [laughter]. An education, learning, it was very good for learning. I think that meant something to us about being aware on the communication side, because we came from a much more silent environment … agriculture… It was not very controversial at all, and we're not trained to handle these kinds of situations." Erling
	"…. Another important thing is our R&D activities... I think in fact our R&D company is one of the biggest private research operations within the business. They also have the sustainability mission as the core value … ensuring us … to being able to handle further growth on sustainable premises."Terje	

5.3 Premise 2: Multi-Level Impacts

The data on the salmon farming industry in BC shows that in addition to being inter-related with each other within the individual level and collective level, conflict, learning, and identity are inter-related across the individual and collective levels via feedback and feed forward mechanisms (Crossan et al., 1999). I will define and illustrate feed forward and feedback processes next, and follow with evidence from the data showing them in action.

5.3.1 Feed Forward Processes

Feed forward processes allow praxis (actions) and new ideas to flow from the individual level to the collective level. Feed forward involves moving from interpreting to integrating – that is shifting from individual action and understanding to the collective level. Indeed the "real test of shared understanding is coherent action" (Crossan et al, 1999) and experimenting may aid in development of shared understanding (Zietsma et al., 2002). The salmon companies and environmentalists employed similar mechanisms to feed actions and ideas forward from individuals to groups both inside and outside their organizations. These mechanisms include: formal budgeting and planning processes, as well as less formal conversations and internal list-serves; and flexible organizational structures that encourage sharing across boundaries, such as the "group" of regional sustainability managers at Marine Harvest and the science committee within CAAR.

The major salmon farming companies and the primary environmental organization all provided evidence of praxis (individual actions) influencing collective understanding and practice (behaviour). See: Table 5-3: Evidence of Praxis Influencing Practice for representative quotations.

Table 5-3: Evidence of Praxis Influencing Practice

Organization	Representative quotations demonstrating the influence of praxis on practice
Marine Harvest	"This is more or less my story … What I try to do is get as much documentation as possible from independent sources that will help to share our story with our stakeholders, because no one has to trust us as a company. We are never believed, but when the story is told by independent reliable sources about what aquaculture has to offer or that it is making progress in the right direction, or not, that can be really helpful." Heikki
CAAR	"I started Living Oceans Society in 1998 … it was not necessarily started as an organization designed to (manage) the fish farming campaign but because we're here and it's the people over there like it and the people down there don't and we're sort of in the middle, plus my husband at the time was a salmon fisherman and it just became an issue that we couldn't not look at and so we got more involved in it as an organization. " Donna
	"I do a lot of work within the coalition keeping people informed of where things stand with our projects with Marine Harvest. I do some work on budgets and financing and just getting people into the field and making sure costs are covered and the money is in place. I do a lot of back and forth between CAAR and the company because the company will have a face to face meeting, they'll make a suggestion. The negotiating team can't sign-off on it on behalf of the whole coalition. So, we've got to go back and talk to our coalition partner groups and, you know, then back to the company. So, it's a lot of back and forth negotiation." Moira
Stolt	"… the vice president of Stolt then went on to be the vice president of Marine Harvest after the first merger. ... Justin was an enigma; I'll tell you that. He was a very fascinating person to deal with … while it really, you know, often really disturbed him he realized that this engagement was important. Like, that it was in his own best business interest to engage. So, he was able to, sort of, get over that stuff. Not so; he couldn't get over it. He was able to make decisions that were not influenced..." Donald

Organization	Representative quotations demonstrating the influence of praxis on practice
Mainstream	"Just a short while ago I was in a meeting with the managers for the east coast of the island, going over with them the costs, the need for clarity in all of their areas, that they need to clearly understand what the focus of the company is. What our long-term goals are. And those have not changed since last year. We must strive in every area to look how we can better one, cost save – of course because we're always interested in making money…" Angus
Government	"… the director general for aquaculture management came into his job it'll be two years at the end of October. And, he's really, I'd say, pushed the need for greater interaction with the ENGOs[8]. So, we have very regular meetings whenever he's out with the ENGOs. And, that's been a better relationship, better than adversarial. We set up this thing where, you know, when he's, you know, we'll have the regular meetings, but when we're not around for the regular meetings, you know, if they want to phone me and ask me questions, you know, I'm much more conducive to that kind of thing. So, you know, it is about relationship building more than anything else. And, I think that there's a lot to be said about the more time you spend with people and the more time you get to know people it just becomes a lot easier to communicate. You know, it just breaks down some barriers." Adrian

The data from the salmon farming industry in BC shows that action taken by individuals influence collective and organizational practices.

5.3.2 Feedback Processes

What has already been learned, in this context an organization's practices related to conflict, learning, and the organization's identity, feeds back from the organization to individuals. It thus affects how people act as well as how they think (Crossan, et al, 1999). Feedback involves the influence of institutionalized practices on individuals intuiting new patterns or possibilities. To increase

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[8] ENGOs are environmental non-government organizations

productivity and exploit past learning the salmon companies shared data between jurisdictions and developed operating standards and procedures that were then closely monitored. They also developed worldwide positions on controversial issues and communicated widely internally and externally. Both the salmon farming companies and CAAR demonstrated their commitment to scientifically validated knowledge by allocating resources to research and development. Interestingly, the methods used by Marine Harvest and CAAR resulted in a broad range of research partners being drawn in. These included, in the case of Marine Harvest, suppliers such as Peruvian anchovy fishermen; and in the case of CAAR, promising graduate students and international environmental groups. Other salmon farming companies tended to allocate research resources to recognized research universities and institutes.

The major salmon farming companies and CAAR provide a range of evidence showing the ways in which institutionalized practices influence individual actions and understanding (praxis). See: Table 5-4: Evidence of Practice Influencing Praxis for representative quotations.

Table 5-4: Evidence of Practice Influencing Praxis

Organiz-ation	Representative quotations demonstrating the influence of practice on praxis
Marine Harvest	"… I had standards that I had developed. Purchasing standards for Wegman's, a big grocery store… on our Chinook, and we were getting 25% premium …. It worked really well… I had the blessing from our corporate to do this – they thought it was a good project, they thought it was a good kind of cutting edge way to do things and it was a trend we would be moving towards – certification." Lana
	"… our ISO 14001 management systems … quite a big part of them are stakeholder feedback in response to environmental impacts, perceived or actual … if these systems are going to work well you want to be responsive to the main issues of the day. " Lana
	"… they (Head Office) do care, sure. Everything we do here, my work, the R and D that I'm involved with, the agreement that I've explained to you, they all cost money… So it raises the unit value of every fish that we grow so the company is constantly looking at the cost of doing business in British Columbia…" Colin
	"… if you were to open a company here and only operate here you'd still have to deal with the cost of the regulation and the cost of the social licence component and then that would raise your cost and you would have to factor that in. So it matters to Holland in this case where the parent company is, but the other side of the coin … we're not avoiding this, we're dealing with it and we are dealing with it in a way that intends to solve the issues without adding additional costs … also they're aware that the product we grow in BC is some of the best product grown anywhere in the world … that's not lost on them at all." Colin
CAAR	"We got together into a group and said, "you know what - we have to make the sum greater than the individual part," that we had to work together to try to deal with it because … we can't outspend them so we have to outthink them so in order to do that we need to have more people together. That's when we came together to form a coalition." Donna
	"Well the dialogue agreement that we have with Marine Harvest certainly has created some policy changes within all the organizations, in that they have to give Marine Harvest a heads up on whether they're going to issue press releases. We are far more careful on what we say about industry. I mean we can still be honest … but we can't say that Marine Harvest are a bunch of

Organiz-ation	Representative quotations demonstrating the influence of practice on praxis
	idiots and they're not listening to anybody. That's not allowed in the dialogue agreement." Harry
	"We have various committees. A science committee, a markets team … we have an internal list serve that is used frequently. It's not unusual to get 40 or 50 email messages from our colleagues a day." Harry
	"… need to work within their business model … so if it's like, "you need to go to closed containment, that's not negotiable. How you're going to get there, we're willing to talk to you about that. OK, you can't do it tomorrow, can you do it in 2 years? What do you need to do it in 2 years? What if we go to government together to get help for you to do it in 2 years. Now let's be friends, now let's work together and find a way to do it." So now when you start talking about a business model, you're talking their language. You can have a conversation with them." Donna
	"… one of the things that we always try to maintain is our credibility. We don't want to make outlandish statements. We rely on the Internet a heck of a lot to get the information out. We do regular updates to people. When we go to give talks we get sign up sheets from people and we add them to an update list." Harry
Main-stream	"We need to be constantly assured that we are not polluting, we're not causing environmental damage, we're treating our people with respect, we have good welfare practices for our people as well as for our product. We have a long-term vision, we're not here for the short-term, we're here for the long-term." Angus
	"ISO then is a management tool. As a deliberate, strategic management tool… " Angus
	"The public will learn that the government – the regulatory agencies – do have the teeth and the authority and the willingness to not allow this industry to take the same course as the other industries before us. Like logging or mining went for 50 years basically unchecked and a lot of damage was caused. Now there's all kinds of reforms and rules in play..." Angus

The data show that an organization's practices (i.e. its routines, procedures, and collective understandings of identity) influence how individuals both seek and interpret signals from the environment and subsequently respond. In the next section I provide a detailed example of these processes.

5.3.3 Feed Forward and Feedback Processes in Action

The story of how the actions of individuals in Marine Harvest influenced policies and were in turn influenced by the policies and practices of the organization provides a graphic illustration of feedforward and feedback, as well as the role of identity and conflict in driving those processes. Heikki a senior corporate manager describes the initial shift from individual interpretation of social responsibility at Nutreco, the predecessor company of today's Marine Harvest, to the integration of those notions, and their subsequent institutionalization into practice:

> *"There was a new chairman… who was, I think, much more than his predecessor, transparent, open to dialogue, aware of what social responsibility is… we had a fantastic meeting with the entire board, plus the food safety director, and the research directors and the business leaders; we had a whole day of what the issues are … of managing sustainability issues of aquaculture, and that was fantastic, because then we could decide upon what should be the rules for … our program for the coming years and our communications."*

The new chairman, Woutt Dekker had come from BP, an early proponent of social responsibility and was a self described "socially responsible manager", evidencing his learning and identity. As a result of his interpretations and actions, such as initiating and sustaining discussions of social responsibility at the board level, Marine Harvest management came to a common understanding of the

meaning and relative importance (to them) of social responsibility, transparency, and openness. Dekker's praxis (initiating and sustaining discussions) acted through organizational practice (the board meetings) to alter learning (shared understanding) and identity (importance of social responsibility etc.). This marked the beginning of Marine Harvest identifying itself as "open to dialogue" and "collaborative" and illustrates how individual interpretation of a new pattern in the external environment, such as the emergence of social responsibility and stakeholder activism, becomes integrated with the interpretations of others, altering their understandings of the situation and their organization. This dynamic is affecting collective identity and organizational learning through practices.

The senior managers at Marine Harvest demonstrated their common understanding (learning) by using that information to set corporate policy and establish procedures (practices) throughout the company to respond to stakeholder raised issues (praxis). In time they provided budget support to the regions (feedback from organizational learning). The organization took a leadership role (identity) in setting up and leading forums to exchange ideas and information on issues facing the aquaculture industry (practice), including a biennial international conference of stakeholders in Stavanger, Norway and numerous multi-party, multi-national initiatives involving participants ranging from politicians in the Hague to Peruvian anchovy fishermen to anti-aquaculture groups. This illustrates how learning and identity influence each other as well as practice, which in turn influences praxis, in this case in response to conflict from stakeholders.

Heikki, a corporate executive, shares what he believes is central to Marine Harvest's approach to the external environment:

"you can only find a solution when you put different people with different backgrounds and different views of the world together because then you have the creative momentum to really start making a change and come up with the right solutions. So not any longer the different disciplines within one company, but now the NGOs, and the government representatives, and the scientists … We have these different hats sitting around the table, and they're going to make a change."

The organizational identity of openness and collaboration and the practices that express that identity and the attendant learning endure and continue to be demonstrated thorough the actions of the company, in the face of and despite of continued conflict with stakeholders. The extent to which it endures is illustrated by the comments of Torgeir and Henriette, corporate managers in Marine Harvest, two years and three changes in ownership later:

"I think that first of all, it's important to be in a dialogue so that the world around you can react when they think that you're doing something that they perceive as being wrong. At the same time, I think it's very important that we are proactive in some processes, and try to step – or to be one step ahead in some areas."

"We find it important. When we entered into the dialogue, we want to be part of the solution, we want to have discussions and to try to find solutions. It's challenging also to have good discussions and find solutions, when you have such different groups and different views. That's of course a challenge to do that, but we find it's still important to be part of it."

Just as BP's practices in the 1990's supported Wout Dekker's recognition of the emerging importance of engaging with stakeholders, Marine Harvest's practices stemming from identify and learning show support for praxis that encourages the development of new insights and the exploration of new ideas. Lana and Colin, senior managers in Marine Harvest Canada, describe,

respectively, how institutionalized practices within the organization have guided

and supported them in praxis relative to their roles:

> *"overall the company – not just me – was quite transparent, quite open …*
> *so that was the way we were. And that helped. It helped me … That was a*
> *corporate position. And that position came from Europe. They were big on*
> *social accountability, big on environmental accountability … they took*
> *leadership roles – Marine Harvest did internationally… They took leadership*
> *on that, and it was in all their … vision statements and all that sort of stuff so*
> *I could always hold that up when I got grief about spending money … we'd*
> *say, "Well look it, I'm just following your corporate strategy, right?" And that*
> *was pretty hard to argue. So that helped me a lot because when your head*
> *corporate is doing that you can … I had the support".*

> *"So, it's a lot easier for me to say, well, in line with corporate thinking we're*
> *working towards greater levels of sustainability. So, if these studies that we*
> *do poke us in the eye a bit, well, that means we have to learn from that; we*
> *have to change…. there's no risk to me organizationally in Canada to*
> *undertake this. It's not out of synchrony with the larger company."*

In each situation the organization's identity of being "open to dialogue" and

"collaborative" was expressed through practices, such as stakeholder

engagement and other collaborative learning processes. These practices

allowed individuals to have intuitive insights and to take action (praxis), facilitating

learning. Indeed the open, collaborative practices that have been institutionalized

within Marine Harvest's structure encourage the development of new shared

understandings, as Lana describes:

> *"I had the opportunity – I was lucky - to go over to Europe quite a few times*
> *… to these high level … strategic planning (conferences) where they were*
> *looking ten years down the road and what the market would look like, and*
> *what consumers wanted to know."*

So in this case what Marine Harvest has already learned as an organization

encourages and supports the exploration of new learning. However the tension

created when integrating new learning in the face of feedback from

institutionalized learning appears to remain, as evidenced by Lana's comment about "getting grief about spending money".

This leads to questions about the extent to which individuals impact organizational learning or does practice dominate praxis? I find that while the data show more than twice as many examples of practice influencing praxis, this does not necessarily indicate a constraint on the exploration of new ideas or actions. The actions that instigated significant change, such as the initial contact of CAAR by Stolt or the acceptance of CAMP by CAAR, stemmed from praxis that deviated from established organizational and industry practices. Consistent with prior research, specific practices stemming from identity and learning can act as a catalyst for exploratory actions. A comparison of the data from Marine Harvest and Mainstream on the extent to which practice influences praxis show that feedback can be supportive of exploratory activities not just activities that exploit or maintain the status quo. (See Table 5-5: Evidence Showing Exploration and Exploitation Influences). For example, the praxis of the individuals at Marine Harvest is consistent with and supported by the organization's identify as being interested in seeking solutions through collaboration and its established practice of engaging in dialogue.

Table 5-5: Evidence Showing Exploration and Exploitation Influences

Organiz-ation	Feedback supporting exploration	Feedback supporting exploitation
Marine Harvest	"They have a bit of a hands off way of operating with their business units in the sense that they recognize ... that they don't, from back in Norway, they don't understand all the political and social context." Doug "… you could not leave this in the court of the CEO or the communication department, because actually it is not their problem. The issues are local to certain parts of the business." Heikki "The company actually made a decision to do that and took a financial hit as a result. They had more fish of a smaller size than what they would have ideally had for the market and that cost them money … at the end of the day when you rolled them all up it cost them some money." Doug "… you're also risking the fact that the science that is going to be done over the next couple of years will identify that it's an issue, it's a major issue with major changes. And, we're prepared to do that. It's a real risk. Now, I would say they're risking the same as well – the NGO groups – that it might identify that there's no difference or the difference is so minimal that the management procedures you have in place now address those risks." Rob	"There is an influence in terms of budgets and things like that for sure. You know, annual budgets are approved by the corporation, the parent company." Doug

Organiz-ation	Feedback supporting exploration	Feedback supporting exploitation
Mainstream	"… we collaborate with different parts of the world whether it be Scotland or Chile. We learn from each other's mistakes ... we all have head offices in different countries. So, we're able to learn from those experiences. We do a lot of networking on a global basis. People come from all around the world to attend different conferences. I was just in Norway at a conference." Karin	"Our focus in this company is sustainable aquaculture… That drives everything. And, the key thing that we've done is our certification. We are ISO certified in our environmental management systems for all our companies… We're also currently working on our occupational health and safety ISO certification, our quality management systems… And then, we'll move forward into the food safety certification … for us the value in certification is A) being third party audited, right and also, B) just to use it as a management tool so that all across our company we have the same standards so that nobody can say, farm A does this; farm B does this. We have the same policies and procedures and high standards in all of our operations. And, that's a really good management tool and it's a good way to show people that this is what we do. And, we know what we do all across the company." Karin "… the other stakeholder group that we're working on now is internal.... the website will be good for that. The newsletter, we're working on our second edition. And, we will be doing some brochures ... as we get bigger we've got to keep people informed." Karin "This passport was printed and given to every employee in the company. And you will always

Organiz-ation	Feedback supporting exploration	Feedback supporting exploitation
		find this posted in every operation that we have, and in any office you'll find this poster. So this is what we live by. To follow-up on the promises or directions we gave here, we established what we called the Cermaq (Mainstream) Sustainability Team, which was working to make this passport live in the organization … Then we formed this team and we also formed these six areas...." Erling

The data from the salmon farming industry in BC show that while practices stemming from organizational identity and the organizations' learning do influence praxis more frequently than the reverse, that does not necessarily indicate that there is relatively more emphasis on exploitation of existing knowledge. The nature of the organization's learning combined with the unique, and enduring characteristics that make up its identity form and inform the practices which may, as in the case of Marine Harvest, promote and support experimentation and exploration.

5.4 Premise 3: Individual Engagement: Practitioners-Praxis-Practice

In the previous section, I described feedback and feed forward cycles within some of the organizations in the BC salmon farming industry. These cycles led to changes in the behaviour of individuals - specifically, interactions and eventual

engagement (praxis) between individual practitioners on different sides of the conflict.

The impetus for experimentation with new behaviour came from destabilizing feedback: external signals that contradicted practitioners' understandings of the situation, of themselves, and of their organizations (D. Gioia et al., 2000). The predominant signals were ongoing criticism of the industry, shifting priorities of philanthropic organizations and funding agencies, and contradictory research findings on aquaculture impacts. As well as inducing dissonance that drove individuals to action, these signals created uncertainty within the organizations. This condition of uncertainty had the effect of freeing individuals from the influence of established organizational practices, permitting and encouraging action in the form of experimentation. Indeed, repeated changes in the ownership of Marine Harvest created further uncertainty around organizational identity and practice, providing more latitude to the initiating individuals and sustaining ongoing experimentation.

Departing from conventional, institutionalized practice, practitioners made direct contact across organizational boundaries. Having done so, they were able to tap into shared identities relevant to the conflict. Amongst these were aspects of being a scientist, a professional facilitator or negotiator, and community membership. These shared identities sustained ongoing interaction. Moreover, aspects of the organizational identities of CAAR and the post-merger Marine Harvest were directly supportive of experimentation, encouraging new activities and the exploration of new ideas as the engagement developed. Hence highly experimental praxis of the individuals, engaging with 'enemies' across

organizational boundaries, was influenced by both individual and member

organizations' identities and learning, and permitted by conditions of uncertainty.

These practitioners subsequently became the catalysts for change and learning

within their home organizations, through feed forward and organizational

integration of their praxis and learning (see Figure 5-2: Individual Engagement:

Practitioners-Praxis-Practice). I will now outline the data that describes these

processes.
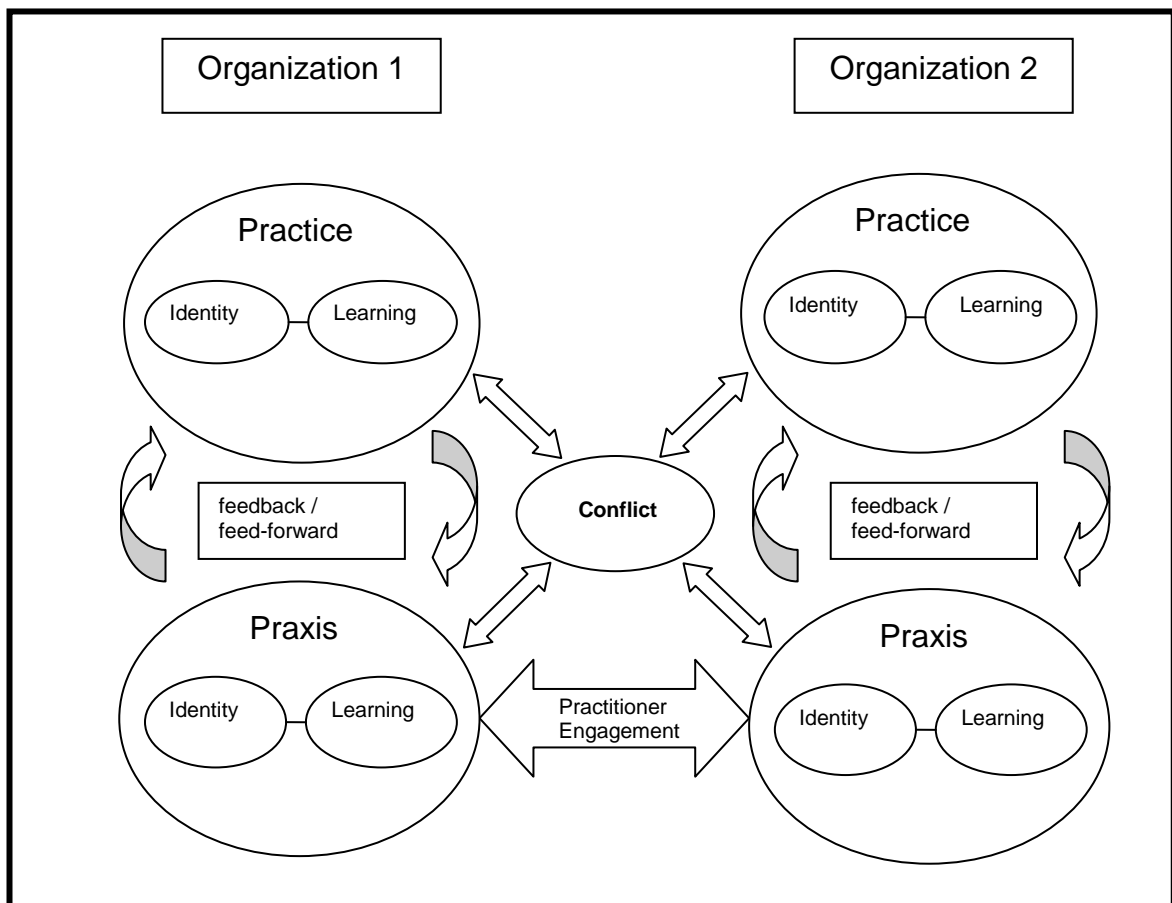
Figure 5-2: Individual Engagement: Practitioners-Praxis-Practice

5.4.1 First Contact: Destabilizing Feedback

In both Marine Harvest and CAAR, signals from the environment loosened the hold that their respective organizational identities placed on individual actions. CAAR was formed at the direction of three major US foundations, with the primary objective of raising public awareness of the impact of salmon farming with a view to reforming the industry. CAAR soon established itself as a vocal critic of the industry with its active and well structured campaigns, including provocative ads targeting consumers in the New York Times and Los Angeles Times and its website www.farmedanddangerous.com. Donna, from CAAR, describes with some satisfaction creating a "nightmare for the industry":

> *"Well the sea lice one – I hate saying this – has benefited us in terms that it gave us a very clear message we can take to the public, we got the public very upset about salmon farming… When you see any fish covered in sea lice and they're dying, the public just grabs on to that. And that's not to say that's more important than some of the other issues but it … helped us articulate our concerns better and reach our audience better, and it's been a real nightmare for the industry"*

After several years of successfully challenging the BC salmon farming industry in its major markets, the direction from one of CAAR's major funders shifted. There was a general directive that the issues had been sufficiently raised and it was time to start looking for solutions. Doug confirms the funders' feedback to CAAR:

> *" (they) wanted to see some kind of rapprochement between the environmental organizations they were funding and the salmon farming industry because from the point of view of the philanthropic organizations their goals are not going to be achieved if people aren't talking to each other."*

While CAAR had created an organizational identity of an activist, critic, and advocate, that identity was now in conflict with the feedback from one of its major funders. In addition all of its inter-organizational learning and experience with salmon farmers was indirect and critical. This pressure from funders to look for opportunities to develop solutions to the issues with salmon farming encouraged individuals within CAAR to be open to new behaviour.

It was Justin, the general manager of Stolt in BC (later merged with Marine Harvest) who initiated direct contact with CAAR. At that time Stolt was recognized as the global industry leader in terms of sales, profitability and operations. In Canada it was ISO 14001 certified. While Stolt was recognized as a superior operator it was not as focused as Marine Harvest was on promoting its social and environmental performance globally. It viewed environmental compliance to be the responsibility of the company and it was accountable to the regulators not the activists. The company's view of its responsibility is illustrated by this statement in its 2003 annual report:

> *"There has been much in the press lately about environmental and quality issues in aquaculture. These issues have been the focus of extensive media coverage and public debate. Indeed, the number of lobbyists and activists with positions on aquaculture is startling. As an aquaculture business, there is nothing we can say or do to satisfy all of these interested parties. What we can do, however, is to adhere rigorously to all regulations governing our industry and to follow our own conscience and set our own high standard. Farmed fish is an excellent source of healthy protein, and it is our responsibility and commitment to meet high standards of husbandry and care for the environment." (Stolt-Neilsen SA, 2003)*

This passage illustrates Stolt's organizational identity of a successful, science-based, responsible producer of a sustainable food product, as well as how that identity manifests in its behaviour. It acknowledges activists and

lobbyists only to say it does not believe it is responsible for responding to their concerns directly. It responds to regulations and is committed to meeting high standards of operation.

There was a serious discrepancy between these internal beliefs and external perceptions of the organization in BC. A scientific board established by the federal government to monitor BC salmon stocks suggested that sea lice from Stolt's farms in the Broughton Archipelago risked doing "irreparable harm" to wild pink salmon runs (C. Wilson, 2002). Moreover environmentalists, including Alexandra Morton, an independent biologist and environmentalist called for "other interested stakeholders -- fishermen, environmentalists, First Nations and the public "to apply pressure for changes to Stolt's salmon farming operations in that area" (Read, 2002). Finally, a number of well publicized negative articles from peer reviewed science journals prompted agitation for more stringent regulation in BC.

Science is the primary language of the conflict around salmon farming (Young & Matthews, 2010). Aquaculture has been the subject of extensive scientific investigation for more than 20 years in Canada and much longer in Norway, in an effort to improve the economic and environmental performance of the industry. This generation of knowledge has served to fuel the conflicts rather than defuse them because of the extent of the disagreement amongst scientists and so called experts in aquaculture. Justin, general manager of Stolt summarized his company's and the industry's position when he said "In a perfect world, if we had all the science … but the fact of the matter is … the science is by no means conclusive." (Read, 2002). The disagreements between the pro-

industry scientists and the pro-environmental scientists include the impact on

human health of consuming farmed salmon, and the impact of salmon farming on

the environment and hence on wild salmon and other marine species. While

Justin said that Stolt prefers "… a careful study of sea lice and the development

and implementation of a sea lice control plan" (Read, 2002), the persistence of

the conflict induced him to reevaluate his understandings. It was in this context

that Justin began to consider a new approach. Thus providing evidence of how

threats to organizational identity cause individuals to reconsider their actions (D.

Gioia et al., 2000; Whetten & Mackey, 2002).

In addition to destabilizing feedback from the environment, a series of

changes in ownership at Stolt/Marine Harvest placed its organizational identity

and expectations in a flux. Discussions between Stolt and CAAR had been

underway for eight months when Marine Harvest purchased Stolt, and

subsequently spun it off as a separately listed company. Then in early 2006

Marine Harvest was purchased by PanFish. Throughout this period Colin and

Doug continued the discussions with the CAAR negotiating team, despite the

replacement of Justin as the head of Marine Harvest's operations in BC. Donna

of CAAR describes Colin's behaviour:

> *"This is our second merger in a year … we're getting pretty good at it. Colin (of Marine Harvest) … basically says, "look, until they tell me otherwise, I continue to act as if it was business as usual." And so the only thing is we can't get his time because he's so busy handling merger issues … – there's been a few times that we've been a little bit unsure if we would go ahead with this, we didn't know about the merger but in no way has he threatened us or used it over our head …"*

During the changes in ownership the acceptance and continuance of the engagement with CAAR was not certain (See: Table 5-6: Impact of Mergers Activity on Practice and Praxis). At the time of the last acquisition, Angus, a senior manager at Mainstream Canada predicted that "Pan's (PanFish) going to come in, they're going to squish that agreement … between Marine and CAAR because they'll say, "It's got nothing to do with us. We bought the company ... We're Pan not Marine."

Despite the uncertainty created by the mergers, Colin in his role of environmental manager at Marine Harvest and scientist, continued to discuss the possibility of a joint research initiative with CAAR. He also continued to position the benefits of pursuing the engagement internally. As Donald, the mediator, observed: "I think by the time they got to PanFish there was probably already a sense that the engagement was yielding benefits." The uncertainty regarding organizational practices introduced by the mergers gave Colin considerable discretion regarding the pursuit of the Framework. That he continued to engage with CAAR without official sanction illustrates the influence that he had gained on the practice of the new organization. In turn, Colin strongly identified with Marine Harvest's (and its predecessor companies) organizational identity as a company that is accountable and that adheres to scientific process, as evidenced by his comment:

> *"… this is why I'm pretty proud to work for Marine Harvest is that globally they say, guess what, we can't really say we're sustainable. Yeah, well, in all measures, but we're working towards that. We're recognizing that we have some problems and we're willing to change, but we feel we have a high level of value to offer the public and the world I guess in terms of... If*

you grow fish so that not all the wild fish have to be taken out ...then there's an environmental value to that."

These aspects of Marine Harvest's organizational identity supported Colin in his experimentation by giving the engagement with the "enemy" a scientific context and describing his praxis in terms of the process of scientific discovery.

Table 5-6: Impact of Mergers Activity on Practice and Praxis

Individuals	Representative Quotes Regarding the Impact of Mergers
Donna - CAAR	"I don't know if I could say that this Marine Harvest would have been willing to go down this road if it hadn't started with the other one. But, aside from that, because we've had consistency in terms of people being there - the issue is when there's a merger we lose their attention; we totally lose them. And, really things are all up in the air until the merger is complete because quite often they don't know what their jobs are going to be…. they have no idea if the new company's going to back this approach and this work that we're doing. ... That's the biggest hurdle. And, once we get through that it's usually just business as usual after that."
Moira - CAAR	"… there was initially some concern that the change of ownership and the dynamic would really affect, you know, the limited progress that had been made in the discussion, but Marine Harvest when they took over seemed amenable to continuing. And then, PanFish and Marine Harvest merged and there was still an openness to continuing."
Donald – Mediator	"... when Stolt and Marine Harvest integrated … there's an issue in terms of which … management team or which management philosophy or direction was likely to prevail. And, you know, had it been the original Marine Harvest I'm not certain whether this engagement would still be going." "I think that after the PanFish merger … once again it was … a period of time in terms of where was the leadership going to be. … the first question … is the leadership in the new organization going to be supportive of the ongoing engagement? And, so, you've got a time period while that gets sorted out. But, then there's also the time period where it takes for the new organization to begin to … institutionally accept it because then you've got folks that have come from both organizations … just because the leader thinks something's a good idea doesn't mean everybody else thinks it's a good idea. So, there's that period of adjustment as well."
Angus - Mainstream	"…We know that then CAAR is going to take up the fight again."

5.4.2 Experimentation: Altered Praxis

As the largest operator in BC, Stolt was the most vulnerable to the conflict over sea lice. In keeping with its identity as a science based company, Stolt Canada's leadership was very motivated to ensure that at the least any forthcoming regulation was supported by good research. As mentioned in the previous section, they began to consider ways to accomplish that. Justin, who had a degree in Marine Biology and almost 40 years experience of working in commercial fishing, fisheries development, and salmon farming, was instrumental (Campbell River Salmon Foundation, 2010). Donald, the mediator, describes Justin's process:

> *"I think he (Justin) thought that the folks in CAAR were sort of evil or something, but he did understand ... And while it really... disturbed him he realized that this engagement was important. Like, that it was in his own best business interest to engage. So, he was able to, sort of, get over that stuff. Not so; he couldn't get over it. He was able to make decisions that were not influenced (by it) ..."*

Despite the ongoing conflict between CAAR and Stolt, Justin was able to intuit a new pattern emerging in the environment and interpret the need for new behaviour. To aid his interpretation of the situation he actively sought guidance from independent sources outside of Stolt and the salmon farming industry, Doug and Donald. These individuals had advisory roles in other environmental conflicts in BC, were residents of Vancouver Island and were familiar with both the situation and the individuals involved. Doug, a consultant specializing in issues management, gave his synopsis of Justin and Stolt's situation:

> *"… Most of the public debate over the years has been a debate characterized by conflict and struggle… I said you really need to try and*

enter into some kind of a structured dialog with the environmental groups.
You can't continue the practice of the sparring press releases … And, the
company understood that. I mean, one of the reasons they came to me was
because they were at a loss."

Justin recognized the significant threat of restrictive legislation and the state

of the knowledge around the sea lice issue. This activated his role identities of

corporate manager and scientist and prompted him to take action (i.e. contacting

Doug). So it was that Justin had Doug contact the main spokesperson for CAAR,

Donna, a lawyer and a resident of one of the islands in the Broughton

Archipelago. According to Colin, the senior Stolt manager who managed the

engagement, the intent was to "buy time" that would allow "science to do its

work." As Colin says:

"… we need to have a time out before all that policy gets articulated in which
the rest of the research can be done to determine … the significance of the
effect of the sea lice… So let's learn together, let's share information, let's
be as transparent as we can be within the context of business and let's let
the science complete its work so that we're basing any policy decision on
good solid science."

As scientists, both Justin and Colin were able to understand the significance

of direct access to fish farming data to the scientists within CAAR's member

organizations. They would be the first environmental group in the world to have

this access. Their identity as scientists enabled them to understand the interests

of the other party and make an offer that would be considered credible and

intriguing. This action was also consistent with their role identity as company

managers protecting the interests of the firm.

CAAR was motivated in part by the shift in the direction from their funders to

focus less on raising awareness and promoting conflict and more on working

towards a solution. They were also motivated, as a science based organization, by the prospect of access to operational data. Scott of CAAR explains, "… we finally decided we're beating our heads against the wall, fighting against the industry and not getting anywhere. And the initial meeting was set up… to see if we can get over (that)".

This action represented a significant departure from past practices in Stolt/Marine Harvest, CAAR, and indeed the industry. Donald, the mediator, explains:

> *"nobody in the salmon farming industry until that point in time had … decided that there was value in talking with people from the environmental community. And, I think, in fact, most people thought that … it was an outrageous betrayal to consider doing that. And then, similarly, you get very similar sentiments among the ENGO coalition as well. It's quite remarkable … the industrial interests … the interests that are representing civil society … their internal issues, their dynamics, they're mirror images of each other"*

The data show that how, in the face of destabilizing feedback from the environment, individuals' social and role identities and learning influence their interpretations of the situation and their praxis, prompting experimentation.

5.4.3 Influence of Common Identities: Practitioners - Praxis

The individuals involved in the Framework had a range of social and role identities However, there were three identities that became most relevant to the learning between the organizations; scientist, issue manager, and coastal community resident. CAAR's team was made up of a lawyer, a PhD in ecology, a biologist/science advocate, the Executive Director of a union sponsored foundation, and a First Nations marine/fisheries representative. Two of these individuals lived in the Broughton Archipelago. Donna, of CAAR, says "… we

bring a multi-talented group of people to these negotiations with industry". The

Marine Harvest team included Justin, a marine biologist by training and the head

of the BC operation, Colin a biologist with a life time of working with salmon and

salmon issues, and Doug, an issues consultant skilled in conflict management.

All were residents of Vancouver Island.

5.4.3.1 Scientist

Despite the various controversies all of the individuals could agree on the

need for greater understanding of the impact of aquaculture on the marine

environment. As a result, the importance of the identity of "scientist" interested in

protecting the marine habitat for salmon in BC was elevated and activated and

came to permeate the activities related to the Framework (See: Table 5-7:

Evidence of Scientist Identity for representative quotes showing activations of the

identity of scientist). Even individuals whose internal roles gave them limited

exposure to science or the scientific methods talked in terms of control groups

and experimentation. The comments by Rob, the senior public relations manager

at Marine Harvest, give an example of the extent to which the language and

structure around scientific experimentation, specifically the need for a control

group, had permeated the organization:

> *"Now, the question is how would it be different if we didn't engage, if we hadn't have reached out to CAAR … Well, how would it be different? We don't have a control so we don't know … some companies might say that, you know, not engaging and simply working with the sixty percent that are undecided leaving the twenty percent wackos alone, you'd never know. . You don't have control. I wish I had another BC somewhere and, you know, kind of tried out a different method."*

Table 5-7: Evidence of Scientist Identity

Organization	Representative Quotes
Marine Harvest	"We agree that there's concern around this. We agree that we can constantly change the way we grow fish. We don't agree that your (CAAR's) concerns are necessarily valid, yet we do agree that we'll probably be changing the way we grow fish because we've been changing the way we grow fish and mitigating concerns as long as we've been growing fish." Colin "Our contention is that it's never been proven that sea lice are entirely produced by the farms because we know that they were always there before the farms were there and they'll be there after the farms leave. So, we felt a good way to test whether that was the case or not was to set this management up and if it's a benefit and it shows that the sea lice are highly reduced in those fallow zones, then it's something that we would, you know, continue to do… like the control route and then the test groups." Colin "If you were talking about sea lice... pink salmon interactions with sea lice in the Broughton Archipelago, we have a good handle on that. If you're talking about are there affects on sockeye salmon, we don't have a great handle on that. I personally as a biologist – I've worked with wild fish for many years – I have trouble believing that sockeye would be at the risk that pink salmon would be at just because of their size … but, that doesn't mean that it's not something that should be addressed ... I'm not comfortable with saying that I have enough information to say I just dismiss that. I'm not saying I'm dismissing other people's concerns. It's like, ok, should this be... We should put some effort into this. Who are the right people to address this?" Stephanie
CAAR	"…So in the broad, robust pattern of management of pathology … These are fairly broad patterns… salmon farming is unique in terms of some of the biological issues. But it's not unique in terms of these patterns that keep repeating and the social patterns. And how individual choice is really important in effecting you know government and industry. And so it's not unique in that aspect just in terms of the biological and ecological side I think. And situational side and the geography and things like that." Harry "Then we then go and interact with the larger groups we stay very focused on those goals and on how the interaction with the larger international campaigns can either better fit or undermine those goals. And because they're very strongly based in the scientific issues of the day, we're not just going out saying, "We want it this

Organization	Representative Quotes
	way because this is our campaign and you've got to do it this way," but we're very clear about how the process can work better if we coordinate and how we're none of us going to get what we need out of this if we don't. And so the relationships are collegial, most of the time." Gord
	"… we have such a strong science component and we have individuals that are very hardcore scientists who have expectations around things. And, if their needs aren't met, it's really hard for us to get things through the coalition. So, we have a strong demand on the scientific rigor of things…" Donna

The role of scientist also helped to establish common concerns, if not beliefs, and helped in establishing credibility as the following comment by Scott of CAAR about Colin of Marine Harvest illustrates:

"… there's still that lack of trust with Marine Harvest … but the guy that negotiated was a marine biologist too – they were concerned … it benefited both of us. We're finally getting the actual truth about things."

It is telling that while Scott states he had a "lack of trust with Marine Harvest" this was mitigated by the fact that a marine biologist, Colin, was representing the organization. Colin's credibility and shared concern about getting "the actual truth about things" allayed some of Scott's mistrust. Hence, the contextual factors in the BC salmon farming industry rendered the identity of scientist more meaningful to the individuals involved than other identities, such as activists or salmon farmers.

Contextual factors also increased the importance of the practices and protocols shared by that identity. In this case the gaps in scientific knowledge on sea lice, the contradictory results from prior research and the need to do properly

controlled studies all directed the individual's attention toward the actions they

could jointly take to address those concerns. In focusing on the socio-cognitive

aspects of the conflict the individuals not only activated the identity of scientist, in

particular biologist, they also elevated the importance of the practices and

protocols that were accepted as "good science". Individuals from both

organizations recognized the importance of employing common practices and of

being prepared to accept the outcomes that resulted. As Gord, of CAAR, a MA in

Marine Biology said:

> *"The rationale for us, I'd say, was to construct a series of research proposals that were done jointly so that there could no longer be this sort of 'he said, she said' around the issues. Two areas, sea lice and closed containment economic viability, are the main areas of research."*

Coincident with agreeing on what constituted "good science", the individuals

in the Framework distanced themselves from the outcomes of prior research on

sea lice impacts. The apparently contradictory results cited by the industry and by

the environmentalists had played a major part in creating and sustaining identity

conflict. The individuals involved in the Framework focused instead on the

research projects they would undertake together and the practices and protocols

they would use in the work. As Stephanie, a biologist at Marine Harvest and

Harry, a PhD in ecology from CAAR said respectively:

> *"we saw this early on that there are these two groups of researchers. There's those who the environmental movement tends to vet or stand behind. And then, there's this other group - and they seem to not be sharing information; they seem to be polarized. And, so, that was one of the key things for our company was to say, well, can't we learn from each other."*

"… because they're very strongly based in the scientific issues of the day, we're not just going out saying, "We want it this way because this is our campaign and you've got to do it this way," but we're very clear about how the process can work better if we coordinate and how we're none of us going to get what we need out of this if we don't."

This emphasis on the practices that they shared had a dramatic impact on their ability to work together and allowed them to distance themselves from the issues that had created conflict in the past. As Donald, the mediator, describes:

"And, what's absolutely remarkable is when you can actually get them (CAAR and Marine Harvest) talking scientist to scientist it's like something transforms in the room, like, in a positive sense. You know, and when it actually comes down to things like protocols and stuff like that, that's a piece of cake... if you get them down to talking about ... for example, what would be the proper, you know, ... protocol around this particular experiment ... they're really good at it."

The individuals involved had moved away from using the end products of science as a weapon against each other to using the scientific process as the mechanism through which they could cooperate. Science provided a neutral and honourable identity with which all parties could identify. It also provided sufficient ambiguity to allow the group to reach consensus on the necessity of joint action, while retaining differing individual beliefs (Eisenberg, 1984).

5.4.3.2 Issue manager

In addition to five scientific research projects, the Framework agreement included communications and conflict management protocols. This context of ongoing conflict elevated the importance of individuals that were not strongly identified with either of the conflicting organizations and therefore were not vulnerable to the same defensive responses to identity conflict as Marine Harvest

or CAAR members. Also the behaviour associated with the identity of issue

consultant/manager was vital to the inter-organizational learning process. Doug

and Donald in particular played pivotal roles in helping the individuals involved

experiment with new behaviour, and then interpret and integrate new

understandings.

Doug was well known to the leaders of CAAR, and his identity as a neutral

and knowledgeable boundary spanner, coupled with his "temporary" identification

with Marine Harvest, was critical to the influence he had on the process. As

Donna, of CAAR describes:

> *"I've known Doug for a long time … He … plays the role of advising*
> *companies on how to work with environmental groups … he has an insight*
> *into the environmental community that a lot of other industry folks don't*
> *have... the value he plays ... is usually something along the lines of (saying)*
> *they're not going to go away, so ignoring them is not a solution."*

Despite both parties' confidence in Doug, he reports that "from the time I

first started talking to my client and to the environmental groups it probably took

six months to get to the point where people actually decided to sit down face to

face and give this a whirl". While both organizations were motivated to try a new

approach, they accepted that they needed help from someone outside the

situation to engage constructively. Their agreement to use Donald as a mediator

was their first act of integration. Doug explains:

> *"I knew it was going to take mediation to be able to make any progress. So,*
> *they agreed to that. I also said that to the environmental groups... you`re*
> *not going to make any headway here if you don`t have mediation. So, they*
> *agreed to that ... Donald was a known quantity in the environmental*
> *community. So, it wasn't really a big problem for them to support using him*
> *… with Marine Harvest … I was able to explain the role of the mediator to*
> *them and the value of using mediation you know, we weren't going to sit*

down at a table some day at a hotel in Port McNeill and have a kum-ba-ya moment and everybody was going to be happy … So, they accepted the idea of using mediation and the cost of mediation would be split between CAAR and between Marine Harvest."

As a result of the "shuttle diplomacy" of Doug, the individuals from Marine Harvest and CAAR interpreted the needs of the situation in a new way, which then prompted the development of a shared understanding of the value of mediation. The act of hiring Donald and especially the agreement to split the cost of his fees 50/50 between the two organizations was a coherent collective action, the best indication of integration of new understanding (Crossan et al., 1999).

CAAR subsequently hired Moira, an activist/issue manager whose long and varied experience included anti-war protests, as well as involvement in forestry, mining, and marine issues. Subsequently Doug and Moira handled all of the day to day issues and minor conflicts. This left Harry, from CAAR, and Stephanie, of Marine Harvest, and others to focus on moving the science projects forward, and Donna, from CAAR, and Colin, from Marine Harvest, to focus on larger relationship issues. In this way the individuals with expertise in science worked on the science issues and delegated all of the "conflictual" matters to those individuals skilled in conflict and issues management. Donna describes the way conflicts within the Framework were handled:

"If there's a scrimmage, it's usually Doug that contacts us. See, Colin doesn't do that. … He will. He will if he's not happy with where it's going and we'll get an email from him. But usually ... Doug does the more day to day, here this is a problem … And, you know, Moira and Doug will talk about it and they'll work it out "

In this way the individuals whose identities are least likely to be threatened by the other's perspective are tasked with developing shared understanding and taking or recommending action.

5.4.3.3 Community Resident

The individuals involved with the Framework were able to empathize with each other by focusing on their common residence in BC. They were also able to separate the people from their positions, further diffusing the identity based conflict that had been characteristic of earlier, albeit indirect, interactions. These comments by Harry and Donna of CAAR illustrate this process:

> *"I can only imagine some of the things that they have to deal with … it must be tough, and we do know its tough. You know, they're nice people, we go out with people that are fish health technicians to the farms. They're nice people that are community members in Campbell River and things like that. So they're people for one thing…. I think genuinely a lot of these people … the managers in Campbell River, for instance, believe these changes have to be made but they have to answer to their parent offices."*

> *"one of the things that I've learned so much from this whole thing is that when you're arguing with your opponent, people assume you actually can't sit in a room together. It's quite funny because people always say, "wow, you can't actually have Donna and Colin from Marine Harvest in a room together," and I'd be like, "I can sit in a room with them, I can have dinner with them," I don't care, they're very nice people they just have different beliefs."*

They no longer viewed each other as just salmon farmers or just environmentalists but as people with common concerns, in many cases, and with different pressures on them.

5.4.4 Impact of Organizational Identities: Practice - Praxis

Both CAAR and Marine Harvest, as it emerged post mergers, had

organizational identities that supported and indeed promoted exploration and

experimentation. CAAR clearly identified itself as a strategic environmental

organization focused on one issue, salmon farming. Donna, of CAAR, describes

the process of arriving at their purpose:

> *"... when we started the question was - are we trying to stop salmon farming altogether, or are we trying to reform it. That was a huge question, and I think one of the successes around our coalition is that we actually took the time to answer that question, and to build consensus around it"*

Its creation via a year of facilitated sessions resulted in firmly established

collaborative practices by which its members were able to interpret and integrate

new information. These facilitated sessions also inculcated its senior members

with the skill to collaborate across organizational boundaries and across

disciplines. Every CAAR member interviewed in 2006-2007 expressed their pride

and excitement to be part of CAAR and their strong identification with the group.

As Donna enthused "… it's a phenomenal group of people. I always say it's an

honour to work with that group."

The combination of Stolt's organizational identity as an ethical, accountable,

industry leader with Marine Harvest's identity as a collaborative, innovative and

socially responsible company resulted in an organization well equipped to learn

from a variety of sources. The disciplined practices related to both operations and

interaction that Stolt had developed provided the structures and systems to

interpret and integrate the information brought into the organization via the

facilitated multi-party initiatives that Marine Harvest had become known for organizing.

Both CAAR and Marine Harvest identified themselves as collaborative, and had long histories of joint scientific research initiatives with universities, research institutes, and independent research organizations. Indeed while negotiating the Framework CAAR also appealed directly to Marine Harvest's organizational identity as a collaborative organization. Scott, of CAAR, describes CAAR's approach:

> "… a lot of people said, "Well you can be the first company. If we do this, you'll be the first one and you'll be recognized for this." So it was pushed along those lines. Why not be the first not only in BC or the country but in other areas too. To be the first ones to do this, this and this. And they are the first company that worked with enviros in this country or even in America too … working on science and monitoring… "

Both organizations came from a strong science base and considered science to be the foundation of their credibility. Ironically it seems that their roots in science helped them to realize that their longer term goals while apparently in direct conflict were dependent on the public's confidence in them. In the case of CAAR their funders also recognized and supported this notion. In Marine Harvest's case, access to sites for growth and expansion depended on their social license to operate as demonstrated by government granted site licenses. Therefore they recognized that the "contested science" that they each had been promoting was damaging their position and they needed to work together to re-establish and maintain their credibility. As Doug, a consultant to Marine Harvest, noted:

> *"You can't continue the practice of the sparring press releases and that sort of thing … the company understood that …"*

In contrast to Marine Harvest, Mainstream identified itself as a sustainable organization, with financial sustainability the first consideration. The company had developed highly disciplined and effective operating processes internally and had implemented them internationally. Activities that could not be linked to financial performance or to one of the six main areas of sustainability articulated in the overall strategic plan were neither encouraged nor supported. This approach had been very successful and as a result Mainstream management took great pride in the approach they took to their business, even to the extent of considering themselves a model for the industry. Mainstream also had a long history of joint scientific research initiatives with universities, research institutes, independent research organizations, and primary stakeholder groups. However, Mainstream, characterized learning as a key contributor to its competitive advantage, and saw knowledge as an asset to be developed and then exploited. Mainstream appeared to be as skilled at learning across boundaries as Marine Harvest. However the way that it identified itself (i.e. as a business first, and then as a competitive salmon farming company) seems to have limited the organizations from which it could learn. Colin, of Marine Harvest, describes the situation in 2009:

> *"… there's a different level of experience between different companies in relation to the conflict laden piece of this. Everyone's aware of the conflict. Different companies have approached trying to find solutions ... They've come at it from different points. So … why has Marine Harvest chosen a different approach than other people … we laughed a little bit whether there's been any learning and I think I mentioned to you that here we are several years down the road and Marine Harvest is still the only company*

that uses the approach of meeting with and talking to and trying to engage with some of the critics, you know, to put it in a nice way … The other companies avoid it if at all possible. Sometimes they can't because meetings are arranged between government and ourselves and sometimes they involve the environmental groups ... That's about the only time I see those folks…"

The practices of Mainstream have resulted in a very different approach to CAAR and to environmental groups in general and as a result have limited their opportunities to learn from them. Indeed, managers at Mainstream do not believe that they can learn anything that is of use to their business from the NGO community.

5.4.5 Feed Forward: Praxis-Practice

Senior managers at Stolt/Marine Harvest (Justin and Colin) actively sought information from new sources, Doug, a consultant, and Donald, a mediator. The managers had sufficient influence within Stolt/Marine Harvest to experiment by having Doug contact Donna, of CAAR, with an offer to engage in collaborative research. Donna was open to responding to this new behaviour and to jointly developing a common interpretation with the other CAAR members to bring them into the dialogue, engaging with Stolt/Marine Harvest directly. By activating and emphasizing behaviours consistent with their shared identities as scientists, facilitators, and/or community residents, individuals from Marine Harvest and CAAR were able to experiment with new cooperative behaviour in their direct interactions, without changing their beliefs. This experimental praxis was consistent with some of the fundamental behaviours through which their

respective organizational identities were expressed, especially collaboration and the practices and protocols of scientific experimentation.

Curiously, these new behaviours were inconsistent with the primary activities of the two organizations, which perpetuated their underlying conflict of interest. CAAR continued to campaign against salmon farming, although CAAR had committed to warning Marine Harvest. Donna from CAAR described the shift in CAAR's activity relative to Marine Harvest:

> *"We are in the business of campaigning and they're in the business of raising fish…. so we are continuing with the markets campaign, but we don't name Marine Harvest … That's fine, they've done something, they've done more than anyone else, so they've gotten something from us..."*

Similarly, Marine Harvest continued to farm salmon in open net cages as before. This created tension and introduced caution into interaction between individuals. Colin of Marine Harvest described his perspective and hopes for the engagement in this way:

> *"It's about intention to replace some of the rhetoric with actual fact, it's about industry doing some positive change and on the other side, the environmental groups also changing the way they talk about industry and agreeing that there can be some other end points beside wholesale removal of the industry from BC."*

Both groups described themselves as cautiously optimistic about the outcomes that were likely as a result of their engagement around specific research projects. However, the underlying resource conflict and the residual identity conflict were never far from the surface. Donna, of CAAR, viewed the shift as a quid pro quo for Marine Harvest sharing data and Colin, of Marine Harvest, wanted the environmental groups to change the way they characterize

the industry. Their statements revealed their beliefs about both themselves and

the other organization and showed how little they had changed despite their

agreement to collaborate. The following comment from Lana, a manager at

Marine Harvest, provides a perspective on the beliefs of individuals on both sides

of the Framework:

> *"It's a marriage of convenience. We're both getting something out of it because they have to demonstrate to their funders that they're working on solutions… and when we get into a dialogue with them we said, "OK now you've got to tone down the rhetoric, you've got to give us some breathing space here and stop attacking our markets" and everything. So it's a deal with the devil on both sides. I mean I'm sure they think of us as the devil."*

The data show that identity and learning served as filters through which

individuals from both Marine Harvest/Stolt and CAAR made sense of feedback.

Destabilizing feedback, which consists of signals from the environment that were

inconsistent with their understandings, prompted a different interpretation of the

situation, activating different aspects of identity and learning. Individuals at

Marine Harvest experimented with new activities. While new to this situation and

interaction, these activities corresponded to practices associated with the

individuals' social and role identities. The interaction between the identities and

learning of the individuals involved and the organizational identities and learning

of Marine Harvest and CAAR encouraged the individual's experimentation. In

summary, individuals' praxis in response to destabilizing feedback is related not

only to their understanding of the conflict but also to their identities, their learning,

and to the learning and identities of the groups and organizations with which they

identify. These are conditions for productive engagement between individuals.

5.5 Premise 4: Repeated Engagement: Inter-Organizational Learning

The data from the BC salmon farming industry show how through repeated engagement (praxis) to develop and implement collaborative research projects, the individuals from Marine Harvest and CAAR, two relatively power balanced organizations, explored and in some cases altered their assumptions about one another and themselves and their organizations. Their repeated engagement resulted in new interpretations of the conflict, of the nature of their identities, and of those aspects of their own and their organizations' identities that are most salient in this situation. They have also advanced scientific understanding of the impact of sea lice. Finally, there is evidence that some of the learning by individuals has been integrated into the practices of their respective organizations, demonstrating inter-organizational learning.

The new interpretations by the individuals directly involved in the Framework generated a stream of outcomes that captured the attention of both organizations, prompting integration at the group and organization level. These outcomes culminated in the two organizations agreeing to a number of increasingly complex and challenging collaborative activities, i.e. experiments. Beginning with The Framework agreement itself, followed by the negotiation of common research terms of reference and a common roster of scientists, and most recently with the development and implementation of CAMP, the shared understanding of the individuals from each organization has formed the foundation for the increasingly comprehensive integration and collective learning

not only between them but also between their respective organizations. Table 5-8: Impact of Repeated Engagement - provides an overview of how the elements unfolded.

Similar to research on collaborative joint learning initiatives between organizations with compatible activities and goals (e.g. Mason & Leek, 2008), there is evidence that inter-organizational learning became feasible once the individuals involved in the Framework began to generate outcomes that were apparent not only to their respective organizations, but to the regulators and general public as well. Thus, their prolonged engagement around a series of cooperative activities, combined with their relatively balanced power and ongoing institutional support for their engagement created the conditions for individuals from Marine Harvest and CAAR to engage in dialogue (Bohm, 1996).

A comparative analysis of the nature of the engagement between individuals from Marine Harvest and CAAR at different times revealed similar patterns of behaviour. In this section I use the data to define and illustrate each element of the theoretical premise introduced in Section 3.3.4: Repeated Engagement. I present data on the conditions for dialogue, examples of dialogue, and the inter-organizational learning outcomes of dialogue, including altered organizational practices and meanings.

Table 5-8: Impact of Repeated Engagement

		Repeated Engagement		
		2003-2006	2006 - 2007	2008 - 2009
Stages		Gathering info, assessing risk/return, committing to work together	Getting going, learning to interact under the agreed terms	Getting serious, new behaviours and beliefs colliding with old, jointly managing research
Dialogue	Practitioners	Two balanced teams based on opposing organization and role identities General Manager (scientist) Manager (scientist) Consultant Executive Director (lawyer) 2 Scientists, Union Executive	Pairs of "representatives", based on common identities Manager: Executive Director Scientist: Scientist Consultant: Manager/Activist	Pairs representing their combined /common identities as well as their organizations' Manager: Executive Director Scientist: Scientist Consultant: Manager/Activist PR: Manager/Activist Scientists: External Scientists
	Praxis	Sought information from new sources (consultant, mediator) and engaged in new behaviours "Shuttle diplomacy" Mediated meetings Negotiated terms of	Regular mediated meetings Interacted directly, e-mail, phone Developed terms of reference and criteria for scientists	Managed projects Negotiated terms for CAMP Changed operations - fallow a migration route Monitored & treated sea lice Engaged in "Skirmishes" "Scrimmages"

		Repeated Engagement		
		2003-2006	**2006 - 2007**	**2008 - 2009**
		engagement, process, protocols		
	Assumptions recognized and explored	Value in working together Organizational similarities Interdependence re. public acceptance	Science is neutral Importance of integrity of output	Working together means adjustment Reform vs. Eliminate Action vs. Analysis
Learning	Practice	Agreement to negotiate Shared sea lice data on-line Framework for Dialogue Neutral language Hired mediator, consultant, biologist & manager/activist	Support through annual budget Project hierarchy & structure Tasks assigned to "specialists" Roster of "acceptable" scientists Joint public presentations and submissions	CAAR members decrease Sub-contract research CAMP implemented quickly Policy to engage Acknowledge sea lice risk Continued financial, social, structural support Marine Harvest's global Sustainability managers meet with CAAR Lobby jointly
	Shifted meanings	Value and information to be gained by cooperating We are similar We are interdependent	Science is not neutral Cooperation enhances integrity	"more than about sea lice" "it's the right thing to do. You need to engage …" "Respect costs you nothing"

5.5.1 Conditions for Dialogue

The balance of power, the structures and mechanisms that facilitated repeated engagement and the ongoing institutional support for their engagement created conditions that enabled individuals from Marine Harvest and CAAR to engage in dialogue. In this section I present data to illustrate each.

5.5.1.1 Balance of Power

For practitioners to have the kind of interactions necessary for dialogue to occur, the relative power of themselves and their organizations must be balanced. While Marine Harvest and CAAR each claimed to be at a power disadvantage relative to the other, by 2004 they were comparatively well balanced. The anti-salmon farming articles in scientific journals in 2003 and 2004, the increase in charges for regulatory violations by salmon farming companies, a recent class action suit, and particularly the recent confirmation by an independent research body of the impact of sea lice in the Broughton Archipelago had raised the profile and influence of CAAR while simultaneously diminishing that of Stolt and other salmon farmers. Stolt/Marine Harvest believed there was a real threat of punitive legislation being rushed through in order to quell public fear.

For CAAR's part they had taken deliberate action to at least partially offset what they viewed as a power and resource imbalance. Donna describes CAAR's approach:

"because the salmon farming companies are multi- national corporations ... we can't outspend them so we have to outthink them ... It was by having everybody pool all their information and work collaboratively we're able to take it (sea lice) ... to being one of the most prominent environmental issues in BC"

This re-balancing of the power relationships set the conditions for both parties to establish dialogue (Bohm, 1996). Consequently when Doug, the consultant, contacted them on behalf of Stolt, with an offer to share sea lice data, the response from Donna and the executives of the CAAR member organizations was cautiously positive. Donna described the situation:

"They were tired of being targeted in the media all the time. They said it affected their morale… people recognize they're the targets and somebody in Stolt made a decision –... Justin the head of Stolt Canada – that: "Let's try and approach these people who are criticizing us and also targeting us in the markets."

In addition to trusting Doug, the individuals' within CAAR felt they understood the motives of the head of Stolt Canada. They believed that their market campaigns had negatively affected the demand for BC salmon and the morale of salmon farm employees. While power had become more balanced between CAAR and Marine Harvest, it appeared at this time that the conflict was well entrenched and firmly based in identity differences and resource competition.

Another significant shift in relative power occurred in 2008 as a result of the negotiation of CAMP in 2008. Marine Harvest through its proposal of an experiment (CAMP) addressed not only one of CAAR's primary concerns but also its own commitment to adaptive management. However it challenged the salient identity of a number of CAAR members. They could not support any form of salmon farming in the Broughton Archipelago, even if it advanced scientific

understanding and so four organizations left the coalition. The reduction in CAAR members, subsequent to the negotiation of CAMP provides an example of how power was re-balanced coincident with a shift and re-confirmation of CAAR's organizational identity as a science based organization.

As a result of the CAMP negotiation, CAAR confirmed its commitment to working with Marine Harvest to improve industry practices and in doing so increased its power with the industry as opposed to its power over the industry (Parker-Follett, 2003).   Post 2008, CAAR members included well known, well funded, and for the most part clearly science based organizations, such as the David Suzuki Foundation, the Georgia Strait Alliance, the Living Oceans Society, the T. Buck Suzuki Foundation, and the Watershed Watch Salmon Society. Their credibility, along with their less (relative to some former CAAR member organizations) controversial profiles served to enhance CAAR's power to influence industry practices via participation in experiments. The organizations that left CAAR, such as the First Nations, retained and confirmed their organizational identities in opposition to salmon farming and some returned to adversarial practices intended to increase power "over" industry (Parker-Follett, 2003).

The practitioners involved in the Framework were able to have the kind of interactions necessary for dialogue, because the relative power of themselves and their organizations was balanced. While the nature of their relative power shifted over the course of their interactions, along with the salient aspects of their organizational identities, these shifts maintained or enhanced the power balance, enabling further and deeper dialogue.

5.5.1.2 The Structures and Mechanisms of Repeated Engagement

Beginning in 2004, practitioners from CAAR and Marine Harvest have

engaged with one another repeatedly around an increasingly complex roster of

activities. These activities began with the negotiation of the terms of their

interaction and the research initiatives that they would undertake, and expanded

to include the development of terms of reference for specific research projects

and a common roster of contract researchers, the negotiation and implementation

of CAMP, which included the sub-contracting and ongoing project management

of research, and finally joint presentations and lobbying.

Early interactions, praxis, were structured and formal and facilitated by a

mediator. Initial discussions about the possibility of joint research took place over

a period of twelve months in a series of meetings between the issues consultant

and two senior managers from Stolt and the four to five member negotiating team

from CAAR. Doug, the consultant to Stolt/Marine Harvest, explains the basic

structure and activities of the meetings:

> *"There were obviously ground rules for the meetings…. they would take place usually at a minimum for half a day and not infrequently for a full day. I can only recall once or twice where we … required actually meeting a couple of consecutive days ... there's the typical kind of tools that you bring to it. You try to find neutral locations for meetings … We've had some of our meetings, our full group meetings at Marine Harvest's office in Campbell River … other times it's … in a hotel … one of the key negotiations … actually took place in Sointula in the community hall there."*

According to Doug the regular meetings provided a venue "to talk in a

structured way more frequently… because that's helpful; it avoids

misunderstandings and misapprehensions." The repeated meetings provide

strong evidence of the sustained attention of the individuals involved. The

meetings provided individuals with additional information to interpret as well as a

forum to come to a shared understanding.

As the relationship developed and particularly after the Framework

agreement had been signed late in 2005 the number of practitioners involved

from each organization increased and roles became more specialized. Donna, of

CAAR, explains:

> *"driving all those projects there are subcommittees and working teams …*
> *The negotiating team members are certainly responsible for ... making sure*
> *projects are moving forward and ensuring that the funding is in place and …*
> *ensuring that all of the details of those projects are agreed to by both*
> *parties,"*

The core group of eight individuals held formal meetings with an agenda

and mediator at least four times a year and more often if necessary. It was in

these meetings that the majority of decisions regarding the Framework would be

made. However there were always informal conversations via e-mail and

telephone going on amongst a larger group regarding the projects. Colin, of

Marine Harvest, talks about the range of people involved in the projects:

> *"…there are elements of the Coastal Alliance that I never speak directly to;*
> *that's true. There's probably two or three or four in Living Oceans I never*
> *speak to and many more in David Suzuki … it's fairly concentrated, that*
> *group of, what, eight, seven/eight people are the core of the relationship and*
> *the Framework."*

Colin, of Marine Harvest, and Donna, of CAAR, were most active in

managing the overall relationship, while Moira, an experienced activist/issue

manager hired by CAAR, and Doug, a consultant to Marine Harvest, managed

issues that arose "day to day". Stephanie, a registered professional biologist, with

experience in the oil and gas industry, the tar sands, mining, and forestry, was added to the Marine Harvest team to share responsibility with Harry of CAAR for managing and monitoring the actual projects, which involved several other individuals from the CAAR member organizations. This delegation of responsibility indicates a somewhat greater level of mutual understanding and alignment between the organizations. Stephanie's and Donna's comments, respectively, illustrate the mutual commitment to following "good science":

> *"… that's the philosophy here is recognizing that we don't understand it all, but we are responsible to make sure that we're taking good management steps to deal with issues when they arise. And, what that means to me is to get some good science around it and data and understanding as to what the issue is and isn't. "*

> *"Within CAAR for example we do have a science team of experts. It's headed up by a PhD. We have biologists on the team. And, they'll work directly with Marine Harvest's science folks or biologists on the details, the, you know, really specific methodology for the research or analysis. And, so, then, you know, it kind of devolves to those teams to sort out all those details. And then, when they've reached agreement, then that comes back to the negotiating team and the company…"*

As mentioned above the responsibility for putting together the program for joint research was delegated to Stephanie, of Marine Harvest, and Harry, of CAAR, individuals whose identities were rooted in scientific research and environmental protection.

Beginning with the initial contact in 2004, individuals from Marine Harvest and CAAR repeatedly engaged with one another around increasingly complex, increasingly cooperative, and increasingly interdependent activities. These activities activated common identities and the practices related to those identities and provided the individuals with opportunities to experiment with new actions

(praxis) and subsequently with new interpretations of the results of those actions. Over time the scope of the dialogue expanded as the number of individuals involved in the engagement increased and the new interpretations developed within the Framework group were introduced into the two organizations.

5.5.1.3 Institutional Support

The joint research initiatives undertaken by Marine Harvest and CAAR received strong institutional support from the provincial and to a lesser extent federal governments. The provincial government's Cabinet Minister for aquaculture described the agreement as a "breakthrough" and stated that he was "very, very pleased" that the salmon farming industry and the environmentalists had agreed "to work together and develop a plan to allow for … sustainable aquaculture" (Simpson, 2006). Although not formally part of the agreement, the provincial government provided both financial and administrative support to it on specific licensing and regulatory issues, and in supporting some of the research.

Subsequent provincial governments continued to publically praise the cooperative work of Marine Harvest and CAAR and they were invited to make a joint presentation to the Special Legislative Committee on Sustainable Aquaculture in 2007.

While support from government regulators was strong, the announcement of the Framework agreement in 2006 took both the salmon farming industry and the anti-salmon farming groups by surprise and both Marine Harvest and CAAR were criticized by their peers and accused of "consorting with the enemy". This criticism has continued.

Institutional support for the Framework within Marine Harvest has survived mergers in both 2005 and 2006. Colin confirmed that while "…some of the personalities and names have changed … but the overall company's commitment to improving sustainability and to transparency and information has remained constant."

Despite criticism from their peers, corporate and government support of Marine Harvest and CAARs joint research has been public and persistent. This official and institutional support for their engagement appears to have encouraged its continuation and to have sustained it, financially as well as socially, during periods of mutual adjustment.

5.5.2 Dialogue

By sustaining their attention, the development and implementation of the Framework provided the individuals from Marine Harvest and CAAR with opportunities to explore their assumptions about expectations, meaning, and identity. Through their conversations and information exchanges, the individuals were able to recognize assumptions and gain new understanding of the extent to which their praxis was influenced by their and their organizations' learning, identities, and their practices. Over repeated interactions, praxis influenced practices within the Framework group and their dialogue deepened. In subsequent interactions even deeper assumptions were explored, leading to further shifts in praxis and ultimately practice. There is evidence that individuals' interpretations of the conflict and identity shifted as well, demonstrating learning.

In this section I provide evidence from three key episodes of individuals exploring and recognizing the impact of their assumptions, and the resulting shifts in behaviour and meanings related to identity, learning, and conflict. I present data on the individual and collective learning in the next section, 5.5.3, Outcome of Dialogue: Learning.

5.5.2.1   Exploring Assumptions Rooted in Expectations around Conflict

By initiating direct interaction, individuals within Marine Harvest/Stolt challenged existing practices and expectations in the BC salmon farming industry about how to respond to conflict. This change in approach demonstrated their recognition that while CAAR operated from a different logic that was not going to change, it might be possible for them to work together. Colin, of Marine Harvest, states that they had "learned that this is a very well organized, well funded, determined group … and that they are not easily ended or dissuaded." Recognizing that CAAR's approach to the conflict appeared unlikely to change, individuals at Marine Harvest altered their praxis.

Marine Harvest/Stolt's original offer of greater transparency and operational data gave CAAR access to information hitherto unavailable to environmentalists in any salmon farming jurisdiction in the world. This prompted members of CAAR to question their assumptions about the value of collaborating with a salmon farming company. While CAAR acknowledged Stolt's self interest in approaching them, they also recognized an opportunity to gain access to proprietary knowledge of salmon farming that might be used to advance both scientific

understanding and their specific agenda. Gord, a biologist and science advocate, from CAAR describes:

> *"… a lot of the data that the farms have about their operations was seen to be confidential, so we had to try to create a forum and an agreement that would open up the analysis, hopefully pinpoint some common understandings around lack of information ..."*

> *"One of the advantages that we'll have in this agreement is that we'll have detailed information on the cost structure of the industry"*

Hence, individuals from CAAR recognized an opportunity that was compelling enough for them to reconsider some of their firmly held assumptions about working with "the enemy".

Perceptions between the individuals involved in the Framework continued to shift as they continued to interact. The following comment made by Donna, of CAAR, is illustrative, "I say we've learned to mutually respect each other for the work. My understanding of the complexity of managing salmon farms has gone way up… it is way harder than anyone would think." Through the ongoing discussions prior to coming to an agreement the individuals from Marine Harvest also continued to adjust their assumptions about CAAR's actions and recognize the extent of the similarity between the expectations placed on each organization. As Colin, of Marine Harvest, notes:

> *"… those groups (CAAR) are businesses and in order to attract investment in their business they have to have a campaign; they have to loudly proclaim what it is they're trying to change. If they get to the point where they say, well, our work is done, then they don't attract any more investment…"*

Through their ongoing interaction in negotiating the Framework the individuals from Marine Harvest and CAAR came to recognize and question

some of their assumptions regarding their organizations' response to the conflict, and in particular the similarities of the challenges facing them and the potential value of working together. They both came to realize that there might be an opportunity to advance their own agendas by collaborating. Marine Harvest could, in effect, buy time for research to be conducted on sea lice. While CAAR would have access to proprietary data to increase the integrity of its positions. Both organizations sought to build credibility in the eyes of the broader community. CAAR sought credibility with their funders and Marine Harvest with the regulators and legislators. By agreeing to conduct collaborative research projects they were able to alter praxis even while retaining many of their assumptions about their own and the other's identity.

5.5.2.2 Exploring Assumptions Rooted in a Common Identity

The process of selecting independent researchers to conduct their first joint research project surfaced assumptions rooted in individuals' common identity of scientist and the meanings and expectations related to that identity. As discussed in prior sections, the common identity of scientist allowed individuals to bridge identity based conflict to focus on the socio-cognitive aspects of the sea lice controversy. However, selecting the researchers to carry out the work raised deeply held assumptions about the neutrality of science and scientists. This task provided the Framework group with an opportunity to assess what was really important to them in terms of both their own identity and the identity of their contract researchers. The interaction around this task resulted in the group reaching a common understanding of their requirements and expectations of

research and then explicitly integrating that understanding into their group process and into their future work.

A group of researchers from Simon Fraser University that were strongly associated with environmental activism and advocacy responded to the first Request for Proposal. Marine Harvest did what Doug referred to as an "emotional gut check" as to whether or not they could work with them. Despite the pre-existing conflict between these researchers and the industry, the Framework group awarded them the project, confident that their integrity as scientists would mitigate any personal positions. They came "within striking distance" of starting the work before it all fell apart, ostensibly over challenges to protocols, as Doug describes:

> *"I mean, there's people at Marine Harvest that understand this stuff pretty well… they've got good scientific credentials themselves. And, we ended up in a negotiation with the, you know, Marine Harvest, CAAR and Rutledge (the lead researcher)"*

Following this protracted and unsuccessful attempt to initiate a project, the individuals from Marine Harvest and CAAR realized that they needed to be cognizant of, what individuals describe as, "the science versus advocacy" tension in the scientific community. The group came to recognize how that plays out and what it means in terms of getting to solid, reliable information. While "the science versus advocacy" tension was not news to the individuals, it did surface expectations around the role of science and scientists within the group. Doug, a consultant to Marine Harvest, goes on to explain:

> *"... we learned quite a lesson… it is probably important to try and find people who don't bring baggage with them out of the research community... And,*

we actually put together a list of criteria that you would check and see – you know, is the person respected by their peers? Are they published? Has their work been put into practice? Is it informed, et cetera et cetera? And, we also realized we needed to make sure … that we'd perhaps targeted them more to people that we understood were the experts in the field."

The assumptions surfaced during their first attempt at selecting researchers led to a dialogue about the expectations of research and eventually to a shared understanding. Stephanie of Marine Harvest described the outcome of that process:

"So, it's better to structure a project such that you can collaborate, which is a challenge … scoping it according to the objectives of the project not necessarily the overall objective of salmon farming is inherently good or salmon farming is inherently bad."

They specified clear selection criteria and then based on those criteria they jointly developed a list of scientists as possible recipients of future Requests for Proposal.

As a result of their sustained interaction with each other individuals in the Framework group were able to gain a deeper understanding of their expectations and meanings related to the identity of scientist, in this case the neutrality of science. They came to realize that the credibility of their joint research would be irreparably damaged if it was seen to favour either industry or environmentalists. They used this realization to articulate practices to guide future praxis. Through this process the individuals in the Framework group from both CAAR and Marine Harvest affirmed the meaning that they collectively attached to the identity of scientist (i.e. neutrality) and through their praxis established practices to ensure their expectations were understood.

5.5.2.3 Exploring Assumptions Rooted in Individual and Organizational Identity

Marine Harvest's offer to work with CAAR to develop a coordinated area management plan (CAMP) for the Broughton Archipelago was a significant departure from past practice and the biggest challenge to both internal and external expectations to date. The discussions around CAMP caused individuals to confront the meanings that they attached to certain activities, like salmon farming in the Broughton, as well as to aspects of their individual and organizational identities. These interactions also challenged expectations regarding learning, and in particular what constitutes "good science" and the extent of individuals' and organizational commitment to experimental learning. The interaction between individuals in the Framework group and between individuals within CAAR resulted in a re-configuration of CAAR and an affirmation of its identity as an organization committed to reforming aquaculture and learning via the scientific method (i.e. experimentation). Marine Harvest affirmed its commitment to adaptive management and its identity as an organization based on science, albeit a slightly more action based proactive approach to science.

By taking the fish out of a number of farms every other year, as part of CAMP, Marine Harvest could create a farm free migration corridor for wild salmon, which could then be compared with corridors with salmon farms – a true experiment. This suggestion was positively received and according to Donna of CAAR "would be a substantial breakthrough." The negotiations on the plan took two consecutive days of mediated meetings. Donna describes CAAR's intentions

in agreeing to CAMP, "...we are trying to see what we can achieve by working with the industry at this time. And we're going to stay the course for a while at least to see whether we can achieve some significant gains."

However to do this presented major challenges to some environmental groups and First Nations within the CAAR organization. The specific area suggested for the migratory corridor, the Tribune-Fife, was often referred to as "ground zero" for the sea lice debate. Certain environmental groups and First Nations wanted all farms taken out of this area and would not even consider any plan that implied otherwise, such as having farms fallow every other year.

The prospect of being seen to support salmon farming in any way in the Tribune-Fife corridor challenged and activated individual and organizational identities within CAAR. This area represented such a key part of the identity of individuals, such as Alexandra Morton (who had done much of her research in that area) and several First Nations leaders, as well as the organizations they represented that the defensiveness provoked was insurmountable. The MTTC, which was made up of 4 First Nations in the area, and Raincoast Research, Alexandra Morton's group withdrew from CAAR over the CAMP amendments. As Donna of CAAR notes:

> "We had a few hurdles where … the staff of the organizations said, no, we can't ever support this. And, we've had to work through that and say, well, you kind of agreed to the strategy when you signed on … So, now it's playing out and I'm sorry you didn't understand this is how it's going to play out."

The sustained attention and prolonged negotiation between individuals at multiple levels of the CAAR organizations surfaced a number of assumptions

about the meanings attached to places, like the Tribune-Fife corridor, to activities like salmon farming, and to processes such as gathering experimental data. The exploration of these assumptions and the process of developing a shared understanding prompted some individuals to withdraw their organizations from CAAR.

The apparently greater willingness to truly experiment represents a shift in some individuals approach to "science". For example, Marine Harvest had entered into the Framework hoping to "buy time" ostensibly to allow "science to do its work". Colin summarizes Marine Harvest' research practices and the meaning that he and the organization attached to "good science work":

> *"… but it's getting the patience and doing the good work, which is slow... Science is slower. Monitoring takes time. And then, you have to look at the patterns in the data and figure out what to do. So, that's the challenge. We're just never able to get all the information quick enough to deal with the conflict as effectively as we could."*

Despite his acknowledgement that "science is slow" Colin and the managers at Marine Harvest undertook some major changes to their operations via CAMP and as Colin says, "…this was maybe done before we had all the scientific information, which is still going on…" The decision by the organization to move before it "had all of the information" is a significant shift in behaviour and demonstrates a subtle shift in the meaning Colin and Marine Harvest attached to "good science".

Through the negotiation of CAMP the individuals from Marine Harvest and CAAR surfaced deeply held assumptions about their identities and their organizations' identities in the context of their joint research. Through their

dialogue they gained a deeper and common understanding of the adjustments each of them needed to make to support their ongoing collaboration.

Through the process of negotiating CAMP the individuals from both CAAR and Marine Harvest affirmed the meaning that they collectively attached to their relationship and through their praxis established practices to ensure their expectations were understood. As a result of the CAMP negotiation and their subsequent adjustments, CAAR and Marine Harvest confirmed their organizational commitment to working together to improve industry practices. Their actions affirmed both organizations' identity as science-based and focused on solving problems, while shifting the meaning each associated with "good science".

5.5.3 Outcome of Dialogue: Learning

Interpreting is a social activity that affords motivated individuals the opportunity to introduce their learning, in this case from the practices developed in the Framework group, into the feed forward processes within their organization. Hence the shared understandings and collective actions of the Framework group prompted processes of interpretation and internal experiments in the two organizations. Even as the dialogue and level of shared understanding continued to develop between the individuals involved with the Framework, changes in their respective organizations' practices, such as the signing of the Framework agreement and later the implementation of CAMP, provide strong evidence that individuals' learning has influenced their organizational learning. In this section I provide evidence of changes to practices and to meaning, learning,

at the individual and organizational level resulting from the praxis of individuals from Marine Harvest and CAAR.

5.5.3.1 Individual Learning

As a result of their repeated engagement individuals from both Marine Harvest and CAAR appear to have altered their beliefs around a number of key aspects of their identity and the conflict (See Table 5-9: Evidence of Individual Learning for representative quotes).

There is evidence of changes in individuals' conflict responses and practices. At the beginning of their interaction individuals were reluctant to even meet. When they did meet, after six months of communicating through a third party, all interactions were mediated and tightly controlled and between a small group of senior practitioners. Over time interaction has become less formal, more varied, and involves a wider range of people from multiple levels of both organizations.

Whereas in the beginning the emphasis was on negotiating terms to manage their identity differences, it had shifted to understanding and closing the gaps in knowledge around sea lice and closed containment systems i.e. to socio-cognitive conflict. Individuals have come to realize that collaborating does not mean agreeing on everything. Indeed it appears that individuals now make more "strategic use" of conflict to achieve specific goals, such as letting people vent or playing "good cop – bad cop" to raise awareness of an issue. While the conflict professionals handle the inevitable day to day conflicts or "skirmishes". In general

engaging with "the enemy" does not represent the threat to identity that it did in the beginning of their relationship.

While individuals' social and role identities have remained stable, the behaviour by which they express their identities and the aspects of their identities that are most salient appear to have shifted. This is most notable in the way that key individuals express their common identity of scientist. Early in their relationship the identity of scientist seemed to signify "expert" and resulted in "dueling press releases" and the defense of generally adversarial positions. Through their interaction, the identity of scientist has come to signify responsibility for disciplined data gathering and analysis. As stated previously, it has shifted to the process of science as opposed to the outcomes of science. Also, through their interaction individuals have come to a common understanding of their similarities; in terms of the constituencies they each must manage and their mutual commitment to protecting the marine habitat.

Over repeated interactions, the dialogue within the Framework group deepened. In subsequent interactions even deeper assumptions were explored, leading to further shifts in praxis and ultimately to changes in individual practice relative to the conflict and their identities, demonstrating learning.

Table 5-9: Evidence of Individual Learning

Individual level learning: Representative quotations	
Conflict	"… so, we've known these people for a long time…. we used to be in greater conflict and now we just disagree, but we still meet together. And, that gave us a completely different relationship." Donna

Individual level learning: Representative quotations	
	" …they were saying they're not facts. That's I think why we're trying to work together because we don't agree on the facts. And, so, they've got their knickers in a knot … Moira and Doug will talk about it and they'll work it out and they'll probably amend the communications framework or something. And, so, part of it's an emotional thing ... the heat's on and he's taking it out on us. And, so, you kind of have to... ride the storm a bit … if there's really huge issues like we're walking away from the dialogue, we bring in our mediator and he would call a meeting." Donna
	"I think we didn't handle it right at the beginning either. We were too dismissive and there was this cavalier attitude that we had a right to farm there, we had our licenses, we were a business. Darn it, people needed our money, didn't you want to see investments? It was very paternalistic, business, the economy, this is good for you…" Lana
Identity	"for the last year and a half every week or two I've been working with stakeholders, but really it's the general public. I've been visiting chamber groups, Rotary groups. And, they seem to be a good mix of business people and what not. And, I've gone up and down the island speaking with those groups... " Rob
	"But we're trying to do it in a way that's information-based and accurate, and not just shrill. And again it takes you a long time to earn credibility and only an instant to lose it. And so we're very careful about that as well." Harry
	"… the first thing we had to do was to acknowledge that everybody who's out there doing some work has a valid piece to...to contribute. If you're going to stand on a position that certain people are simply not doing work that's worth recognizing, then you're never going to be able to include their information ... And, that happens." Stephanie
	"… there's no risk to me organizationally in Canada to undertake this." Colin
	"I'm out there with all the other salmon farmers looking at it wondering if I'm a nut, you know, because it's a risk. Right? And, but, I think that you can't stick your head in the sand." Stephanie
Learning (process)	"I'd probably let all these little things slip by. So, that's why to me a team has to have all diverse people on it to make sure everything gets picked up" Donna
	"It's harder to convince your colleagues of a strategy than it can be to convince your opponents…" Donna

Individual level learning: Representative quotations	
	"I'm just saying that I think it's the right way to go. I can't translate that into money." Stephanie
	"… another one that I've worked on... it's looking at clam beach contamination in the Broughton Archipelago. … I do the same process with everybody. It's basically, what is your issue? What's your concern? Let's scope it effectively. Are you worried about this and not this? Like, what's in? What's out?" Stephanie

5.5.3.2 Organizational Learning

In July 2009, after just over 5 years of engagement, Marine Harvest and CAAR made a joint press release, crediting their jointly managed and monitored fish farm management program with reduced sea lice levels in the Broughton Archipelago (Lavoie, 2009). The notion that a salmon farming company and environmentalists could work together was novel in 2004. After years of repeated engagement Marine Harvest and CAAR regard direct engagement as the only way to resolve differences in understanding. This is a distinct shift in the practice of both organizations, and appears to stem directly from the praxis of the key individuals. Colin, of Marine Harvest, and Donna, of CAAR, give the perspective of the two organizations:

> *"…the only way to affect any positive outcome is through engagement and working with these folks…. it should be clear to everybody in this industry by now that those groups are not going away. They are in fact part of the fabric of our culture ... people look to environmental groups to sound the warning bell as do I. So, they're not going to go away. So, trying to avoid them or defend against them or destroy them or whatever is not going to happen. So, can you find ways to work with them within the environment of conflict?"*

> *"… I don't know what the alternative would be to get to a solution ... I guess the best way to frame it is no matter what you do at some point you have to sit down and talk with your opponent even if it's for them to stop doing what they're doing, … So, you negotiate no matter what."*

Concurrent with this fundamental shift in their behaviour toward one another over the period of negotiating and implementing the Framework, there is evidence of a shift in the meanings that are attached to Marine Harvest and CAAR's identities and to the conflict between them. While neither organization has dramatically changed the characteristics that it claims are central, enduring, and unique, i.e. its identity, the actions through which each expresses those characteristics have shifted and the action which each takes in response to conflict have changed.

For example, Marine Harvest and CAAR still identify themselves as collaborative organizations; however the range of organizations they view as legitimate collaborators has expanded. This may be as a result of the benefits derived from their joint research. Contrary to the practice in the industry prior to 2004, everyone involved with the Framework agrees that their engagement with "the enemy" has value. As Stephanie, of Marine Harvest, says "You know, we've learned that continuing to be engaged has value although it also puts you at risk in that you have to share more about your company." This statement illustrates a fundamental shift in the belief that the organizations had – that is "the value of engaging with "the enemy" outweighs the risks". As Rob, of Marine Harvest explains:

> *"… if a stakeholder is identified or a stakeholder approaches us, we're interested in engaging …. that's our policy is to engage. We're not going to sit back … There is one fellow in particular ... he also has the website 'Save*

our Salmon'... It doesn't bring any balance to the subject whatsoever. So, we're a little stunned … but, you know, just next week we're meeting with him and touring him out to the farm and that's what we need to do, understand him a little more. His heart's in the right place, but…"

Marine Harvest's plan to meet with the philanthropist behind "Save our Salmon", an especially strident activist group, to discuss funding for a project, is a further example of how the shift in meanings attached to being a collaborative organization has resulted in a shift in their response to conflict.

Marine Harvest and CAAR have undertaken to jointly approach both levels of government which has had the effect of aligning their identities. Moira, of CAAR, describes their joint efforts with regard to closed containment as "… another area where we and Marine Harvest are going to be pushing the government very hard… we did meet with … the provincial minister jointly with Marine Harvest". In addition, they have made a number of joint presentations on their collaborative research including to the Special Legislative Committee on Sustainable Aquaculture, and to the World Wildlife Foundations international multi-party Salmon Aquaculture Dialogue. They have also presented their opposing views together in the same session to regional district councils regarding zoning changes, and to a conference of travel writers.

This public alignment has separated them to a certain extent from their peers. Colin of Marine Harvest explains:

 "My colleagues view me as a traitor if you will.... someone who's willing to sit down with the enemy. And, on the other side of the coin they (CAAR) say that they have the same kinds of problems."

Donna of CAAR shared similar reactions from peers in the environmental movement:

> *"... I imagine if I was in Marine Harvest... I'm sure Colin has been hit with, you know, what the heck are you doing working with those (people)? ... there are some other NGO's out there or individuals who say that we shouldn't be so nice in terms of how we work with industry. We should be more critical ..."*

Aligning with each other publically and over time is distinctive in their respective peer groups and thus their joint activity has shifted their respective organizational identities. Over time each organization has come to see their collaboration as part of how they do things.

Both, Marine Harvest and CAAR continue to identify themselves as organizations rooted in science. Indeed, in both organizations the logic and language of experimentation and the scientific method has diffused, with lawyers and public relations people regularly talking about comparing performance to a control group. The two organizations jointly and separately emphasize adherence to the appropriate and valid scientific practices and protocols. Donna of CAAR states her organization's requirements:

> *"… we have individuals that are very hardcore scientists who have expectations around things … So, we have a strong demand on the scientific rigor of things."*

The re-configuration of CAAR after the CAMP negotiation affirmed its organizational commitment to the scientific method and articulated the practices that entails. Rigorous experimental design and execution is what Marine Harvest and CAAR collectively understand to be "good science".

By 2009 both Marine Harvest and CAAR showed evidence of changed beliefs as well as changed behaviours, related to their conflict. Both organizations and indeed the broader community have learned more about the impact and

dynamics of sea lice. Marine Harvest has changed its treatment of the parasite in response to this information and CAAR has sponsored research based on farm operating data and adjusted its materials according to that research. Marine Harvest has learned that fallowing farms for a season may be "better for business" and CAAR has learned about the complexity of salmon farming. Marine Harvest has a better appreciation for how the environmental movement works and does not react to every statement. Finally, both organizations have seen value in being more transparent about their activities. Marine Harvest recognizes that transparency decreases suspicion. Marine Harvest created the role of Communications Manager, part of whose responsibility is to connect with stakeholders and the general public. As Stephanie, of Marine Harvest says:

> *"… you can't stick your head in the sand. We're here. We want to stay on the coast forever. And, the only way to do that is to be credible. And, if you have issues, you have to find out what they are and deal with it."*

Marine Harvest now hosts public tours on one of its farms and regularly has students from the University of Vancouver Island monitoring its farm operations. CAAR recognizes that giving Marine Harvest warning of their actions generally elevates the tone of the public debate because it allows them to give more thoughtful answers and not "a knee jerk response".

Both organizations continue to speak against the actions of the other in the press. This is in breach of their agreement and in the past these kinds of statements usually prompted defensive responses, via press release or letters to the editor. While both organizations continue to breach their agreement, the

responses have been much less defensive. As Rob of Marine Harvest and

Donna of CAAR explain:

> *"We both breach the communication protocols. I will sit here and tell you that they breach it ten times more than we breach it, but they have multiple members that all speak. Really we have one or two … we're held quite accountable to what we say, but, you know, I'll have to be fair and say that we both push it..."*

> *"We've had times where I've definitely had to lash out when things aren't working… Like, today, I was meeting with Colin by phone. We had some issues we needed to talk about. We have pretty much open door access, right. So, I can phone him … like, we just put out some information. They say we didn't follow the communications protocol. They get their knickers in a knot. We, kind of, push back. So, there's all these little scrimmages that happen all the time. And, to me, the deal is you navigate through those scrimmages while you're keeping on track with the overall direction…"*

Rather than issue a "dueling press release" as had been the past practice,

now the individuals involved contact one another directly and hold them

accountable for their behaviour. Interestingly both Marine Harvest and CAAR

acknowledge their own culpability and recognize the risk it poses to the overall

relationship.

While both Marine Harvest and CAAR show evidence of having learned as

a result of their engagement, their fundamental conflict over the use of the marine

resources remains. They have been able to shift much of their activity to

resolving the differences in knowledge of the issues, while downplaying the

problematic practices of each other. Donna sums up CAAR's position after more

than six years of repeated engagement with Marine Harvest:

> *"We're willing to have a conversation with industry … even if we don't agree with them and we try and play quietly, but we don't give up our positions. As a friend of mine once said, you know, respect costs you nothing … you*

can go in there and talk to your enemy with respect … it doesn't mean you're giving up."

In the BC salmon farming industry repeated engagement between individuals from Marine Harvest and CAAR, two relatively power balanced organizations, allowed them to explore and to alter assumptions about one another, themselves and their organizations. Their repeated engagement resulted in new interpretations of the conflict, of the nature of their identities, and of those aspects of their own and their organizations' identities that are most salient in this situation. They also advanced scientific understanding of the impact of sea lice. Finally, some of the learning by individuals has been integrated into the practices in their respective organizations, demonstrating inter-organizational learning. See Table 5-10: Evidence of Inter-organizational Learning for representative quotations.

Table 5-10: Evidence of Inter-organizational Learning

	Organizational learning: Representative quotations	
	Marine Harvest	**CAAR**
Conflict	"… we acknowledge that there is a risk. We didn't acknowledge that in 2003... I know internally we knew sea lice was a risk because we were trying to manage them in the 90's." Colin "… what I can see … is an acceptance from the company... this just isn't about sea lice." Rob "…can't we learn from each other. Can't we get over whatever's keeping us separate, knowing that that's kind of a bit naive because of the way science works ... we have persevered on trying to bring some of the researchers together that don't normally work together. And, we're having some success in doing that." Stephanie	"…. obviously, we don't see eye to eye …. We know each other. It's all quite civilized, but we have quite different, you know, diametrically opposed views on some issues." Moira "… we couldn't get information from them(Mainstream) because they didn't trust us. And, it made a difference having Marine Harvest there because they would say, no, it's ok. You can do this ... it still was not the same and we never really got agreement on some stuff." Donna
Identity	"… it's a lot easier for me to say, well, in line with corporate thinking we're working towards greater levels of sustainability. So, if these studies that we do poke us in the eye a bit, well, that means we have to learn from that; we have to change…" Colin "… that's the philosophy here is recognizing that we don't understand it all, but we are responsible to make sure that we're taking good management steps to deal with issues when they arise. And, what that means to me is to get some good science around it and data and understanding as to what the issue is and isn't. And then, whatever those results show then we make	"… our fallback has always been even if we can't get government to change we do as much as we can just with industry..." Donna "… some other NGO's out there or individuals who say that we shouldn't be so nice … We should be more critical ... do more legal actions. But we are trying to see what we can achieve by working with the industry at this time." Harry "… I would say, well, it's not about trust you guys. It's never about trust. so, if you measure success not by their view of the world and what science they're willing to accept, but by how the industry is being managed or

Organizational learning: Representative quotations		
	management decisions after them." Stephanie	the environment's being impacted, then you have a much higher chance of success." Donna
Learning	"There have been some gains in terms of management strategies trying to adapt, adaptive management strategies ... Adaptive management is basically incorporating experimental design into management to try and elucidate whether the management action is yielding the effects that you want." Vince	"... it was a major breakthrough for us to be able to go out on their farms and count sea lice. I don't want to minimize that. It was a major breakthrough. It was them saying, "OK we admit that we're not transparent. People need to understand what's going on on our farms." Harry
	"You have to acknowledge the fact that this person's brought up and is committed to a certain data set, issue, et cetera. And, so, that can't be denied. So, it's better to structure a project such that you can collaborate, which is a challenge." Stephanie	" … a press release went out today … They knew all about that before it went out, they were completely briefed on it and prepared and everything, and that's a whole different style of working relationship for us." Harry
	"… we became much more aware of the sea lice dynamic. And, so, we're much more aggressive in dealing with it than we were previously…. there's a different and deeper understanding of what's actually going on." Colin	"In the old days, we'd keep it all very secret … we'd catch them off guard and so this gives them an opportunity to think through the information and respond. Some people would say that that's a bad thing because it gives them a chance to give their answers but … their answers don't change that much." Donna
	"We've committed to trial a closed containment again…. let's do it collaboratively this time…. I mean you learn so much … we showed how the system financially performed and how it performed with production and we showed how the conventional system did, but … didn't do … a good job of comparing … we'd do it collaboratively … then we would have … key indicators that we thought were important collaboratively." Lana	

5.6 Premise 5: Conditions

A number of the key conditions that favour inter-organizational learning are present in the salmon farming industry in British Columbia. There is evidence that the combination of sources of conflict between the two organizations, the experience and capabilities or practices of the Marine Harvest and CAAR organizations, and the experience and capabilities of the individuals directly involved all supported inter-organizational learning. I will now present data to illustrate each set of conditions in the following sections.

5.6.1 Conditions Related to the Conflict

The source of conflict between salmon farming companies and environmentalists began as a conflict of interests over how to best manage the coastal water resources in BC and over time had degenerated into a conflict over values and identity. This description given in 2005 by Heikki, a corporate manager of Marine Harvest, evocatively describes salmon farmers' perception of the conflict:

> *"The symbolism of salmon is like the swimming panda bear of Canada. For us fish farmers, Canada is really tough … Sometimes it literally starts at the border. The guy from Customs asks what kind of business are you in and you say salmon farming and he says "ooooh", as if you are an arms dealer."*

> *"Canada has the biggest anti salmon farming emotional sentiment … We try to build relationships, but it is really tough. The pressure mostly comes from the NGO community. But there is an enormous awareness among the Canadian population and the values have spread so much, that it affects the markets."*

In what the press had termed "The War in the Water" (C. Wilson, 2003), the practice of each of the opposing "sides" was to claim the moral high ground with environmentalists emphasizing the protection of wild salmon and the marine habitat and the companies stressing their economic contribution to coastal communities and the provincial economy in general.

Notwithstanding its provocative statements, since its creation, CAAR had framed its conflict with the industry in terms of differences in understanding of the impact of raising salmon in open net cages. However their actions tended to cast the salmon farming companies' actions and intentions in a negative light. Their website www.farmedanddangerous.com is but one example of how CAAR casts aspersions on salmon farmers' integrity.

The connection between collapse of the pink salmon run in the Broughton Archipelago in 2001 and sea lice from the salmon farms shifted the conflict by drawing attention to the gap in the scientific research on sea lice. Late in 2002 the Pacific Fisheries Resource Council concluded that sea lice from the salmon farms contributed to the collapse and recommended fallowing farms in migration corridors during the out migration. In February 2003 the University of British Columbia hosted an international workshop to examine sea lice research marking the first time industry, government, First Nations, scientists and non-government organizations had met on a topic of scientific research (Richards, 2003). While the industry and environmentalists, including CAAR, continued to take actions to develop and maintain a positive identity, the recognition of the differences in the understanding about the impact of sea lice on the marine habitat and wild salmon (socio-cognitive conflict) appeared to have an impact on salmon farming

companies. As this comment by Margaret of the BC Salmon Farmers Association

illustrates:

> " We've always abided by the regulations that are in place now, and would
> like to work collaboratively to figure out what the best approach is … a lot of
> work needs to be done around the interaction of farmed and wild
> salmon."(Read, 2003)

The identity framing and the emotions it provoked are described by Lana, of

Marine Harvest:

> "First we reacted by pushing back really hard and being outraged and
> indignant and going for the … and attacking the NGOs and attacking their
> credibility. And then we saw ourselves as small community-based
> businesses and farmers and biologists, we didn't see ourselves as big
> international corporations. And the NGOs painted us like that. And we
> didn't see that. We thought you know people would just listen to us, they
> would just see. Like I said, we're good people. And we were naïve about
> that too."

Managers came to realize that this approach, particularly when used to

respond to the sea lice issue, proved to be a "fatal error", as Colin of Marine

Harvest said:

> "We agree that there's concern around this. We agree that we can
> constantly change the way we grow fish. We don't agree that your concerns
> are necessarily valid, yet we do agree that we'll probably be changing the
> way we grow fish because we've been changing the way we grow fish in
> mitigating concerns as long as we've been growing fish. So let's learn
> together..."

Subsequent to Marine Harvest and CAAR engaging with one another

directly in joint research, the socio-cognitive aspects of their conflict has become

a more important driver of behaviour. There has been vacillation between identity

conflict and conflicts in knowledge especially when either party breaks the

communication protocols of their agreement. Conflict based on identity was

instrumental in the fragmentation of CAAR in 2008. Certain individuals and

organizations were so identified with the goal of removing salmon farms from the

Tribune-Fife area that they could not participate in the CAMP experiment.

However, it seems that by either addressing or distancing themselves from the

facets of their identities that are different and focusing on the practices of

identities that they share the individuals from Marine Harvest and CAAR have

been able to access the productive problem solving features of socio-cognitive

conflict. They have done this even while their beliefs about the underlying

resource conflict have remained unchanged (see Table 5-11: Sources of the

Conflict).

Table 5-11: Sources of the Conflict

Conflict Source	Representative quotations
Resources or Conflicts of Interest	"I think historically the relationship generally starts out on points of conflict around company practices, their impact on the ecosystem and species and concerns around the need for change among concerned citizens, environmental groups, et cetera …" Donald
	"Just because you removed the fish from the water is it improvement if you have now increased your energy usage to the point where you're taking localized impacts and trading them for global impacts. So, yeah, you've got some poop under the ocean under conventional net pens. Yes, there is the risk of sea lice transfer both to and from, but if you essentially solve those local impacts, move them up to land and create global impacts, where's your energy coming from? What's your source of energy?" Rob
Socio-cognitive Conflict	"Unfortunately there is a lack of scientific knowledge in some areas. We are quite concerned that there are some research gaps here that need to be filled. That's also something that you find when you have this dialogue; you can actually better identify these research gaps and hopefully agree where we need to do more research. We

	are taking part in local dialogues, in Canada we're taking part in local dialogues, also elsewhere in the world, and we're also part of the World Wildlife Fund -led salmon aquaculture dialogue – where most of the North American/Canadian NGOs are participating." Torgeir
Identity Conflict	"I think working with environmental groups that simply their goal is to remove open net cages from BC. I struggle because I don't think we have a common goal … their messaging has not changed from the time that we met with them originally. It was "we don't believe in conventional salmon farming". It's almost to the point where they don't believe in salmon farming because it's a carnivore … So, it was close containment's the answer and that's where we're going to get to ... to the point where if we were managing sea lice so well that we knew it was zero impact, it still wouldn't appease them… So, it's difficult." Rob

5.6.2 Conditions Related to the Organizations

Each of the organizations involved in the Framework were complex

organizations with complex and highly developed learning processes and

practices. CAAR and Marine Harvest (and its predecessor companies) each had

established learning practices which, while relatively new, were robust enough to

endure despite repeated mergers in the case of Marine Harvest and personnel

changes in the case of CAAR.

Internal learning practices in both Stolt/Marine Harvest and CAAR primarily

took the form of ongoing collaborative activities between organizational groups.

Stolt was arguably the salmon farming organization most adept at learning as it

was the most profitable in the industry, was considered by its peers to have the

best run operations and the highest ethics. The firm was also adept at inter-

organizational learning, albeit with like minded science-based organizations, as it

220 of 339

actively participated in collaborative research and development projects with

universities and research institutes. In the case of Marine Harvest, scientists and

production mangers from various regions and divisions regularly collaborate on

operational research and development, by sharing data and methods as well as

through joint initiatives. For example, in September of 2009 the Directors of

Sustainability for each of Marine Harvest's regions met for a week in Campbell

River to exchange best practices, assess progress to date, and plan future

sustainability initiatives. The development of Marine Harvest's sustainability

reporting has provided a focal point for much of this activity and has sustained it

(the activities) through the recent mergers.

In the case of CAAR, internal learning practices take the form of regular

internal meetings, committee work, and regular and systematized

communications between the member organizations focusing on strategy

development, market analysis, and consumer and community development and

outreach. As Harry, of CAAR, explains:

> *"We have full coalition meetings every two months. We have various*
> *committees. A science committee, a markets team, that are in regular*
> *contact. But we have an internal list serve that is used frequently. It's not*
> *unusual to get 40 or 50 email messages from our colleagues a day…."*

These disciplined learning practices are an expression of CAAR's organizational

identity as a strategic, issue focused ENGO.

Perhaps most significantly for inter-organizational learning, the practices of

each organization had been informed by extensive prior experience with learning

across organizational boundaries. Marine Harvest had worked extensively with

universities, independent and private research institutes and governments on

research projects related to marine ecosystem management, fish husbandry, and marine biology. As Colin, of Marine Harvest, describes:

> *"(Marine Harvest) was involved in the research and development ... And it's not always that we're doing that independently we're usually doing that as a group of companies or doing that with the federal or provincial government or with an academic institution."*

These initiatives primarily took the form of contract or co-managed research projects between organizations with similar logics and knowledge bases, i.e. science-based research or commercial organizations.

In addition, the company consulted with customers, supply chain members, regional governments, the financial community, NGOs, and other stakeholders. For example, in 1996 Marine Harvest began a biennial international conference, Aquavision, to build relationships and to discuss the challenges in the industry. Heikki, of Nutreco, Marine Harvest's parent company at the time, explains the intent:

> *"Having a dialogue to build trust is really important ... we invite our business partners, our customers, the financial community, NGOs, media, financial analysts, to discuss the big challenges for our industry ..."*

These cross boundary initiatives had established precedents and mechanisms for collaboration with "like minded" organizations, primarily related to Marine Harvest's core business (aquaculture) and for information exchanges with a broader range of stakeholders, including conferences, and facilitated multi-party initiatives. However, Marine Harvest Canada's negotiations with the Kitasoo First Nation prompted a greater level of commitment to working not only across borders but also across dominant logics.

Since 1997 the landmark Delgamuukw case, which established the rights of First Nation consultation for activities on their traditional territories, First Nations had significant involvement in all fish farm licensing. Two years prior to the ruling Marine Harvest had established a cooperative relationship with the Kitasoo First Nation in Klemtu. The BC operation had developed some collaborative skills from consulting with other regions within Marine Harvest, however through the process of consultation with First Nations it developed skills in working with diverse groups and across historically adversarial organizational and cultural boundaries, albeit toward a shared goal. Certain individuals and groups within Marine Harvest Canada recognized the difference in these types of collaborations, Particularly Lana who had been directly involved with First Nation consultation over the years:

> *"… people talk about the three legged stool of sustainability, the social, the environmental and all that, but I say, this is really a new way of doing business… if we're going to make it work here we have to kind of embrace it … We all want profitability. It's just a different path to get there".*

Through its relationship with the Kitasoo Marine Harvest also developed internal learning practices. As a result of the significant discussions that went on internally prior to the Delgamuukw ruling, Marine Harvest changed the way that it managed farm licenses in First Nations' territory, two years prior to this change being required by law. As Lana describes:

> *"… the first partnership we had – in Klemtu … I took it right to Holland - and Norway. To explain and present what we were doing and then when the … CEO of the international company was here and we spent a lot of energy explaining to him why this was a good move. Why doing this agreement, why putting tenures in their name was actually a good move, why that was a security of operations, why this was the future in BC, why this was going to*

be a real bottleneck for us for expansion unless we found a way to work with First Nations, right? On their terms! We were going to spend way more energy fighting it than if we put some energy into figuring out how to make it work."

CAAR's operating procedures, and indeed its very existence was the result of a year of negotiations between independent ENGOs (i.e. across organizational boundaries). Donna of CAAR notes that while the people have changed, the organization and practices of CAAR have remained:

"… it was 2000 that we sat down for the first time. And there's been a lot of changeover in terms of the membership – the people, not the organization. But we initially had a one-year facilitated group of meetings to come up with a plan and our protocols and how we would operate and work together and what teams we'd put together and all that stuff."

This experience had allowed CAAR to establish practices to coordinate and collaborate among its member organizations as well as between the key individuals involved in the organization.

5.6.3 Conditions Related to the Practitioners

The individuals from Marine Harvest and CAAR that negotiated the Framework were ready to experiment with new behaviours but for different reasons. Justin and Colin from Stolt/Marine Harvest were concerned that the government would rush in restrictive legislation in order to demonstrate to an increasingly alarmed public that they were taking appropriate action. They had also come to realize that CAAR was likely to persist in its quest for closed containment and further attempts to discredit them (CAAR) would probably reflect badly on the company. They became slightly more optimistic about engaging with CAAR once they had sought help from Doug, a credible third party with

experience in similar situations. Doug was able to provide them with a clear process and established practices from other contexts which further increased their confidence and prompted them to ask Doug to contact CAAR with an offer to do joint research.

The response from Donna and the executives of the CAAR member organizations to the initial contact from Stolt/Marine Harvest was optimistic. They had confidence in Doug from other conflicts and saw the fact that Stolt/Marine Harvest hired him and not one of several other well known consultants as a very positive sign. In addition to trusting Doug, CAAR trusted Stolt's motives because they believed that their market campaigns had negatively affected the demand for BC salmon and the morale of salmon farm employees.

Also, for several of CAAR's scientist members the prospect of having access to operational data from salmon farms far outweighed the risks and efforts involved in collaborating with the company. Finally, Scott along with CAAR's major funders recognized that while their tactics had produced lots of awareness there had been limited change and that perhaps it was time to try a new approach.

In summary, Justin and Colin from Marine Harvest were ready to engage with CAAR because they were motivated by the threat of punitive legislation, and the cost in terms of public support of continued conflict. They were optimistic about the outcome of engaging with CAAR because of guidance they received from Doug. Donna, Scott, Harry, and Gord of CAAR were ready to engage with Marine Harvest because they were motivated by the suggestion of their major funders, and by the opportunity to conduct research on actual operating salmon

farms. They were optimistic because they perceived that Marine Harvest had

been affected by their campaigns and that by hiring Doug they were ready to truly

engage.

CHAPTER 6: DISCUSSION

6.1 Overview

In this research I focused on uncovering the role of identity in inter-organizational learning between organizations in conflict and the conditions under which such learning is more likely to occur. In addition, I explored how individuals and organizations balance the dysfunctional processes that arise when identity based conflict persists with the more functional problem solving processes associated with resolving a gap in knowledge, a socio-cognitive conflict. Managing this delicate balance is critical for firms, as they are increasingly expected to engage with and integrate perspectives from different sectors (Hart & Sharma, 2004; Rothman & Friedman, 2001) in order to "anticipate and respond to impending threats, conduct experiments, (and) engage in continuing innovation" (Argyris & Schon, 1996, p. xvii).

This research explored the relationship between identity, conflict, and inter-organizational learning, using the theoretical lens of the practice-based view. The practice-based view contains three elements, practice, praxis and practitioners (Whittington, 2006). Practice represents the prior collective and individual learning, including aspects of identity that guide activity, such as shared routines, norms, and procedures, that can be altered depending on the situation in which they are used (Orlikowski, 1996; Seidl, 2007). Praxis refers to the actual activities and behaviour that individuals undertake in situations in response to stimuli, in this case conflict. Practitioners are those who perform praxis, and they

can be organizational leaders, managers, or external agents such as consultants because what they actually do in situations of conflict affects an organization's learning. These three elements combine to form inter-organizational learning.

I proposed a multi-level model of inter-organizational learning consisting of three meta-constructs, identity, conflict, and learning, and based on five premises each of which is rooted in existing theory. I put forward that each meta-construct is embedded in behaviour at the individual and collective levels and each is interrelated to the others. Change in each meta-construct is anchored in feedback and feed forward cycles through the activities (praxis) of individuals and the practices of organizations. In this dissertation I suggest that there are necessary conditions related to each meta-construct for inter-organizational learning to occur between "enemies". Therefore, a model of inter-organizational learning should consider all three meta-constructs.

The empirical work in this dissertation was guided by two research questions. First, what is the role of identity in organizational learning between organizations in conflict? Second, how does an organization learn from another organization with which it is in conflict?

Using a single case study approach, which is appropriate to answer "how" and "why" questions asked against a backdrop of existing theory (Yin, 2009), I studied the salmon farming industry in BC. Historically this has been an industry embroiled in conflict with environmentalists. The salmon farming industry in BC represented a fruitful setting for studying inter-organizational learning given the industry has been under intense pressure from both shareholders and stakeholders to improve economic and environmental performance respectively.

Recently a joint learning initiative has begun between the largest salmon farming company and a coalition of environmental organizations and First Nations. In contrast, the second largest salmon farming company has actively chosen not to interact with any ENGOs. Using interviews, archival data, newspaper articles, and observations, I collected a rich data set that allowed me to compare the findings of the case with my model of inter-organizational learning, i.e. my initial theoretical statement (Yin, 2009). As Yin (2009) points out the qualitative case method enables theoretical but not statistical generalization.

Three main findings emerged from this research. First, by examining identity, conflict, and learning together I am able to provide insight into conditions under which learning between organizations in conflict is more likely to occur. While previous research has acknowledged the importance of conflict to learning and the centrality of identity to conflict and to a lesser extent identity's influence on learning, in this study I articulate the relationship between these three key concepts. This relationship extends beyond the emphasis in prior literature on cognition and provides a more socialized and behavioural view of inter-organizational learning.

Second, I identified a critical link between individual learning and inter-organizational learning in situations of conflict. Individuals in my case study were able to use conflict as a motivating point to advance learning within their organization. Specifically, individuals from two of the organizations in my study were able to use the practices associated with a shared identity to engage in collective action (praxis) and consequently bridge across the conflict. Their repeated interaction and engagement prompted new interpretations, and

integration of their shared understanding. This in turn prompted further experimentation both together and in their respective organizations, leading to altered practices, and ultimately altered meanings. This outcome extends the dominant view in the literature, that of identity as a constraint to learning and source of conflict and revealed a more nuanced picture of identity's impact on individual interaction and its (identity's) impact on learning.

Finally, this case study showed the role of identity in shifting behaviour and the role of conflict and learning processes in shifting the salience of certain aspects of identity. Change in individuals' and organizations' response to conflict, their learning, and aspects of their identity was anchored in feedback and feed forward cycles. Conflict, identity, and learning appeared to evolve through the situated activities (praxis) of individuals and ensuing shifts in the practices of organizations or groups. This finding highlights the multi-level nature of both identity and learning and in particular the importance of behaviours or practices associated with identity at the individual and collective levels.

In this chapter, the findings of my research are interpreted within the context of the proposed theoretical model by first examining the relationship between conflict, identity, and learning. Then, I address my research questions by exploring the role of identity in inter-organizational learning via the processes through which inter-organizational learning between enemies occurs. The pen-ultimate section explores several new ideas related to the impact of identity on conflict and learning processes which emerged during the research process. The final section assesses the quality of this research.

6.2 Understanding Identity, Conflict, and Inter-Organizational Learning

Prior research has acknowledged that conflict can instigate learning (Argyris & Schon, 1978), that identity is central to conflict (De Dreu & Gelfand, 2008), and that identity has an influence on learning (Nag et al., 2007); however the nature of the relationship between these concepts has not been articulated. In particular prior research has been unable to explain the paradoxical phenomenon of organizations that are able to learn from each other despite high levels of identity based conflict, the source of conflict shown to be most dysfunctional for learning. So while previous research has looked at these concepts in isolation my research considers all three together to uncover the activities that underlie inter-organizational learning. The relationships I uncovered, along with the processes that shape these relationships, contribute to a richer understanding of how organizations learn, in general and in situations of conflict in particular.

The first two of the five premises underpinning my theoretical model describe fundamental connections between identity, conflict and learning. First, that identity, conflict and learning are inter-related, in that one influences the formation of the others. As expected, my data show that identity and learning are embedded in the activities (praxis) of individuals and in practices at the collective level. However, conflict appears to act as a stimulus to activity and is not embedded in it in the same way as is identity and learning. Second, identity, conflict and learning are inter-related across individual and collective levels via feedback and feed forward mechanisms. Again as expected, my data provide

multiple examples of the existence and importance of links between levels for each of identity, conflict and learning.

Prior literature has focused on one of two somewhat simplistic views of conflict: the information processing view in which conflict is seen as promoting learning and the social identity view where conflict negatively affects learning. In the latter perspective, identity is characterized as a constraint to learning by virtue of the organizational and individual defensiveness it can trigger (Argyris, 1991; A. Brown & Starkey, 2000; Nag et al., 2007). By considering conflict, identify, and learning together in this research I found that under certain conditions identity can enable learning despite identity differences. This is an important insight into the learning literature because it brings together two hitherto separate explanations of the relationship between conflict and learning and specifically addresses the conflict based on identity difference, considered by some researchers to be both the most prevalent and dysfunctional form of conflict (Mannix & Neale, 2005; Mooney et al., 2007).

The third and fourth premises in my model describe change in identity, conflict and learning and how change results from the activities (praxis) of individuals and the practices of groups when they engage inter-organizationally. My data show how the practices associated with individual and organizational identity can support shifts in behaviour. Over repeated engagement identity, conflict and learning continued to evolve as a result of individuals recognising and exploring their assumptions, developing shared understandings, and introducing those understandings to their respective organizations. My case study provides

strong evidence of the importance of actions and practices at the individual level
and the implications for practice and learning at the collective level over time.

The final premise underpinning my model deals with certain pre-existing
conditions identified in prior literature that appear to be particularly relevant to
inter-organizational learning in situations of conflict. They relate to the conflict
itself, the organizations and the individuals involved. Previous research has
tended to treat these as discrete situations, for example examining the level of
inter-organizational learning experience but not considering the root of the conflict
that created the learning opportunity or the positions of the individuals directly
engaged with one another. In my research, in addition to the organizational
learning capability and inter-organizational learning experience, I drew insight
from social psychology and considered the relative importance of the socio-
cognitive aspects of the conflict (De Dreu & Gelfand, 2008), and the motivation
and confidence of individuals in the possibility for change (Pruitt, 2005). In
explaining the conditions required for exploring assumptions I drew on social
psychology and sociology, to consider the impact of power, institutions, and
prolonged engagement on learning (Allport, 1954; R. Brown, 2000; Parker-Follett,
2003). Most importantly, my research demonstrated the importance of individual
and organizational identities to learning which I discuss in detail in the following
section.

This dissertation was guided by two research questions. First, what is the
role of identity in organizational learning between organizations in conflict?
Second, how does an organization learn from another organization with which it

is in conflict (the process of learning)? In the next sections I answer these questions.

6.3 The Role of Identity in Inter-Organizational Learning in Conflict

I focus on identity because research and practice have shown that all conflicts are at least in part rooted in the identities of the individuals, groups, or organizations involved (De Dreu & Gelfand, 2008). Specifically I explored the conditions that allowed organizations and individuals to overcome the constraints that prior research suggests that social, role, and organization identities imposed on learning. Whereas previous research has focused on how the practices associated with identity deterred learning, especially across organizational boundaries (Hong & O, 2009; Macpherson & Clark, 2009; Nag et al., 2007) my case study shows how practices associated with specific individual and organizational identities can support learning even across significant boundaries.

6.3.1 Organizational Identity

Organizational identity has been defined as the "central and enduring attributes of an organization that distinguish it from other organizations … reflected in its unique pattern of binding commitments" (Whetten, 2006, p. 220). Similar to institutionalized learning, organizational identity is often described as a "cognitive map" that filters and molds an organization's interpretation of stimuli and activates a set of familiar routines in response (Albert & Whetten, 1985; Ashforth & Mael, 1989; Dutton & Dukerich, 1991). Organizational identity has

been shown to delineate what are considered acceptable or legitimate solutions (Dutton & Dukerich, 1991; Meyer & Rowan, 1977) and it is one of the vehicles through which "preconceptions determine appropriate action" (K. Weick, 1988, p. 306). My research reinforced the notion that interpretations shaped by the organization's identity can shift individuals' behaviour in particular directions and thereby direct and shape organizational actions (Dutton & Dukerich, 1991). In particular, it demonstrated that an organizational identity defined by learning processes, such as the scientific method, can direct individual behaviour (praxis) toward exploration (Barney et al., 1998; Schon, 1986), especially when individuals strongly identify with their organization (Schwenk, 2002). For example, Marine Harvest's emphasis on dialogue and openness encourages individual managers, several of whom openly expressed their pride in the organization's approach to sustainability, to undertake projects outside the boundaries of the industry without fear of reprisal. This demonstrates the role of organizational identity in directing behaviour as well as illustrating the behavioural impact of an identity defined by deutero-learning processes. In contrast, Mainstream's emphasis on financial sustainability encourages individual managers, who are equally proud of their organization's approach to sustainability, to devote time and resources to improving internal operations and exploiting existing knowledge.

In my case study, the way in which key organizational players expressed their organizational identities had an impact on the learning processes they undertook. Stolt described itself as a collaborative research organization particularly within the aquaculture research and development community. However, Stolt was private and focused on "like minded" organizations in their

consultation. Stolt consulted directly and privately with research organizations with recognized expertise, until the sea lice issue. They were more like Mainstream in that regard. CAAR, in a similar vein, described itself as a collaborative organization that is able to navigate/negotiate difficult relationships and coordinate research in support of protecting the marine habitat also with "like minded" organizations.

In my case study conflict motivated a relaxation of the constraints that organizational identity places on individual behaviour. Consistent with prior findings, my study confirmed that the interaction between external stimuli and internal feedback and feed forward processes drive organizational identity dynamics (K. Corley & D. Gioia, 2004) and that feedback from the external environment destabilized organizational members' self-perceptions (e.g. D. Gioia et al., 2000; Hatch & Schultz, 2002). Until 2004 inconsistencies between external perceptions and internal beliefs regarding their organization's identity triggered defensiveness. By 2004 the serious discrepancies activated by the sea lice debate, induced individuals at Marine Harvest/Stolt to reevaluate their understandings (D. Gioia et al., 2000; Whetten & Mackey, 2002). With the "filter and mold" of their organization's interpretations in flux individuals within Marine Harvest and CAAR were able to suspend their belief systems and thus be open to new interpretations (Inkpen & Crossan, 1995). My research suggests that the influence of organizational identity on individual behaviour depends on its degree of stability.

6.3.2 Individual Identity

While key behavioural aspects of the organizational identities of Stolt and CAAR were aligned this was not sufficient to overcome the dysfunctional responses prompted by what Stolt viewed as illegitimate targeting by CAAR. That initiative came from individual action prompted by external feedback and sustained through a period of multiple mergers that introduced ambiguity to the organization's identity. Contrary to the predictions of my original model, in my case study identity and learning are embedded in praxis and practice. Conflict, identity, and learning are inter-related through action. Conflict stimulates praxis which is an expression of identity and learning.

Identity ambiguity implies multiple possible interpretations about which core features should define the organization (K. Corley & D. Gioia, 2004). The ambiguity introduced by merger activity appears to have increased the opportunities to ask the question "who are we" and the positive feedback from the environment may have provided guidance as to a desired identity and the behaviours associated with that identity for the company created by the merger of Stolt, Marine Harvest and PanFish.

The extent of the feedback around the sea lice issue seemed to shift the root of conflict to the apparent gaps in knowledge about sea lice as well as highlight to managers within Stolt the ineffectiveness of its approach to addressing the issue. This prompted the senior manager in Canada to seek information from new sources, albeit one with recognized expertise in managing stakeholder conflicts and to eventually engage that well regarded third party to

contact CAAR. The key individual in CAAR believed that Stolt had been harmed by their (CAAR's) aggressive anti-farmed salmon campaign. She believed that they were ready to consider a new approach and that made her interpret, albeit cautiously, the offer as a sincere request to explore possibilities. Both of the key individuals involved thought the other party had much to gain from the interaction and used what they interpreted as an opportunity to potentially advance their own agenda. Their change in behaviours created the opportunity for experimental learning as they entered into the interaction with openness to behavioural change.

In my case study, inter-organizational learning appeared to begin with actions that minimized, to the extent possible, identity differences between individuals and emphasized joint problem solving. Initial contact was made via an individual that was not strongly or personally identified with either "side". Over an extended period of first indirect and then direct interaction individuals' from both Stolt/Marine Harvest and CAAR were able to tap into practices related to their common social and role identities. The individuals involved in the salmon farming industry had a range of relevant social and role identities including, scientists, issue consultants/managers, and coastal community residents. Most importantly they were able to coalesce around the identity of "scientist" interested in understanding the impact of sea lice. Also, as in this case, an identity such as scientist may connect individuals, whereas within an organization it is often a role identity that differentiates them. By matching individuals who shared the identities of scientist or issue manager, individuals were able to use the common protocols and practices associated with those communities of practice, as well as the

language to experiment with collective action without changing their beliefs. In particular the matching of scientists supported their focus on joint research while allowing them to "delegate" the controversial relationship issues to the issue managers.

Contrary to my original expectations the conflict in my case study did not appear to activate different individual identities but rather different aspects of individuals' salient identities. For example, the most important aspect of the identity of "scientist" shifted from being the "expert" and to being the guardian of the scientific method.

Once the Framework for Dialogue had been developed and integrated within each of their respective organizations the individuals could suspend their beliefs, and behave according to the agreement, which was built around five scientific investigations and well established scientific (and conflict management) protocols. They had begun to move from using the end products of science as a weapon against each other to using the practices associated with the scientific process as the mechanism through which they could cooperate. Science continued to provide a neutral and honourable identity with which all parties (individuals and organizations) could identify. It also provided sufficient ambiguity to allow the group to agree on action while retaining whatever individual beliefs that were needed to reach consensus (Eisenberg, 1984). This shared action and experience created sufficient shared understanding for CAAR and Marine Harvest to enter into an agreement and to subsequently undertake a major experiment and to jointly lobby government.

6.3.3 Shifting Aspects of Identity

The collaboration process between Marine Harvest and CAAR was
enthusiastically supported by local institutions, in particular government. The
behavioural change was so strongly supported that Marine Harvest and CAAR
came to share an identity as leaders in resource company/environmentalist
collaboration. In a sense their response to the feedback from the environment put
them in the "iron cage" together (DiMaggio & Powell, 1983). Given that the
institutional (regulatory) support for the new practices after five years of repeated
engagement, they appear to have altered some of the meanings attached to
identity (K. Corley & D. Gioia, 2003). Most dramatically, CAAR decreased its
membership primarily as the result of asking the questions "who are we" and
"what activities will we undertake" during their decision to support the CAMP. The
changes to CAAR's membership and Marine Harvest's operations demonstrate
their respective integration of new common understanding of "who we are" and
"what we do" and hence inter-organizational learning.

Building on the work of Nag and colleagues (2007), my research
demonstrates that the possibility for inter-organizational learning can occur at the
intersection of identity (who we are), learning (what we know), and practice (what
we do) both within and between organizations in conflict. By attending to the
socio-cognitive aspects of the conflict individuals from each organization begin to
distance themselves from their identity based differences. Consequently, these
individuals, within the context of their unique social, role and organizational
identities, interpret the stimulus provided by the conflict differently. Their

interpretation and therefore their responses are enormously affected by their repertoire of individual identities, the nature and stability of their respective organizational identities, and by their level of identification with their organization. If the hold of their organizational identity is sufficiently loosened or supportive of exploration, then the practices associated with a common social or role identity may provide the common language and protocols to undertake collective action. It is the identities of the individuals representing each organization and the practices and actions through which they express their identities that initially facilitates or constrains interpretation and integration and hence organizational learning (Crossan et al, 1999).

6.4 The Process of Inter-Organizational Learning

At the heart of the process of "learning between enemies" lies the concept of dialogue (Bohm, 1996). Dialogue goes beyond typical notions of conversation and exchange to explore "the manner in which thought … is generated and sustained at the collective level" (Bohm, 1996, p. vii) and as such it requires that individuals and their respective organizations have both the ability and the willingness to engage, to explore assumptions, and to collectively learn. Whereas prior research has tended to deal with the issues of willingness and ability separately, my research considers the conditions necessary at the individual and collective levels for "enemies" to engage and to sustain that engagement such that they learn from each other.

Prior research has tended to focus on one of three broadly defined sources of conflict; resources, identity, or socio-cognitive differences. There has been

limited recognition that all sources can be present in any situation of conflict and no consideration of the implications that has for progression of the conflict (for an exception see DeDreu & Gelfand, 2008). My research showed that by managing the identity aspects of their conflict and focusing on its socio-cognitive aspects individuals were able to undertake and sustain collective action, which resulted in individual and collective learning, even while their resource based conflict persisted. Through addressing or distancing themselves from the facets of their identities that were different and focusing on the practices of identities that they shared, individuals from Marine Harvest and CAAR were able to access the productive problem solving features of socio-cognitive conflict and avoid, for the most part, the dysfunctional defensiveness of identity conflict.

My case study reinforced the importance of an organization's internal learning practices and its prior experience with inter-organizational learning. My data demonstrated how well developed organizational learning capabilities and established practices to manage inter-organizational interactions help to facilitate the challenging interactions typical of "learning between enemies". CAAR and Marine Harvest each had established learning practices which, while relatively new, were robust enough to endure despite repeated mergers in the case of Marine Harvest and personnel changes in the case of CAAR. Each had had experience of learning across organizational boundaries. Most recently, Marine Harvest had incorporated learning from its interactions with a First Nation, demonstrating an ability to learn from an organization that operated under a different logic.

The willingness and abilities of the individuals directly involved are critical to inter-organizational learning outcomes. Whereas previous research on inter-organizational learning has hinted at the importance of individuals (i.e. Inkpen & Tsang, 2007), my research draws a direct link between individual learning and inter-organizational learning. My data demonstrates that individuals can be motivated and optimistic about engaging with the "enemy" for different reasons. However, in order to initiate contact individuals must be confident that the potential benefits of working with unfamiliar and possibly hostile individuals outweigh the personal cost.

Previous empirical research on inter-organizational learning has given limited attention to power shifts in inter-organizational collaborations (Easterby-Smith et al., 2008; Inkpen & Tsang, 2007). In my case study the relative balance of power between the individuals involved has been maintained, while the power between their organizations has vacillated. My data shows that a shift in first the balance of power and then in the nature of the power between the two key organizations was critical to maintaining their engagement and to supporting the exploration of assumptions underlying their behaviour and expectations. The apparent shift from a "power over" paradigm to a more interdependent "power with" approach has supported continued and productive engagement (Parker-Follett, 2003). Further to notions of power and consistent with the predictions of institutional theory and organizational learning theory, in my case study, institutional support from the relevant levels of government as well as in Marine Harvest's case the corporate head office was critical to sustaining the engagement.

My case study reinforces and elaborates on previous research on inter-organizational learning that describes the structures and mechanisms necessary for learning. My data show a gradual shift from very structured formal interactions between a few senior people to less formal more social interactions between people at various levels of the organization and even external to the organization. Early in their engagement formal, structured interaction was conducted through a consultant and then with the help of a mediator. These third parties focused the information exchanged, thus helping the parties to focus on certain aspects of the conflict and on common aspects of their identities. From this common base the individuals were able to negotiate an agreement that included behavioural protocols as well five specific research projects. Over time there was a de facto separation of duties with the scientists managing the various research projects and the consultant and manager/activist managing the day-to-day conflicts. Individuals' responsibilities became aligned with their identities and abilities. Thus, these structures and mechanisms of engagement sustained the interaction enabling dialogue.

My data show clear instances of individuals engaging in dialogue, that is exploring deeply held assumptions about their expectations, the meanings they attach to their own and to others identities'. By recognizing these assumptions, individuals appear to have gained new understanding of themselves and others. In this context they began to understand the extent to which they were automatically responding based on their interpretation of the situation. With such understanding, Bohm (1996) suggests that defensive posturing will diminish and deep collective learning is then possible, although not assured. For example, the

negotiation of CAMP resulted in a new interpretation of the identity of CAAR, as

evidenced by its binding commitment to support CAMP. It also resulted in an

affirmation of the identities of those organizations that left CAAR. The more that

the balance of power, the relevant institutions, and the structures and

mechanisms of engagement between the organizations are able to support and

sustain dialogue, the more likely inter-organizational learning will occur.

6.5 Beyond the Model: Sub-Process of Inter-Organizational Learning

The focus of this dissertation has been on understanding the relationship

between identity, conflict, and inter-organizational learning using an extreme case

study of a single industry. This research was grounded in a process model of

inter-organizational learning developed from an eclectic review of the literature

and the recent theoretical lens of the practice based view. However during the

course of the field work, data analysis and consolidation, several patterns outside

the scope of the proposed model have surfaced. I discuss these in this section.

The primary evidence of inter-organizational learning between the two

"enemies" in my case study was their willingness to jointly undertake increasingly

bold experiments even while continuing to target and respond to each other

negatively in the media. The repeated engagement via experiments between

individuals from Marine Harvest and CAAR seemed to mediate the relationship

between conflict and learning, prompting a three step learning process that I have

labeled as distancing, pairing, and rule setting. In the period under study I

identified two cycles of distancing, pairing, and rule setting each culminating in an experiment, overall reduction in targeting in the media, and an increase in the extent of experimentation. See Figure 6-1: Sub-processes of Inter-organizational Learning in Conflict.
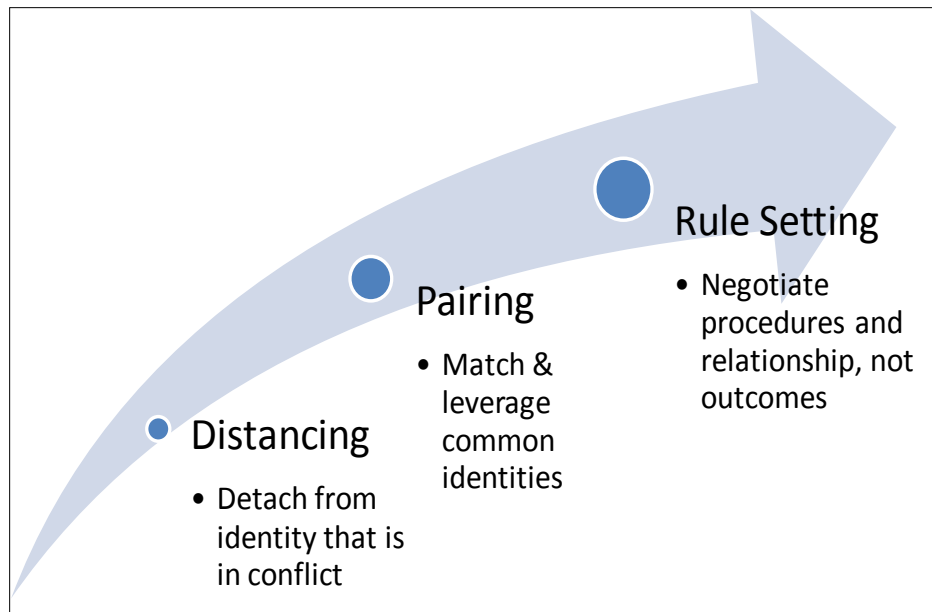
Figure 6-1: Sub-processes of Inter-organizational Learning in Conflict

The first sub-process that I uncovered involved a detachment or separation by individuals from aspects of the conflict or of their identities that were both problematic and fixed, such as shifting focus away from the conflict in values between salmon farming companies and environmentalists and toward their common knowledge gap (i.e. the impact of sea lice). Individual activities (praxis) that comprise this include seeking information from new sources, communicating via a neutral third party, and talking privately. By consulting new sources, both parties displayed a willingness to consider new approaches to the issue of sea

lice. Their subsequent communication via a neutral third party and in private talks further demonstrated their motivation to distance themselves from the behaviour that had been ineffective in resolving the sea lice issue. Organizationally, there is also evidence of actively detaching from past practices, such as when Stolt began posting sea lice data on the internet. By sharing information publically Stolt was distancing itself from its "private" and less than transparent identity and showcasing its accountability and operationally superior aspects. Also, hiring a well regarded neutral consultant to represent the company with CAAR minimized the risk of identity conflict rooted in that individual's identification with Stolt. Similarly, CAAR hired an experienced issue manager/activist with no prior connection to the sea lice issue to manage day to day interaction with Marine Harvest once the Framework was in place. I summarized these behaviours as *distancing* to describe what both individual managers and organizations were doing to shift attention away from the identity conflict and toward socio-cognitive conflict both prior to and during engagement with each other.

The second sub-process that emerged, involved a matching of individuals and groups based on those aspects of their respective identities that were compatible particularly from a work practice or skill perspective. In my case study, scientists were assigned to design and manage research projects and over time communicated directly. Perhaps most importantly, conflict professionals such as the consultant and the experienced manager/activist were hired by Marine Harvest and CAAR respectively and tasked with managing the day to day relationship as well as any non-science conflicts that emerged in the projects. This ensured that the individuals that were most skilled in handling conflict were

responsible to do so. These individuals were relatively less identified with the issue or their organizations than others interviewed; however they were very identified with making the Framework a success. Organizationally, Marine Harvest and CAAR carefully matched the individuals they initially put forward to negotiate. Tellingly, CAAR did not include the individual most closely associated with sea lice and arguably the most knowledgeable, even though she was part of the coalition. The CAAR team included two individuals trained in negotiation and two scientists, while the core Stolt team included a consultant/negotiator and a scientist who had spent a multi-faceted career in salmon related issues. By matching the identities of the individuals they put forward the two organizations helped to provide common skills and language. Additionally, over time the organizations that had compatible aspects in their identities continue to work together (i.e. Living Oceans Society, David Suzuki Foundation, the Watershed Watch Salmon Society), while those that could not distance themselves from the problematic aspects of their organizational identity, left the coalition (i.e. Raincoast Research). I summarized these behaviours as *pairing* to describe how common aspects of identity and especially role identities form the basis for individual practitioners to engage and how organizations undertook to match the common aspects of their organizational identities.

The third sub-process that emerged dealt with setting the rules for ongoing interaction between the paired individuals and organizations, such as the agreement to discuss a joint initiative, agreeing to the terms contained in the Framework, and agreeing to the process for specific research projects. This sub-process involved negotiating both the procedures and the nature of the

interaction using the language and protocols of the common identities that had been paired for the engagement. Importantly, it did not include negotiating outcomes. I labeled this sub-process *rule setting.* The rule setting process evolved from highly focused, controlled and mediated face to face interactions in the beginning to less formal, and less centralized direct and indirect interactions across a range of activities such as project management, and project initiation. At the individual level rule setting activities (praxis) included meetings, phone calls, emails, and modeling acceptable behaviour. At the collective level rule setting was demonstrated by the agreement and subsequent adherence to the communication protocols, the roster of scientists, the project hierarchy and structure and respectful interaction.

For some examples of these sub-processes at the praxis (individual) and practice (collective) levels, see Table 6-1: Sub-processes of Inter-organizational Learning in Conflict.

Table 6-1: Sub-processes of Inter-organizational Learning in Conflict

Sub -Process	Praxis	Practice
Distancing	Sought information from new sources Contact via 3rd party Private talks	Shared sea lice data on-line Hired neutral consultant (MH) and a manager/activist (CAAR)
Pairing	Scientists- Consultant-Lawyer Scientists –Scientist Consultant – Experienced Activist	Hired mediator Built an extended team Delegated tasks to "specialists"

Rule setting	E-mail, phone calls, meetings Teaching respectful interaction Negotiate list of scientists Project management activities	Communication protocols "Respect costs you nothing" List of "acceptable" scientists Project hierarchy & structure
Bold Experiment	Negotiating process & prohibitions Monitoring sea lice together Developing terms of reference Joint lobbying	Agreement to negotiate Framework for Dialogue Sub-contract research CAMP

In my case study each cycle of distancing, pairing, and rule setting culminated in collective action which I termed a bold experiment. The negotiation and implementation of each bold experiment increased the shared understanding between Marine Harvest and CAAR and thus created an ever firmer foundation for the next cycle of learning and experimentation. I define a bold experiment as a collective behavioural change undertaken with no apparent cognitive change, which is described as surprising by participants and/or other individuals or organizations in the industry. The bold experiments include the original agreement to negotiate, the Framework for Dialogue, the joint sub-contracting of research, and CAMP. My research revealed a general increase in both the "boldness" of the experiments undertaken by Marine Harvest and CAAR as well as the level of shared understanding between the two organizations. While this increase in shared understanding was accompanied by a decrease in expressions of identity based conflict, the underlying identity and resource conflict

between the two organizations persists (See Figure 6-2: Inter-organizational

Learning in Conflict).
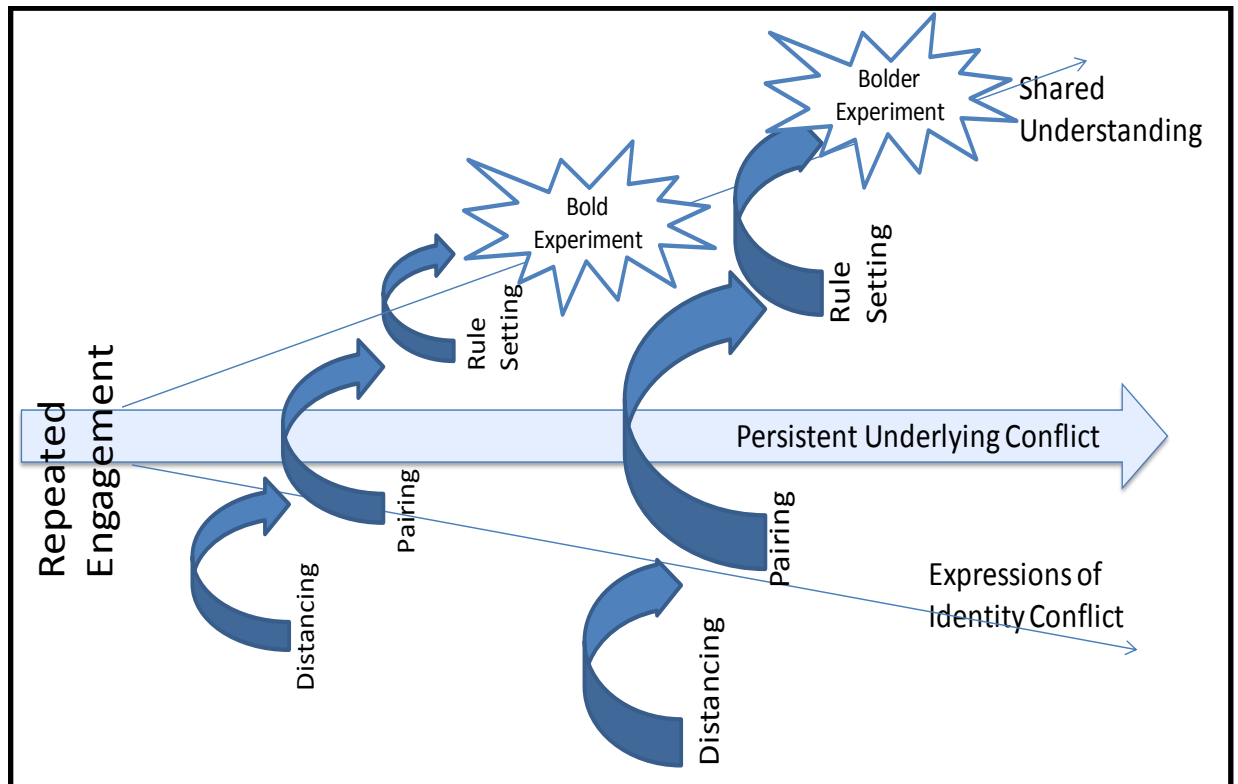
Figure 6-2: Inter-organizational Learning in Conflict

These sub-processes begin to provide a deeper understanding of the

practitioner- praxis- practice relationships that I describe in my conceptual model

of inter-organizational learning (see Figure 3.5) and the relationships between

conflict, identity, and learning that comprise the primary contribution of this

research.

CHAPTER 7: CONCLUSIONS

7.1 Summary of Contributions

This research makes four primary contributions. The main contribution of this dissertation is highlighting the importance of the relationship between identity, conflict and learning at the individual and collective levels. The relatively narrower focus of prior research has neglected the important connections between these three crucial areas. The presence of conflict brings behaviour to the foreground in learning theories, while at the same time emphasizing the processes of identity protection and maintenance. This case showed the importance of identity in shifting behaviour and the role of conflict and learning processes in shifting aspects of identity. Examining these concepts together provides insight into the conditions under which inter-organizational learning is more likely to occur.

My research highlights the role played by the practices associated with social, role, and organizational identity in shaping individual praxis in response to conflict. Hence, it extends current understanding of the implications of individual behaviour for organizational learning, particularly in situations of conflict. This work explicitly addresses the identity-based conflict inherent in inter-group interactions and, by suggesting that learning depends on the aspects of identity that organizations and individuals activate in response to a situation, I provide direction for realizing the benefit of diverse perspectives. The common practices either prescribed by communities or co-created by individuals engaged in a

common task may hold the key to sustained behavioural change which may generate cognitive change. Individuals can use conflict as a motivating point to advance learning within their organization, via the practices of their common identities. Unless we understand how individual and organizational identities are connected to behaviour it is hard to understand their impact on learning. In addition, in a case of conflict, learning may depend on the ability of individuals to come together through behaviours or activities related to common identities.

My process model of inter-organizational learning as practice provides a more socialized theoretical background for understanding the challenges of inter-organizational learning. It highlights the importance of considering all of the components of learning and suggests that it is the nexus of practitioners, practice, and praxis that delivers inter-organizational learning. Instead of conceptualizing inter-organizational learning as an outcome, my research explores how individuals and organizations tend to respond to each other and how behavioural practices, such as engagement and dialogue, play a critical role in shaping their organizations' learning.

Finally, I contribute to the understanding of the implications of different sources or roots of conflict to inter-organizational interaction. A shift in emphasis from identity based conflict to the socio-cognitive aspects of the conflict, preceded mutual problem solving behaviour, even while the underlying conflict of interest persisted between the parties. The individuals and their respective organizations were able to undertake collaborative action once they reached consensus on the gaps in their collective knowledge. This research underscores the importance of understanding that at some level all conflicts are identity based,

and the need to understand how organizations come to work together despite and in the presence of their identity differences.

7.2 Practical Implications

There has been much discussion recently of the possibilities inherent in conflict and in interaction with diverse organizations (Hart & Sharma, 2004). If through these interactions organizations are more attuned to social trends and sensitivities, managers may be alerted to risks and opportunities they might not otherwise have spotted, and organizations will likely develop or augment their capabilities ("A Survey," 2008). Yet few organizations readily embrace those learning opportunities, and managers appear skeptical about the power of conflict to invigorate problem solving (Eisenhardt et al., 1997; Tjosvold, 2008). Although organizations increasingly participate, voluntarily or in some cases by mandate, in cross sector initiatives with diverse organizations, they struggle with how to simultaneously manage the conflict and make use of the learning opportunities. My research shows that by focusing on their mutual knowledge gaps and the practices associated with common identities, managers and organizations may be able to defuse the more dysfunctional aspects of their conflict to permit mutual problem solving.

My insights from this research are an important step in understanding ways in which organizations can create mutual strategic advantage out of apparently intractable conflicts. This work has demonstrated that engagement over a well known, albeit poorly understood conflict, can also confer social legitimacy, a key component to competitive advantage in highly regulated industries and likewise

crucial to non-government organizations. Organizations that confront the diversity amongst economic, social, and environmental views in their decision making may be better able to shift their thinking toward an integrated view. This in turn may engender more innovative responses. While the conflict may never be resolved-indeed it may be "unresolvable"- much can be learned through carefully delimited cooperation on specific tasks.

This research demonstrates that strategic advantage can be derived from engagement in situations of intractable conflict. It also emphasizes the range of conditions that are necessary before organizations can realize the "promise" of conflict, extending from intractable to more mundane forms of conflict and situations. Learning in the presence of identity differences, for instance during mergers or acquisitions, requires well established internal and inter-organizational learning processes. If senior managers consider the extent and nature of the learning and inter-organizational learning capabilities of both organizations, they will be better able to assess the synergies possible from the merger or acquisition.

This research highlights the importance and influence of an organization's current strategy and goals on individual behaviour. Marine Harvest's and CAAR's mutual emphases on dialogue and science provided their members with both the motivation and the "permission" to experiment with new behaviour and to learn. In this way, both organizations' current strategies supported adaptive behaviour, and ultimately strategic renewal. Strategies that acknowledge and support deutero-learning processes play an important part in strategic adaptation and renewal.

My research demonstrates the importance of deliberately emphasizing certain aspects of the conflict between organizations. By actively highlighting the socio-cognitive aspects of the conflict, which may not be readily apparent to participants, managers may increase the likelihood of them engaging in problem solving. In addition, by framing responses around the socio-cognitive aspects of the conflict that are significant to both the managers and organizations involved, senior managers may increase the likelihood of repeated engagement. This facet of the research illustrates the role senior managers and other organizational leaders can play in creating the conditions conducive to learning in the face of identity difference.

My research provides important guidelines for managers when structuring and staffing inter-organizational initiatives, such as joint ventures, research consortiums, and stakeholder engagement processes. Individuals in boundary spanning roles may be more effective if they are less identified with the more contentious aspects of their organization's identity. This raises the issue of how managers might weaken or transform existing aspects of an individual's identification with their organization. Conversely, if the boundary spanning individuals are strongly identified with an established process or set of protocols they may be relatively more effective in bridging across conflict. The key lesson for external advisers is that their focus should be instigating and maintaining learning processes in situations of conflict – not working to resolve the conflict, as is typically the case.

Finally, my research demonstrates the significance of clearly articulating the behaviour expected in the inter-organizational relationship. In the same way that

"good fences make good neighbours", enacting rules and sanctions for breaking

the rules is important to cooperation. By developing protocols for communication,

with each other and with the public, the focal organizations in this study were able

to create common practices. Established rules and holding each other

accountable for adhering to those rules reduced the ambiguity associated with

different identities. Over time, repercussions for breaching the agreement

became consistent, helping to decrease uncertainty in the relationship and

ultimately to increase cooperation. These practices are generalizable and

beneficial whatever the organizational interaction.

The connections identified in this study will be relevant to a range of

situations where learning must overcome differences in identity. While I studied

an extreme case of identity difference, my findings will be useful to organizations

in a range of situations, as they come to grips with increased interaction, across

sectors and across organizational and national boundaries.

7.3 Limitations and Future Research

As with any research this study has limitations. First, I realize that focusing

on one situation, in this case a protracted resource conflict, will limit the

generalizability of my conclusions. However, as Yin (1994) and Johnson et al.

(2007) suggest, the case study method provides an opportunity for analytic

generalization from the case study to theory which is achieved by the proper

selection of the case study. Also many industries are increasingly faced with

conflicts of interest with stakeholders and while they may not be as targeted as

the salmon farming industry, they nevertheless face the challenge of adapting to

changes in their environment. Future research should investigate whether the practices associated with identity relate to the reduction of identity conflict and a shift to socio-cognitive conflict and learning in other industries and other perhaps less extreme contexts. Furthermore, this research could be used to develop measurable items to test the relative mix of the sources of conflict and the relationship between for example socio-cognitive conflict and learning.

Second, using the case method means the researcher begins with a proposed theory (Yin, 2009) which may constrain them from seeing new patterns. However, the iterative nature of my design allowed me to modify my model because the data were repeatedly compared with theory.

Third, interview data may suffer from biases, including social desirability bias. However, careful construction of interview questions, along with triangulation with other data sources, helped mitigate this problem. Additionally, participants' answers can be influenced by question wording, format, and context. To avoid such biases, I pilot tested the interview questions on individuals associated with but not directly involved with the BC salmon farming industry.

Fourth, access was a problem in the second phase of my data gathering. A number of external events, in addition to the contentious nature of the topic, limited individuals' willingness to have meetings observed. However, given their vivid recollections of particular events and meetings I was able to employ analytic techniques (described in Section 4.5.5, Mapping of Statements into Practice and Praxis) to distinguish practice and praxis from respondents' statements during interviews.

Despite the above limitations, I believe this research provides a first step in understanding the relationship between identity, conflict, and learning in organizations.

Finally, past findings have found a relationship between innovation, especially complex and radical innovation and engagement with a range of partners, allowing for the "integration of different knowledge bases, behaviours, and habits of thought" (Pittaway, Robertson, Munir, Denyer, & Neely, 2004, p. 150). Indeed, in a group situation, scientists have been identified as being particularly adept at using diversity to their advantage (Pelz, 1956). However, my research suggests there are significant challenges to engaging with diverse individuals and organizations, even scientists, and success depends on a number of conditions. Future research should re-examine the relationship between innovation and engagement between diverse organizations, in light of the more socialized explanation of inter-organizational learning processes presented by my research findings.

7.4 Final Thoughts

The impetus for strategic renewal often comes from a misalignment of an organization's current strategy with its environment. Increased inter-organizational conflict can be a signal of such misalignment. There is evidence that accessing diverse or hitherto unavailable sources of ideas may increase an organization's ability to adapt to its environment and learn. Accessing those sources however is likely to be fraught with conflict because the focal

organizations almost certainly have different perspectives, making interaction problematic and potentially costly in both financial and reputational terms.

Increasingly complex issues, such as sustainability and globalization, have increased pressure on organizations to integrate disparate perspectives. Yet relatively few firms embrace the learning opportunities inherent in diverse or adversarial situations. Responding to conflict provides an opportunity to learn. The ability to learn from disparate and diverse organizations perhaps even "enemies" has the potential to produce positive variations in firms' capabilities. This is the promise of conflict.

This research speaks to that promise by examining inter-organizational learning and the role of identity in such learning. The behaviours associated with identity are important to inter-organizational learning because in practice, identity-based conflict often inhibits learning. However, under certain conditions the practices related to common identities may act as a bridge across conflict and allow the development of shared understanding through collective action. In this way individuals and their organizations are able to realize the promise of conflict and successfully adapt to changes in their environment.

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APPENDIX A: DETAILED CHRONOLOGY OF EVENTS IN THE BC SALMON FARMING INDUSTRY 1970 – 2009

Year	Event
Early 1970s	Salmon farming begins on the Sunshine Coast in BC with small locally owned operations and limited regulation.
Early 1980s	Norwegian salmon farming companies enter BC, buying and consolidating small operations. They also introduce the Atlantic salmon species to the region.
Mid 1980s	Toxic algae blooms devastate fish inventories and salmon farming moves to Vancouver Island, primarily around Nanaimo, Tofino and the Broughton Archipelago.
1986	Demand for salmon farming licenses explodes and conflicts with other coastal users escalate. The government declares a moratorium on new licenses and organizes an inquiry into the industry.
1987	Moratorium on new licenses lifted after inquiry calls for increased regulation and monitoring of the industry, increased First Nation consultation and formal conflict resolution processes. The United Fisherman's and Allied Workers Union becomes salmon farming's most vocal critic and calls for a moratorium on fish farms until strict regulations are in place.
1988	Simon Fraser University creates an aquaculture research institute and later the University of British Columbia creates a Chair of Aquaculture Research. Department of Fisheries & Oceans (DFO) assigns legal authority to regulate aquaculture to the province of BC via a Memorandum of Agreement
1989	BC has its strongest sockeye salmon run in 76 years. Increased supply results in a drop in price and many salmon farms go bankrupt. Federal and provincial officials reiterate their support of salmon farming and announce funding for a research program to investigate its impact on wild salmon. Concerns are raised in the media about escaped Atlantic salmon and their impact on the native wild salmon. Concerns regarding disease and effluent are ongoing.
Early 1990s	The concerns raised by the Fisherman's Union are now shared by the provincial New Democratic Party, the BC Liberal party, the Green party, the Alaskan government, the Native Brotherhood of BC, the

Year	Event
	Ocean Resource Conservation Alliance, the David Suzuki Foundation, and various local environmental groups.
	Environmentalists increasingly use the media to raise public awareness of the potential harmful impact of salmon farming caused by the drugs used in the feeding and disease treatment of farmed fish, the waste produced by the farms, and the escape of non-native species into the wild. The industry minimizes or ignores these concerns.
1991	The US levies an anti-dumping tariff on Norwegian salmon effectively shutting them out of the market and providing a significant market opportunity for the emerging Chilean and the Canadian industries.
1994	Sea lice from salmon farms are identified as the sole cause of the Irish sea trout collapse, prompting calls in the BC media for a federal or provincial review of the environmental impact of salmon farming.
1995	The BC government in consultation with the federal Department of Fisheries and Oceans (DFO) places a moratorium on new farm licenses and announces the creation of the Salmon Aquaculture Review Panel to review the current methods and processes used in regulating and managing salmon aquaculture operations.
1997	The report of the Salmon Aquaculture Review Panel concluded that salmon farming could be managed to prevent or mitigate adverse impacts and avoid conflicts, leading to a sustainable industry in BC's coastal communities. The moratorium remains in effect.
	The landmark Delgamuukw case is decided in favor of First Nation consultation or compensation for activities on territory that they claim, thus ensuring significant First Nation involvement in all fish farm licensing in traditional territories.
1998	The first evidence of successful Atlantic salmon spawning was discovered in the Tsitika River on Vancouver Island, reigniting public debate about the risks of salmon farming and in particular the risks related to escaped Atlantic salmon.
1999	The Alaskan government publishes a white paper on its concerns about BC salmon farming and begins to lobby the BC and Canadian governments to continue the moratorium on salmon farming.
2000	The Coastal Alliance for Aquaculture Reform (CAAR) is formed, made up environmental groups and First Nations including the Living Oceans Society, The David Suzuki Foundation, The T. Buck Suzuki Foundation, The Georgia Strait Alliance, Raincoast Conservation and others.
2001	The federal Auditor General announces that the federal government

Year	Event
	is failing to protect wild BC salmon stocks from farmed salmon.
	A Senate Committee finds that escaped Atlantic salmon are aclimatizing and spawning and the Atlantic Salmon Watch, a joint federal and provincial program to research escaped salmon is set up.
	The David Suzuki Foundation hires a former BC Supreme Court Judge to conduct an independent inquiry into salmon farming. He concludes that closed containment farming is the only environmentally acceptable alternative.
	CAAR coordinates 140 conservation groups, First Nations, and businesses in Canada and the US, 20 scientists and 31 members of the Alaska State Legislature, to petition Prime Minister Jean Chretien and President George Bush not to lift the moratorium until a Canadian Environmental Assessment Act Review was conducted.
	The pink salmon run in the Broughton Archipelago collapses and Local First Nations and the David Suzuki Foundation blame it on an infestation of sea lice in the adjacent salmon farms.
2002	The moratorium placed on new site licenses in 1995 is lifted.
	Two salmon farming companies are charged for violating environmental regulations.
	Grieg Seafoods is granted a new farming license in the Broughton.
	CAAR launches an international boycott of BC farmed salmon.
	The Pacific Fisheries Resource Conservation Council (a federally funded independent conservation Council) concludes that sea lice "amplified" by the salmon farms is the likely cause of the collapse of the pink salmon run.

Year	Event
2003	An international workshop examining sea lice research is organized by UBC and includes First Nations, government, industry, scientists and non-government organizations. The scientists encourage the province to act quickly to monitor and control sea lice.
	Class action suit filed in Washington state against three major supermarket chains, Safeway, Krogers and Albertsons, for allegedly deceiving their customers about the origins of their salmon.
	The BC Salmon Farmers Association hires the public relations firm, Hill & Knowlton to "revamp the way it presents itself to the public".
	The Heiltsuk First Nation initiates a lawsuit against the BC government and PanFish over a new hatchery PanFish is building on Heiltsuk territory, without proper consultation.
	The federal Minister of Fisheries and the provincial Ministers responsible for Treaty Negotiations and Agriculture, Food and Fisheries appoints an independent two-person task group to review the approaches to fisheries settlements in treaties.
	The federal government announces administrative reforms giving environmentalists, aboriginals and the provincial government more control over managing Pacific salmon. These reforms had been developed with the consensus of stakeholders including commercial, aboriginal and sport fishers.
2004	"Science" (one of the foremost scientific journals) publishes an article by Hites examining the links between farmed Atlantic salmon and toxins, PCBs in particular that are hazardous to human health.
	Marine Harvest, Stolt Sea Farm Group and 48 other US and Canadian salmon farms, fish processors and grocery chains (including Safeway, Albertson's and Costco) were quickly named as defendants in a legal action in California for failing to warn consumers that salmon may contain potentially dangerous levels of PCB's
	Stolt Sea Farms, BC's largest salmon farming operation, begins posting sea-lice and water quality data on the company web-site seeing it as "an educational opportunity for both researchers and the general public" and to "demonstrate we are serious about our commitment to having sustainable salmon farm operations".
	Provincial government creates the Pacific Salmon Forum to study the health of wild salmon.
2005	Members of the BC Wilderness Tourism Association demand the fallowing of fish farms in the Broughton Archipelago because of their impact on wild salmon.
	The newly re-elected provincial government makes the

Year	Event
	unprecedented move of setting up a Special Committee on Sustainable Aquaculture led by someone from the opposition party with the majority of its members drawn from the opposition (6 from opposition, 4 from government).
2006	CAAR and Marine Harvest (newly merged with Stolt Sea Farms) announce an agreement to conduct joint research. Titled the Framework for Dialogue, the agreement outlines 5 areas of mutual interest with the initial research to be on sea lice. The Special Committee on Sustainable Aquaculture conducts public hearings on salmon farming and hears testimony from the industry, the environmentalists and scientists. Sea lice research published by Simon Fraser University scientists linking farms to reductions in wild salmon. DFO and industry refutes. DFO research suggesting that farmed and wild salmon can co-exist is released. Environmentalists refute. Grieg Seafoods is granted the second new farm license in the Broughton since 2002. It is done with the consultation and agreement of the Tlowitsis First Nation. First Nations, along with Don Saniford from the Pure Salmon, protest at the AGM of Cermaq in Stavanger, Norway. BC Salmon Farmers Association begins giving salmon farm and processing plant tours. Alexandra Morton unsuccessful in suing salmon farms for "releasing" sea lice. However, her methods and "science" are commended be a world renowned expert. A study, published on-line by Marty Krkosek using 40 years of DFO data suggests that sea lice from salmon farms killed 95% of wild juvenile smolts swimming by.
2007	BC Supreme Court upholds Creative Salmon of Tofino's successful libel/defamation suit against Don Saniford, a former employee of Friends of Clayoquot Sound. A CAAR member publishes a peer reviewed journal article linking sea lice from salmon farms to wild salmon decline, based on sea lice data shared through the Framework for Dialogue. Friends of Wild Salmon run ads in major newspapers in BC to stop fish farms in the North. The Special Legislative Committee on Sustainable Aquaculture recommends a move to closed containment within 5 years, supported by government funded development of technology, a moratorium on new licenses in the North, moving regulation from Agriculture to the

Year	Event
	Environment Ministry.
	One week after the report is tabled Greig Seafoods is granted a new farming license in Nootka Sound. The Mowachaht/Muchalaht First Nation agreed.
	CAAR runs ad in NY Times targeting Safeway's sale of farmed salmon.
	"Confidential" report authored by Watershed Watch's Craig Orr, for the Pacific Salmon Forum is "obtained" by the CanWest News Service. It did not meet their test for scientific rigour and they asked that he not speak about it.
	The Pacific Salmon Forum, in its interim report, called on the government to develop a new way of managing watersheds to better protect wild salmon, including federal, provincial, regional and aboriginal governments. They also called for proper analysis of what is known about closed containment before either investing government funds in it or requiring industry to move to it.
	Two new farm licenses are approved for sites near Klemtu on the Central Coast.
	Middle Bay Sustainable Aquaculture Institute (Agri-marine) gets $2.4 million in federal funding, in addition to $1.2M from the Moore Foundation. Another $1.2M and $2M are expected from the Moore Foundation and the province's Island Coastal Economic Trust respectively.
	Grieg Seafood B.C. Ltd. of Campbell River was granted approval for a new farm site in Nootka Sound, the 4th since the report of the Committee on Sustainable Aquaculture in May. It has the support of the Mowachaht/Muchalaht First Nation.
	18 respected scientists and researchers send an open letter to the PM and the Premier calling for immediate barriers between wild and farmed salmon.
	A group of British Columbia business owners took a full-page ad in the first section of The Globe and Mail. The ad, addressed to Premier Gordon Campbell and the provincial and federal ministers of fisheries, was entitled "The Future of B.C. Salmon Is In Your Hands" and ran in the national edition of The Globe.
	An article in Science (one of the foremost scientific journals), based on 37 years' worth of fish- survival data collected by DFO, asserts that some wild pink salmon populations are in a mortal decline as a direct result of lice infestations from farms. Martin Krkosek and B.C.'s Alexandra Morton, looked at DFO data for 71 central coast rivers. DFO and others allege it is shoddy science. The Pacific Salmon

Year	Event
	Forum later agrees, in part, with its conclusions. An earlier version of the paper had been published on-line at the end of 2006.
2008	Research by Dalhousie scientists Ford and Myers reports that fish farms are associated with plummeting populations of salmon and trout in all jurisdictions that farm fish.
	A group of ecotourism businesses, native organizations and environmentalists announce a plan to "medi-evac" smolts past salmon farms in the Broughton.
	Grieg Seafood B.C. was issued a farm license in Nootka Sound on Muchalat Inlet. It is the sixth site granted in a settlement with the Mowachaht/Muchalaht First Nations.
	A finfish license went to Creative Salmon Company Ltd. to raise chinook salmon at the entrance of Tofino Inlet.
	A major story in the New York Times outlining the difficulties plaguing Chile's salmon farms.
	The provincial government declared a moratorium on fish farms on B.C.'s North Coast.
	The Scottish government's Fisheries Research Services found "strong evidence that sea lice from caged salmon contaminate wild fish -- and the problem seems to be getting worse."
	Marine Harvest runs full page ads in major newspapers describing its success in minimizing sea lice on its farms during the out-migration of juvenile wild salmon.
	BC Salmon Farmers Association reports that demand for BC salmon is outstripping supply and has been for 3-4 years
	Canada's department of fisheries and oceans confirms that Canada, Ireland, Scotland and Norway plan to coordinate field experiments and hold meetings where scientists share knowledge, methods and experimental results. Environmental organization Pure Salmon obtained this information from Scotland's government using freedom of information laws.
	Taras Grescoe's book Bottom feeder: A seafood lovers journey to the end of the food chain is published in Canada. It claims that sea lice are wiping out wild salmon
	Vancouver's sustainable seafood guru executive chef Robert Clark announced he was taking wild Pacific salmon off the menus of C Restaurant, Raincity Grill and Nu
	The legal authority of the provincial government to regulate fish farms on the West Coast is challenged in the Supreme Court of British

Year	Event
	Columbia. Alexandra Morton, the Wilderness Tourism Association, the Southern Gillnetters Association, the Fishing Vessel Owners' Association of B.C. and the Pacific Coast Wild Salmon Society petition to have the province's right to regulate ruled constitutionally invalid and to strike down all the aquaculture regulations B.C. has put in place over the past 20 years. Representing the petitioners is a highly skilled environmental lawyer. Gregory McDade, former head of the Sierra Legal Defence Fund.
	A request for an emergency debate in the House of Commons on the dwindling number of Pacific salmon was denied.
	First nations in British Columbia have added their voice to a call from The B.C. Wildlife Federation, Fraser Valley Salmon Society, Sportfishing Defence Alliance and others for the Auditor-General of Canada to investigate the actions of the Department of Fisheries and Oceans on the West Coast. The petition by the B.C. organizations followed an earlier petition filed by several prominent individuals - including broadcaster and author David Suzuki, and Daniel Pauly, a leading fisheries scientist - that called on the Auditor-General to examine DFO's policy decisions on the West Coast.
	Marine Harvest announces a Coordinated Area Management Plan (CAMP) to create safe corridors for migrating pink salmon in the Broughton Archipelago by emptying salmon farms during the spring out-migration of wild juvenile fish from March 1 to June 30 each year. The company is ready to move forward with the plan pending government approvals. Marine Harvest had briefed the government, first nations, and environmental groups.
	30,000 salmon escape from a Marine Harvest farm near Campbell River, BCs largest escape in 8 years.
	BC Supreme Court hears petition to have the province's right to regulate ruled constitutionally invalid.
	Applications for amendments to license at specific existing Marine Harvest and Mainstream fish farms are "happened upon" by CAAR members and reported as applications to increase production in the media.
	Sea lice genomics project, funded by DFO, University of Victoria, Vancouver Island University, four fish farm companies and the province, has discovered Pacific sea lice are very different from their Atlantic and European cousins – sufficiently so that they could be another species.
	2,500 salmon escape from a Mainstream farm in Clayoquot Sound.

Year	Event
2009	First Nations in the Broughton Archipelago announce they will file a class-action lawsuit against the B.C. government for damages caused to wild stocks by salmon farming.
	The Pacific Salmon Forum report concluded that wild salmon require the protection of a new agency dedicated to taking an ecological approach to all watershed activities that might threaten fish habitat. It also concluded that farmed and wild salmon can co-exist, but recommended limits on salmon farming, including a cap on production in the Broughton Archipelago at current levels and managing farms to meet sea-lice limits on young wild salmon. The forum also recommended a science secretariat to co-ordinate salmon research and urged the province to lead a pilot program to see if salmon farming can be economically viable using closed-containment systems.
	The B.C. Supreme Court (Justice Chris Hinkson) ruled that the federal government -- not the province -- has exclusive jurisdiction over the management of salmon farming.
	Alexandra Morton sends letter and petition to federal Fisheries Minister Gail Shea asking her to apply the Fisheries Act to the "salmon feedlot fishery".
	Marine Harvest announces it is appealing the B.C. Supreme Court ruling that the federal government, not the province, has jurisdiction over fish farms, claiming that "Domesticated creatures, like farm-raised salmon, are private property, and are not part of the fishery as a public resource."
	The provincial government will not appeal the B.C. Supreme Court ruling that the federal government has exclusive jurisdiction over fish farms.
	Alexandra Morton re-sends letter and petition to federal Fisheries Minister Gail Shea and BC Premier Campbell weekly with more names. By the end of March there are 8,400 signatures on the petition.
	A team led by a professor at the University of Guelph, has used DNA barcoding techniques to trace the path of transmission of lice to and from wild fish
	Greenpeace rates the sustainability of the seafood offerings at Canada's major supermarket chains. The report gave highest marks to Loblaw, because it announced that by 2013, it would sell only sustainable seafood. Second place went to Sobeys.
	Federal Fisheries Minister Gail Shea announces 6 BC aquaculture companies will get more than $930,000 to pursue innovative ideas.

Year	Event
	An additional $848,000 will go to the six projects from the province, industry and universities.
	Sea-lice levels dropped between 2008 and 2009 on young pink and chum salmon migrating through the Broughton Archipelago. The Coastal Alliance for Aquaculture Reform and Marine Harvest Canada both credit a fish farm management program. "This is a historic release in that it marks the first time that former adversaries have come forward in agreement."
	While some parts of the province have strong sockeye runs, the Fraser River sockeye run collapses.
	Record runs of pink salmon.
	Federal government calls for Judicial Inquiry in to the collapse of the Fraser River Sockeye run. The Cohen Inquiry will investigate reasons for the decline of the sockeye salmon in the Fraser River.

APPENDIX B: INTERVIEW PROTOCOL 2005, 2006, 2007

CONFIDENTIAL

Respondent:_____Organization: _____

Years with Org: _____ Years in Position: _____ Title: _____

Interviewers: _____Date: _____

      Thank you for taking the time to meet with us(me) today. Your expertise and perspective is very important to our research. The PURPOSE of multi-year Research Project is to better understand the global salmon farming industry, what important strategic issues the industry is faced with and how it deals with them. Our research team is made up of several business strategy professors from both Canada and Australia.

Re: Strategic Issues

What are the most pressing issues facing YOUR INDUSTRY at this time? (What is your industry? Domestic issues? International issues?)

What are the most pressing issues facing YOUR ORGANIZATION at this time? (Domestic? International? Competitive? Regulatory? Stakeholder issues?) [for diversified bus]

Re: Issues (e.g., regulatory, trade, certification, health, environment, safety)
What are the most pressing issues facing the salmon farming industry at this time? And facing your organization at this time? Specify via list below:

Competitive issues for INDUSTRY; for YOUR ORG

International trade-related issues for INDUSTRY; for YOUR ORG

What are the major regulatory or political issues the INDUSTRY / YOUR ORG has to deal with? (domestic and international)

What certification issues does salmon farming face?

What environmental issues does salming farming face? does YOUR ORG face?

What health-related issues does salmon farming face? Does YOUR ORG face?

What other issues are on the radar? Add q on cc impacts / on the radar screen?

RE: Issue Salience
How do these issues become issues for your organization?

Of all these issues, which do you consider the three most critical ones for THE INDUSTRY?

Of all these issues, which do you consider the three most critical ones for YOUR ORG?

Re: Industry & Supply Chain
Do actions of firms in other parts of the salmon farming supply chain affect your business? In what way?

 How do you manage this? (i.e., work with them, pressure them, develop standards, etc.)

In what ways do you work with/talk with other industry members (associations belonged to, conferences attended, alliances, etc. Specify names and approximate dates of joining, belonging to, etc.)?

What's the role of organic salmon? Possible? Emerging product?
Is land based aquaculture going to become more important? Why or why not?

Re: Critical Events
What were the major events impacting the INDUSTRY in the last 5 years?
What were the major events impacting YOUR ORG in the last 5 years?

What are the critical events you anticipate to happen in the INDUSTRY in the next 5-10 years?
What are the critical events you anticipate to happen in YOUR ORG in the next 5-10 years?

Re: Crises
Considering all business issues, have you felt that the industry was in a crisis during the last 3-4 years? ("Crisis is an event that hits unexpectedly and changes things dramatically in the organization").
>   How was the crisis perceived inside the organization? Was there agreement within the organization about what the crisis was and how to handle it?

Re: Organization's Objectives
Over the last few years, what have been the major strategic decisions and strategic shifts in YOUR ORG?

What, in your opinion, are the primary objectives of YOUR ORG today? Of your SBU?

Re: Important Stakeholders
What stakeholders do you consider as important to your firm?
Who are they and how important are they? (Scale I)

Are there primary objectives of your main stakeholders that are in conflict with the objectives of the company today? (How did you derive your stakeholders' objectives? What, if any, kind of communication do you have with different groups?)

What means do your stakeholders use to try to influence you? How do you try to influence your stakeholders?

Do you hear much from activist groups? How do they attempt to influence your organization?
What kind of an impact are your critics having on your market? How?

Has your own perspective changed regarding environmental issues? How did that happen?

Re: Leadership
What is the position of the board on specific strategic, social and environmental issues?
(Is the board generally in agreement regarding environmental issues? Can you give examples?)

What is the position of Top Management on specific strategic, social and environmental issues?

Re: Wrap up:
What have we missed?
Any comments on our interview?
What's ahead for Your Organization?
Can you suggest anyone else we should interview about the salmon farming industry?
May we contact you in the future for clarification questions?

Thank you for your time!

In general, what stakeholders do you consider as important to your organization?
Please rate the importance of each of the following stakeholder groups:

	Most important…… least important		
local communities	1	2	3
industry & trade associations	1	2	3
provincial government agencies	1	2	3
federal government agencies	1	2	3
environmental regulators	1	2	3
non-regulatory gov. pressure	1	2	3
financial institutions	1	2	3
environmental groups	1	2	3
international groups	1	2	3
other NGOs	1	2	3
the media	1	2	3
consumers/customers	1	2	3
shareholders/BOD	1	2	3
employees / unions	1	2	3
top management	1	2	3
suppliers	1	2	3
First Nations / aboriginals	1	2	3
other: _____	1	2	3
other: _____	1	2	3

APPENDIX C: ETHICS APPROVAL OF RESEARCH DESIGN

Ivey

Richard Ivey School of Business
The University of Western Ontario

Richard Ivey School of Business
The University of Western Ontario
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Use of Human Subjects – Ethics Approval Notice

Principal Investigator: Mary Crossan	Review Number: 017/09(BREB)
Re: PhD Student: Pat MacDonald	
Protocol Title: Inter-organizational learning in the BC salmon farming industry: learning from the enemy	
Approval Date: August 27, 2009	End Date: August 27, 2010

This is to notify you that the Ivey School of Business Expedited Research Ethics Board (BREB) has granted expedited approval to the above named research study on the date noted above.

The BREB is a sub-REB of the University of Western Ontario's Research Ethics Board for Non-Medical Research Involving Human Subjects (NMREB), which is organized and operates according to the Tri-Council Policy Statement and the applicable laws and regulations of Ontario.

This approval shall remain valid until the end date noted above assuming timely and acceptable responses to the BREB's periodic requests for surveillance and monitoring information.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the BREB except when the change(s) involve only logistical or administrative aspects of the study. Subjects must receive a copy of the signed information/consent documentation.

Investigators must promptly also report to the BREB:
- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely effect the safety of the subjects or the conduct of the study.

If these changes require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information must be submitted to this office for approval.

Members of the BREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to such studies when they are presented to the BREB.

Signature:_

Rod White, Associate Dean, Faculty Relations & Research
Chair, Business Expedited Research Ethics Board (BREB)

This is an official document. Please retain the original in your files.

APPENDIX D: NOTE SENT TO POTENTIAL PARTICIPANTS

Dear

My name is Patricia MacDonald and I am a doctoral candidate at the Ivey Business School at the University of Western Ontario. I am inviting you to take part in a research study on **Inter-Organizational Learning in the Salmon Farming Industry**. The purpose of this research is to study the conditions under which inter-organizational learning occurs between companies and their stakeholders, particularly with respect to conflict laden issues. I am conducting this research within the context of the BC salmon farming industry, its issues, and its stakeholders. This research builds on prior work that I did with Dr. Monika Winn, University of Victoria, Business. The information that I am currently collecting will be used in my thesis. The purpose of this letter is to provide you with the information you require to make an informed decision on participating in this research.

You are being asked to participate in this study because you were identified as an expert on aspects of salmon farming, through for example public sources or by other persons knowledgeable in this field. Salmon farming is multi-faceted and generates many diverse viewpoints; it is important for this study to fully understand your perspective.

I will be conducting interviews on Vancouver Island and in the Vancouver area between September 15 and 29. I would very much like to interview you about the issues faced by your organization and other stakeholders and members of the industry, and the impact they have had on companies.

If you agree to voluntarily participate in this research, your participation will include an interview of about 60 to 90 minutes, at a time and location of your choosing. There are no known or anticipated risks to you by participating in this research. You and your organization's anonymity and confidentiality of data will be assured. If you agree to a meeting, we will provide you with a formal consent form which spells out the information provided above in more detail. You will also receive a signed copy of this consent form for your records.

The potential benefits of your participation in this research include your contribution to an enhanced understanding of how companies learn from conflict laden issues and how to better manage this process. I would be happy to share results with you at the conclusion of the research project.

Thank you for considering this request. I will contact you shortly to discuss further details.

Sincerely, Pat MacDonald

APPENDIX E: LETTER OF INTRODUCTION & INFORMED CONSENT FORM

Research Project: Inter-organizational Learning in the BC Salmon Farming Industry

Dear

My name is Patricia MacDonald and I am a doctoral student at the Ivey Business School at the University of Western Ontario and the information I am collecting will be used in my thesis.

You are being invited to take part in a research study looking at how organizations learn from one another in the salmon farming industry in British Columbia. The purpose of this letter is to provide you with the information you require to make an informed decision on participating in this research.

The study is expected to add to our collective knowledge about organizations' interactions with their stakeholders and the conditions under which inter-organizational learning occurs. Approximately 25 other representatives of salmon farming companies and their stakeholder groups are being contacted. If you like, you may receive summaries of the findings of this research, which may benefit you in your own organization. The results of this research are expected to be published in academic journals.

I will contact you to set up an interview at your office location that will consist of a number of open-ended questions designed to capture your recollections of events and actions regarding stakeholder interactions around conflict laden issues affecting your industry. It should take approximately 60 minutes to complete and there are no known risks to your involvement in this study. Please note that **your responses are strictly confidential**, that your participation is completely voluntary. You may refuse to participate, refuse to answer any questions or withdraw from the study at any time with no effect on your future. Should the results of the study be published, your name will not be used. With your permission, the interview will be audio taped and transcribed and will be labeled and identified with a code, not your name.

Should you have any questions or concerns about this study, please contact Dr. Mary Crossan at XXXXXXXX. If you have any questions about the conduct of this study or your rights as a research participant, you may contact the Office of Research Ethics, the University of Western Ontario (519-661-3036 or email at: ethics@uwo.ca). Signing the consent form indicates consent to participate in the study.

I look forward to talking to you, and wish to thank you again for your time and participation.

Yours sincerely,

Patricia MacDonald,
PhD Candidate, Richard Ivey School of Business, University of Western Ontario

Consent Form

Research Project: Inter-organizational Learning in the BC Salmon Farming Industry

I have read the letter of information, have had the nature of the study explained to me and I agree to participate. All questions have been answered to my satisfaction.

Name (please print)_____

Signature_____

Date_____

Person Obtaining Consent_____

Signature_____

Date_____

      Please indicate if you would like to receive summaries of the research findings.
      Yes_____ No_____.
      These will be sent to you at your work address unless you indicate otherwise.

APPENDIX F: INTERVIEW PROTOCOL 2009

Research area	Preliminary interview questions
Background/context	Describe what has been happening in the BC salmon farming industry between the companies and their stakeholders since the most recent government review was begun? (possible prompts – behaviour around issues, Behaviour between companies and stakeholders)
	What has been your involvement with stakeholders?
Individual Identity	Describe your role in the organization? In the industry?
	When did you first get involved? What were you doing before?
	How long have you been with (organization) and in what roles?
	How much of your time do you spend on conflict issues related to salmon farming?
	Someone said it takes a certain kind of person to be involved with these issues – what are your thoughts on that? What kind of person would you say has been involved?
	You mentioned that you see yourself as ----- could you tell me what that entails?
Organization Identity	How would you describe your organization's response to the issues related to salmon farming?
	How have you felt about your organization's responses?
	Are there different types of salmon farming companies?
	What makes you say that?
	Can you give me an example of something that demonstrates that?
	Are there any other things that your consider central to your organization?
	Are there different types of ENGOs?
	What makes you say that? Can you give me some examples?
	Has (organization) always been like that?
	When did it change (if at all)?
	Have the mergers in the salmon farming industry affected

	relationships within the industry? In what ways?
	You mentioned that you see your organization as a ----- could you tell me what that entails?
Learning	Do you conduct joint initiatives with other organizations?
	Who is involved? What is your role in those initiatives?
	Describe how the organizations work together?
	Has that changed over time?
	Describe how decisions are made and actions taken?
	Has that changed over time?
	Describe how conflicts are resolved within the initiative? Has that changed over time?
	What have been the results/ output from the research done with other organizations? For you personally? For your organization? For the industry?
Conflict	How would you describe the situation in the salmon farming industry in BC?
	How would you describe your organization's actions in response to conflict? Have they changed over time?
	Can you give me an example that illustrates what you mean by that?
	Is your organization similar or different (in its actions in response to conflict) from other organizations involved in the BC salmon farming industry?
Engagement practices	Who do you deal with on these issues? Is you contact director indirect?
	Tell me about your interaction? Where does it take place?
	How does it unfold?
	Describe your formal versus informal interaction?
	Has your interaction changed over time?
	What have you observed in terms of the activities of others involved?
	Can you think of any other ways that you interact with stakeholders?
	Are you familiar/involved with the Framework for Dialogue?
	Could you describe it to me?

APPENDIX G: PRELIMINARY ANALYSIS OF INDIVIDUAL AND ORGANIZATIONAL IDENTITIES IN THE INDUSTRY

Individual and Organizational Identities in the Salmon Farming Industry in BC

Company Level	Identity Description	Representative Quotations
Marine Harvest Individual	Open Facilitator Broadly knowledgeable on salmon farming Community member	"I started out as a fish biologist... then worked in research and production ...production support... environmental management... I had an affinity to work with people so I just kind of naturally started to gravitate towards that" "I build bridges" "I was always very big on just open up your books, we've got nothing to hide, let's show people ... show constant improvement" "… my son goes to school with the son of the councillor who had opposed fish farming but when we see each other on the soccer field we can actually talk about it because we're there on the soccer field together."
Marine Harvest Organization	Transparent Collaborative Innovative Socially responsible Industry leader in collaboration	"... you can only find a solution when you put different people with different backgrounds and different views of the world together... not the different disciplines within one company, but now the NGOs and the government representatives and the scientists" "Dialogue is important to build trust ... transparency builds trust ... we are a very open company" "... we were very out there, we were very transparent and I made sure our story got told a lot ... I really broadcast our successes in order to shore up the ability to do more work" "this is a dynamic industry with lots of innovation and every year we get better" "... big on social accountability, big on environmental accountability, even though they didn't have First Nations issues, they took leadership roles – Marine Harvest did internationally."

Stolt Individual	Scientist Data driven Facilitator Knowledgeable on salmon issues (wild and farmed)	"I am a marine biologist ... a scientist that supports the scientific process" "I am just someone who has spent their lives working with salmon habitat and conservation issues" "I ... focus on doing and helping" "I am a facilitator"
Stolt Organization (pre-merger)	Private Accountable Ethical Industry leader size and profitability	"we undertake cooperative research and development on ecosystem principles that were put under stress through various impacts" "Stolt was quieter … were also working on a very high level of compliance, a very high level of accountability. Very good ethics. And very profitable … but no so out there and not so much into the ... social issues ... kind of stayed back a bit ... not as transparent" "... the number of lobbyists and activists with positions on aquaculture is startling ... there is nothing we can say or do to satisfy all of these interested parties. What we can do is adhere rigorously to all regulations ... and to follow our own conscience and set our own high standard" "... it is our responsibility and commitment to meet high standards of husbandry and care for the environment"
Mainstream Individual	Business person Rational Knowledgeable on business issues (running a salmon farming operation)	"I don't necessarily believe we are the best at what we do but I'd say we do it definitely better than the rest of the group ... we run our business better" "... make sure that you educate yourself as to what sustainability means. It's a tough one to quantify." "if you don't make money you are not sustainable" "... we have more revenue than the largest company" in Canada" "You've got to be continually looking for innovation and development" "I believe it is the future ...we're going to focus ... on the bigger picture ... it's just not one little industry causing an issue"

Mainstream Organization	Sustainable Rational Innovative Risk balancer Focused on the business of salmon farming	"we ... have set a goal for ISO ... we will be able to hold our heads up high and say we are sustainable" "We had to emphasize the financial sustainability of everything we did. We had to regain our financial freedom by focusing on operations, cautious stewardship of our assets ..." "We take the long-term view and act responsibly with respect to nature and society. We place great emphasis on environmental sustainability ... However, sustainability also means running a profitable business, where we balance risks and opportunities based on our recognized strengths" "Cermaq has established a strong international network both within and outside the industry…. the company participates in various research projects with public and industrial research establishments around the world" "As an industrial R and D institution we have a highly commercial focus. Our slogan "Knowledge makes the difference" ... results in actual competitive advantages for our customers... we are increasingly collaborating on the basis of the licensing of exclusive rights, which enables unique product advantages"
CAAR Individual	Scientist Data driven Logical Strategic Knowledgeable on environmental and social issues Community member	"I'm an ecologist. We have a fisheries biologist on staff, we have another staff member who has an oceanography degree, so we have a strong science background" "There's piece after piece after piece that builds your case, and your case has to be solid and it has to be based on science and it has to be rational and you can use a million different tactics to deliver that message, some people use irrational tactics but the message can still be rational. " "my husband ... was a salmon fisherman and it just became an issue that we couldn't not look at"

CAAR Organization	Cooperative Logical Strategic Focussed Skilled in coordinating inter-organizational activity	"We got together into a group and said, "you know what we have to make the sum greater than the individual part," that we had to work together to try to deal with it because the salmon farming companies are multi-national corporations ... we can't outspend them so we have to outthink them ... It was by having everybody pool all their information and work collaboratively we're able to take it ... to being one of the most prominent environmental issues in BC" "... when we started the question was - are we trying to stop salmon farming altogether, or are we trying to reform it. That was a huge question, and I think one of the successes around our coalition is that we actually took the time to answer that question, and to build consensus around it" "The science is pretty clear on this, but science alone is not a driver in social change. It's just the underpinning ... You have to get the public really behind all this stuff." "CAAR is the best coalition I've ever worked with in my life. It's phenomenal. We've met every two months for going on seven years, and always consensus, it's a phenomenal group of people. I always say it's an honour to work with that group."

APPENDIX H: PRELIMINARY ANALYSIS OF LEARNING ACTIVITIES AND OUTCOMES

Company	Organizational Identity	Learning Activities	Learning Outcomes (post-merger)
Marine Harvest	Transparent Collaborative Innovative Socially responsible Industry leader in collaboration "Learning is collaborative process. We can all learn from each other. Knowledge must be shared so everyone can benefit."	Internal consultation ISO certification External consultation with customers, supply chain members, regional governments, financial community, NGOs, other stakeholders International, Regional and National Conferences Research consortiums with supply chain participants Collaborative research with universities, NGOs, independent and/or Private research institutes Public-private partnerships with governments	Articles in peer reviewed science and ecology journals Awareness of issues Programs to manage social, environmental, and animal welfare issues Other niche conferences (i.e. salmon farming jurisdictions) Revised operational practices Approaches to stakeholder management and engagement Cooperation and collaboration with suppliers, customers, stakeholders
Stolt	Private Accountable Ethical Industry leader in size,	Internal research and development Internal consultation Collaborative research with universities and independent private research institutes	

	profitability "Learning and knowledge support achieving and maintaining our high operating standards."	Collaborative research with CAAR	
CAAR	Cooperative Logical Strategic Focused "Learning and knowledge support our advocacy work."	Partnering on research with experts on specific issues Partnering with international environmental groups on campaigns and research Partnering with corporations Funding graduate students Attending International industry conferences Accessing information via the Freedom of Information Act Participating in international government sponsored research symposiums Workshops in conjunction with universities Community science outreach through brochures and speaches	Position on aquaculture in general and open net farming in particular Articles in peer reviewed science and ecology journals Approaches to target firm engagement Access to proprietary corporate data

| Mainstream | Sustainable

Rational

Innovative

Risk balancer

"A Business"

"Learning supports us achieving a competitive advantage. Knowledge is an asset to be developed and exploited." | Internal research and development

ISO certification

Internal consultation with senior managers

Local community consultation

Collaborative research projects with public and industrial research establishments around the world

Participate in international networks within and outside the fish feed and fish farming industry | Revised operational practices – greater efficiency, reduction in violations

Revised management practices

Mechanisms for monitoring performance

Lower costs

Employee training requirements

Employment standards and expectations |

APPENDIX I: COMPLETE LIST OF FINAL NODES, CASES, AND RELATIONSHIPS

Tree Nodes		
Identity	Individual Identity	Roles
		Social
		Tapping other identities
	Group Identity	
	Organizational Identity	Organization identity in flux
		Shift in organization identity
	Relations between levels	
Conflict	Conflict dynamic	Individual
		Group
		Organizational
	Conflict source	Identity
		Socio-cognitive
		Interests
Learning	Outcomes	Individual Learning
		Collective learning
		Inter-organizational learning
	Processes	Individual
		Organizational
Practice	Identity	
	Conflict	
	Learning	
Practitioners		
Praxis	Identity	
	Conflict	
	Learning	
Repeated engagement	Individual interactions	Dialogue
		External
		Internal
	Inter-organizational dynamics	

Free Nodes
Distancing
Pairing
Rule Setting
Experiments - Bold
Ongoing conflict

Relationships		
From Name	**Type**	**To Name**
Identity - individual	Associated	Learning – individual
Conflict - individual	Associated	Identity - individual
Learning - individual	Associated	Conflict - individual
Identity - organizational	Associated	Learning - - organizational
Conflict- organizational	Associated	Identity - organizational
Learning - organizational	Associated	Conflict - organizational
Practitioners	Associated	Inter-organizational learning
Practitioners	Influences	Organizational learning
Practice	Influences	Praxis
Praxis	Influences	Practice

Cases
CAAR
Marine Harvest
Mainstream
Industry Associations
Media
Observers-academics
Regulators-government
Suppliers
Other ENGOs

APPENDIX J: LEARNING ACTIVITIES AND OUTCOMES OVER TIME

Relationship of Learning and Identity	Learning Activities/Practice prior to 2003	Learning Outcomes prior to 2003	Additional Learning Activities/ Practice 2004-2006	Learning Outcomes 2004-2006	Additional Learning Activities/ Practice after 2006	Learning Outcomes 2009
Marine Harvest Learning is collaborative process. We can all learn from each other. Knowledge must be shared so everyone can benefit. (more at the corporate level and more superficial) **Stolt** Learning and knowledge	Internal consultation across regions (MH and Stolt) Internal research and development (MH and Stolt) Collaborative research with universities, research institutes, governments (MH and Stolt) ISO Certification (MH and Stolt) External consultation	Programs to manage social, environmental, and animal welfare issues (MH) Recognize value in collaborating across a range of stakeholders (MH) High standards and first-rate operations (Stolt) Ongoing understanding of the eco system impacts of farms (Stolt)	Direct interaction - Facilitated direct negotiation of a joint research agreement with CAAR (Stolt) Collaboration with the Monterey Bay Aquarium (MH)	Recognition at the BC level of the need to engage with a broader range of stakeholders (albeit for different reasons) Recognition of a different logic Recognition that the conflict was escalating and was costly Recognition of the importance of non-economic	Collecting data to address broader marine environment questions and compiling databases Developing research questions collaboratively with CAAR Listening to both camps of researchers and acknowledging there are 2 camps Contracting with neutral scientists and bringing pro and anti salmon	Proactive environmental management has value = good management Engagement with stakeholders has value, despite the risks Have to deal with the issues (one way or another) to remain credible No risk from corporate from engaging in this process

Relationship of Learning and Identity	Learning Activities/Practice prior to 2003	Learning Outcomes prior to 2003	Additional Learning Activities/ Practice 2004-2006	Learning Outcomes 2004-2006	Additional Learning Activities/ Practice after 2006	Learning Outcomes 2009
support achieving and maintaining our high operating standards	with customers, suppliers,governments, financial community, NGOs, other stakeholders (MH) Participation in the WWF Salmon Dialogue (MH) Negotiation with First Nations re. leases (MH prior to it becoming law, Stolt when it was legally required)	Good management = good science (Stolt)		metrics Engaging does not mean agreeing or even changing that much Ongoing revised operational practices based on feedback Recognition of similarities (CAAR is a business)	farming scientists together Monitoring the farms and identifying patterns in the data in collaboration with stakeholder personnel Weekly contact – across a number of individuals – in a variety of ways Engaging directly with communities alone and with CAAR Engaging with new critics	Different and deeper understanding of sea lice Revised understanding of the nature of the relationship. Revised understanding of their responsibility in the relationship Understanding the conflict trade offs (speed vs. completeness) Revised approach to structuring engagement

Relationship of Learning and Identity	Learning Activities/Practice prior to 2003	Learning Outcomes prior to 2003	Additional Learning Activities/ Practice 2004-2006	Learning Outcomes 2004-2006	Additional Learning Activities/ Practice after 2006	Learning Outcomes 2009
						(structure, openness, acknowledgement of different perspectives – of responsibility)
CAAR Learning and knowledge of science support advocacy work.	Facilitated development of the coalition, over a year funded by foundations Funding research internally and at universities Conducting independent research Conflictual interaction mediated by third parties	Focus on science and on specific long term goals – sea lice – closed containment Positioning to maximize effectiveness – credibility – good science – rational arguments Value in collaborating with other like	Direct interaction with industry – negotiation of a joint research agreement with MH Ongoing research using MH data	Access to data and funding for staff provides immediate value in engaging with Marine Harvest Potential value in collaborating with industry despite the risks Strategic use of interest based approach	Monitoring the farms and identifying patterns in the data in collaboration with company personnel Increased specialization of function (within CAAR and between MH) Developing and implementing projects collaboratively –	An article in peer reviewed science/ ecology journal – major breakthrough in terms of data access There is value in engaging with industry despite the risks Value is viewed differently by different people "Respect costs

Relationship of Learning and Identity	Learning Activities/Practice prior to 2003	Learning Outcomes prior to 2003	Additional Learning Activities/ Practice 2004-2006	Learning Outcomes 2004-2006	Additional Learning Activities/ Practice after 2006	Learning Outcomes 2009
	Ongoing collaborative activities of the coalition – regular meetings – committees – communications - facilitation Market analysis and understanding of business models Consumer and community development/outreach	minded researchers and organizations Collaborative skills, conflict management skills internally Importance of "semantics" – speaking the language of business Strategic use of conflict/power – new targets – new methods		Empathy for salmon farmers – separating the people from the issue – seeing them as members of the same community Initial recognition of their similarities	meeting constantly – on the phone etc. Direct interaction between more people inter-organizationally – delegation of relationship and task responsibility – open door Managing interpretation and integration internally- two layers of negotiations Contracting and collaborating with independent scientists together – choosing one that understood the conflict and	you nothing" Interest base approaches worth a try – can always go back to power and rights based Third parties decrease the perceived risk of engagement and of identity conflict Engaging does not necessarily mean agreeing (high on relationship, high on goal) Recognition of similarities Strategic use of

Relationship of Learning and Identity	Learning Activities/Practice prior to 2003	Learning Outcomes prior to 2003	Additional Learning Activities/ Practice 2004-2006	Learning Outcomes 2004-2006	Additional Learning Activities/ Practice after 2006	Learning Outcomes 2009
					was able to manage it	conflict to achieve goals
					Ongoing day to day conflict managed by external consultant - Really big issues mediated by the mediator	Focus on interim goals
						Trust is not as important as behaviour change
					Joint presentations to government, community groups, WWF's Salmon Aquaculture Dialog	Science can bridge internally and externally
						Greater empathy/appreciation of the other
					Collaboration with other companies	

APPENDIX K: SUMMARY OF THE FRAMEWORK FOR DIALOGUE

COASTAL ALLIANCE FOR AQUACULTURE REFORM ("CAAR") AND

MARINE HARVEST CANADA ("MHC")

FRAMEWORK FOR DIALOGUE – SUMMARY

JANUARY 12, 2006

BACKGROUND

The Coastal Alliance for Aquaculture Reform (CAAR) is a coalition of First Nations and conservation groups working to stop the negative impacts of salmon farming on wild salmon and the marine ecosystem in British Columbia. The member organizations of CAAR are theDavid Suzuki Foundation, Friends of Clayoquot Sound, Georgia Strait Alliance, Living OceansSociety, Musgamagw Tsawataineuk Tribal Council, Raincoast Conservation Society, Raincoast Research, T. Buck Suzuki Environmental Foundation, and Watershed Watch Salmon Society Marine Harvest is the world's leading producer and supplier of farmed salmon and is committed to continual improvement with respect to its products and environmental practices.

In British Columbia, Marine Harvest Canada (MHC) operates ISO 14000 and 9000 certified salmon farms on Vancouver Island and the mid coast. In the spring of 2004, CAAR and MHC each, independent of the other, recognizes the salmon farming debate in British Columbia is highly polarized and not likely to produce positive results in its current format. The chronology of the ensuing dialogue is as follows:

a) June 2004 - CAAR and MHC initiate exploratory discussions to determine if there is potential value and mutual interest in engaging in some direct discussion around aquaculture issues.

b) October 2004 - based on these exploratory discussions, CAAR and MHC agree there is value in engaging in such direct discussion and begin to meet periodically – discussion initially focuses on identifying the scope of issues that would benefit from direct discussion, relative priorities, principles to govern dialogue such that the likelihood of success within a polarized climate was maximized, identifying research priorities required to support effective discussion/resolution of the issues, and identifying precautionary measures that could be undertaken relative to each party's interests while research and discussion takes place.

c) December 2005 – CAAR and MHC reach agreement on the substantive elements of a framework for Dialogue – (see below for a summary of the Framework).

d) The Province was advised early on that these discussions were taking place but not briefed as to specifics/details until November 2005. The Province supported the successful conclusion of the Framework by agreeing to fund certain interim measures identified in the Framework.

SUMMARY OF THE "FRAMEWORK"

The Framework is a comprehensive document. Following is a summary of those matters addressed within the Framework – this is intended for illustrative purposes only and, by its summary nature, does not address every detail.

Purpose

The Framework is intended to

a) Support constructive, efficient, interest-based results that address the needs of both MHC and CAAR;

b) Increase knowledge with respect to environmental, social and economic factors associated with salmon farming;

c) Reduce conflict associated with MHC's salmon farming; and

d) Direct change to current practices where best available information demonstrates there are impacts to the environment and wild salmon as a result of current practices;

2. The Framework is not intended to fulfill and constitute duties of consultation or accommodation owed to First Nations.

3. The Framework is not intended to create legal rights or obligations.

Background/Context

4. The Framework sets out a number of background/contextual matters acknowledged and/or agreed to by both MHC and CAAR including the ecological, cultural, and economic importance of wild salmon, salmon farming is part of the economy of coastal communities, there are environmental impacts associated with salmon farming that need to be reduced, mitigated or eliminated, both CAAR and MHC have invested in research however some further research is required.

5. The Framework states that MHC maintains the right to exercise their business operations as required on a day-to-day basis and to publicly respond to criticism or third party assessment of their business or effects of their business on the environment, especially wild salmon.

6. The Framework states that CAAR maintains the right to exercise its campaigns and public education initiatives related to aquaculture and marine conservation;

Guiding Principles for Dialogue

7. The Framework sets out a number of principles CAAR and MHC agree will govern their ongoing dialogue (e.g. interest based dialogue, respectful dialogue,

both parties having access to information in a timely and transparent manner, willingness to change perspectives based on new information etc)

Salmon Farming Issues

8. The Framework describes the broad range of issues associated with salmon farming in BC (these are summarized in Appendix A), acknowledges that some are most appropriately addressed bilaterally while others are best addressed in multi-lateral public policy forums, commits the parties to:

a) periodically reviewing this list of issues; and

b) periodically identifying priorities for research and dialogue based on these issues

9. The Framework identifies the short term priorities for research being

a) the interaction between wild salmon, farmed salmon, and sea lice

b) the economic feasibility of commercial scale closed containment

c) wild salmon migratory routes

10. The Framework provides that discussion, dialogue and decisions need to be informed by

best available information (i.e. information that is peer reviewed, research that is

undertaken collaboratively, and documented local knowledge).

Sea Lice Research

17[9]. The Framework provides that research is best undertaken collaboratively and in a manner that seeks to reduce the polarity that has existed within the scientific community regarding aquaculture issues

18. The Framework describes an agreed upon list of priority questions that need to be addressed through research relative to the sea lice issue in the Broughton, a process to annually review these questions, the research priorities based on these questions, and certain specific research projects that need to be undertaken collaboratively in 2006 including,:

a) Morbidity/mortality/behavioral effects on juvenile pink and chum salmon associated with sea lice infections;

b) The source of sea lice (i.e., from farms or other sources) infecting out migrating juvenile salmon;

c) The migration pathways of out-migrating juvenile wild salmon in the Broughton;

d) The relationship between the age of farmed fish (time in salt water) and sea lice i.e. after what period in salt water do farmed fish develop the capacity to contribute a significant amount of sea lice to the surrounding environment;

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[9] Non-sequential numbering appeared in the original

e) What date within the period January 18 and March 1 constitutes a reasonably precautionary commencement date for a migration corridor in each year.

19. The Framework provides that in some circumstances research will be undertaken by MHC and CAAR directly and in other circumstances they will jointly advocate that such research be undertaken by others on the basis of agreed upon Terms of Reference (e.g. the Pacific Salmon Forum)

Closed Containment Research

20. The Framework establishes as a priority collaborative research into the economic feasibility of commercial scale closed containment to be completed by August 31, 2006 and includes agreed upon Terms of Reference for such research

21. The Framework provides that MHC and CAAR will mutually agree upon a researcher to complete this analysis and to jointly advocate for funding from the BC Pacific Salmon Forum or other appropriate bodies.

22. The Framework provides that upon completion of the closed containment research, both parties will seek to identify ways to overcome the economic obstacles to adapting closed containment as identified in that research

23. The Framework provides that upon economic viability of commercial scale closed containment being demonstrated, MHC will work to incorporate closed containment into its operations

Communications

24. The Framework establishes a communications protocol that will govern how CAAR and MHC will communicate both internally and externally regarding those matters addressed in the document.

25. The Framework provides that CAAR will not directly target MHC or its products in the local, national and international market campaigns and that MHC will communicate with CAAR on an ongoing basis regarding any new tenure applications, relocations, or siting requests.

Process

26. The Framework provides that the parties will meet as required on an ongoing basis to implement the Framework

27. The Framework provides for parties other than CAAR and MHC becoming involved in discussions under the Framework subject to mutual agreement

28. The Framework provides for dispute resolution.

Appendix A (to FRAMEWORK FOR DIALOGUE – SUMMARY)

: General Summary of Issues Related to Salmon Farming As Identified in the Framework

• farmed salmon /wild salmon interactions (e.g., sea lice, disease transfer)

• escapes of farmed fish and non-native species

• use and application of chemicals and medication

• overall wellbeing of seafood industry (e.g., competition, integration)

• jobs and economic development, wellbeing of coastal communities

• reputation (e.g., credibility of claims, public perception)

• application of technology (e.g., closed containment, management systems, fish husbandry)

• tenure allocation including siting impacts and First Nations interests

• fish husbandry (composition of fish feed, antibiotics etc.)

• the impacts of waste from salmon farms on the water column, benthic environment, and

marine ecosystem in general

• sustainable fisheries at the global and local levels (e.g., fish meal/fish oil)

• human health and safety (e.g., nutrition, contamination)

• business viability (e.g., investments, cost control, markets)

• aboriginal rights, traditional use and land claims

• communications (e.g., information sharing, public claims, marketing)

• research and development

• regulatory environment

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